

ANNUAL MEETING UPDATE

MEETING THE PROMISE OF TOMORROW THROUGH PLANETARY HEALTH

Elizabeth Gillespie, MD

Dr. Gillespie (Elizabeth.Gillespie@dhha.org) is a hospital-based physician at Denver Health, assistant professor at University of Colorado School of Medicine (CUSOM), director of undergraduate medical education for CUSOM Climate and Health Program, founding member of SGIM's Environmental Health Interest Group, and inaugural chair of sustainability on the program committee.

Even if global consumption of fossil fuels were to end today, heat-trapping gases present in the atmosphere would continue to warm the planet, propagating a cascade of environmental hazards, biodiversity loss, and threats to human health. While everyone suffers from environmental degradation, health-related impacts are multiplied among at-risk populations, thereby widening existing disparities of income, race, gender, and educational attainment. While this can easily lead some to despair, the #SGIM23 program committee has a sense of hope as we plan to meet the promise of tomorrow through planetary health at the annual meeting.

SGIM's 2021 Position Statement related to the Health Effects of Climate Change¹ has formed the basis of our meeting planning approach as it relates to planetary health. SGIM's overarching stance is that we "should take an active role in educating patients, trainees, and the healthcare system about the health effects of climate change, and possible means to address underlying causes and attenuate expected effects."¹ The #SGIM23 meeting approach to planetary health supports the actions listed in the position statement, in particular those actions related to developing, disseminating, and evaluating educational material on the public health impacts of climate change. SGIM also supports efforts to "reduce the drivers of climate change, including Earth's reliance on fossil fuels..."¹ SGIM has demonstrated a commitment

to environmental sustainability with the creation in 2022 of a new chair of sustainability on the SGIM program committee.

The opening plenary on Thursday, May 11, 2023, delivered by Howard Frumkin, DrPH, MPH, MD, will set the stage for further planetary health programming throughout the meeting. Dr. Frumkin is a fellow internist, an environmental and occupational medicine specialist, epidemiologist, Professor Emeritus of Environmental and Occupational Health Sciences at the University of Washington, and member of the Planetary Health Alliance Steering Committee. In his article "Hope, Health, and the Climate Crisis," he lists multiple reasons to maintain active hope, noting that "greater hope predicts greater problem-solving ability and constructive, goal-seeking behavior" which ultimately benefits both patient care and care of the planet.²

Armed with hope, attendees will have opportunities to engage problem-solving skills at two workshops offered in partnership with SGIM's Environment and Health Interest Group (EHIG): "Meeting Learners Where They Are: Action in Climate and Health Education" (2:20-3:20 May 11) and "Meeting the Promise of Tomorrow through Sustainability QI" (1:20-2:20 May 12). Other planetary health-related meeting content will be available through the meeting app.

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FROM THE EDITOR

DR. GOOGLE V. DR. CHATGPT

Tiffany I. Leung, MD, MPH, FACP, FAMIA,
Editor in Chief, *SGIM Forum*

Finding reliable and trustworthy sources of information—and debunking, when necessary, misinformation and disinformation—remains a growing challenge that health professionals face routinely. From one of my last jobs, I received a mug as a parting gift that said, “*Please don’t confuse your Google search with my medical degree*”—a sarcastic quip relevant to a time when physicians and health professionals feared the consequences of patients looking up health information via internet search. That time has long passed, and we find ourselves again at a crux where we wonder next: with generative artificial intelligence (AI), like ChatGPT, how will we face the challenges of confabulations and hallucinations presented by such AI? How will this new tool that patients can readily access for generated answers to their pressing medicine questions (mis)lead them in their quest for health and wellness?

On this specific issue and usage of chatbots driven by generative AI, I’m not too concerned that our routine physician work and interactions with patients will change. For at least a couple of decades, we have already acclimated to the reality of information democratization via the internet and the ability of people to search for whatever they wish to find there. Adjusting how we address misinformation to also address this extended issue of generative AI offering potentially inaccurate or incorrect information will be quite similar. We also still need to continue to foster among patients and populations a keener critical eye about health information sources, their reliability, and credibility. These four steps seem like a foundational place: be vigilant; make sure patients cross-reference information; verify claims; and don’t click on everything.¹

Beyond the individual patient-physician encounter, as much as we in the Society of General Internal Medicine seek to aim at changing the roots of systemic issues, I also think our greatest opportunities to influence our patients’ technology use for health lie in engaging in the design of technologies specifically for those purposes. There is no current way to track exactly who and how many physician informatics professionals there are—existing limited data suggest that a large proportion of clinical informatics (CI) board certified physicians in the United States are internists (36.6% as of 2020), but unfortunately information about gender, race, and ethnicity is entirely missing.²

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GATHERING WITH A PURPOSE: SGIM 2023 MEETING THE PROMISE OF TOMORROW

Martha S. Gerrity, MD, MPH, PhD, FACP, President, SGIM

"Priya Parker, author of The Art of Gathering: How We Meet and Why it Matters, encourages us to think about the purpose of a gathering by exploring the deeper why of gathering.... I encourage you to spend time thinking about the purpose of #SGIM23 for you. Ask yourself why you are here, what are you hoping to get out of #SGIM23, and how can you contribute."



As our 2023 meeting draws close, I am excited that we will gather to share ideas to meet the promise of tomorrow. Our 2023 annual meeting gives us an extraordinary opportunity to connect, collaborate, and learn from each other to advance our mission "to cultivate innovative educators, researchers and clinicians"¹ and tackle the problems we face in all the settings where we work. This meeting starts my year as SGIM President, and I am especially looking forward to hearing from you about ways to advance our mission.

As a generalist society, we have many reasons to gather and interests to cover, such as: acute and chronic disease management, healthcare delivery, career development and wellness, medical education and scholarship, DEI and health equity, research skills, advocating for

our patients and generalist care, and more—just look at the program! This may feel overwhelming with so many great sessions and not enough time to attend all of them, even in a focused area or interest. How do you decide?

Priya Parker, author of *The Art of Gathering: How We Meet and Why it Matters*,² encourages us to think about the purpose of a gathering by exploring the deeper *why* of gathering. I've missed only one meeting since joining SGIM, for the birth of my second son. I can say that one purpose of our annual meeting has been constant over the years—engaging and supporting each other and celebrating the achievements of our members. I am always energized by our meeting; connecting with friends, mentors, mentees; making new friends and colleagues; and being exposed to new ideas or ways of looking at an issue.

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SGIM Forum

Editor In Chief

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Editor.SocietyGIMForum@gmail.com

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smookh@u.washington.edu
Susana Morales, MD
srm2001@med.cornell.edu

Shobha L. Rao, MD
shobha_rao@rush.edu
Jorge A. Rodriguez, MD
jarodriguez1@partners.org
Gaetan Sgro, MD
gaetan.sgro@va.gov
Elisa Sottile, MD, FACP
Elisa.Sottile@jax.ufl.edu
David Walsh, MD
dawalsh@augusta.edu
Taylor Wise, SGIM Social Media and
Communications Specialist
wiset@sgim.org

The SGIM Forum, the official newsletter of the Society of General Internal Medicine, is a monthly publication that offers articles, essays, thought-pieces, and editorials that reflect on healthcare trends, report on Society activities, and air important issues in general internal medicine and the healthcare system at large. The mission of the Forum is to inspire, inform, and connect—both SGIM members and those interested in general internal medicine (clinical care, medical education, research, and health policy). Unless specifically noted, the views expressed in the Forum do not represent the official position of SGIM. Articles are selected or solicited based on topical interest, clarity of writing, and potential to engage the readership. The Editorial staff welcomes suggestions from the readership. Readers may contact the Editor, Managing Editor, or Associate Editors with comments, ideas, controversies, or potential articles. This news magazine is published by Springer. The SGIM Forum template was created by Howard Petlack.

Q & A WITH SGIM'S CEO ABOUT THE NATIONAL PRIMARY CARE SCORECARD

Celeste Newby, MD, PhD; Eric B. Bass, MD, MPH

Dr. Newby (cnewby@tulane.edu) is the co-chair of the Clinical Practice Subcommittee of SGIM's Health Policy Committee. Dr. Bass (basse@sgim.org) is the CEO of SGIM.

EB: Why did the National Academies of Sciences, Engineering, and Medicine (NASEM) call for development of a national primary care scorecard?

CN: The 2021 NASEM report opens with the sentence: "High-quality primary care is the foundation of a robust healthcare system and, perhaps more importantly, it is the essential element for improving the health of the US population."¹ In the almost 500-page report, NASEM carefully outlines how to achieve high quality primary care in the United States with five main objectives:

1. *Payment:* Pay for primary care teams to care for people, not doctors to deliver services.
2. *Access:* Ensure that high-quality primary care is available to every individual and family in every community
3. *Workforce:* Train primary care teams where people live and work
4. *Digital Health:* Design information technology that serves the patient, family, and interprofessional care team
5. *Accountability:* Ensure that high-quality primary care is implemented in the United States

The national primary care scorecard was developed to provide accountability and to track the implementation of high-quality primary care in the United States and is an important step in examining the national data sets on primary care.² This initial scorecard will serve as a baseline for future reports.

EB: How was the scorecard developed?

CN: The Milbank Memorial Fund and the Physicians Foundation partnered with the Robert Graham Center to develop the scorecard.² The NASEM report outlined a measurement strategy based on already established measures of the healthcare system, few in number, easy for the public to understand, consistent over time, and preferably taken from publicly available data. The data set reviewed was from 2010-20, acknowledging that

2020 data was likely affected by the global pandemic. The developers used public data sets when possible, supplemented with proprietary data sets when public data was incomplete (e.g., workforce management data). The report authors note that despite the large amount of information collected and analyzed, there are still many gaps in the data, and this is a limitation of the analysis.

EB: What are the most important findings in the scorecard?

CN: The five main findings of the scorecard are as follows:

1. *Financing: The United States is systemically underinvesting in primary care.* The United States is underinvesting in primary care across all payer types, at 3-8% of health care expenditures. Medicare payments for primary care are the lowest, and likely reflect the population's use of specialists and hospital care. Medicaid payments for primary care have continuously dropped since 2014. Commercial entities spend the highest amount for primary care. Essentially no progress has been made toward mixed payer models (capitation used as a proxy).
2. *Workforce: The primary care physician workforce is shrinking and gaps in access to care appear to be growing.* In 2010, 1 in 3 physicians specialized in primary care, and in 2020, that number was 1 in 5.
3. *Access: The percentage of adults reporting they do not have a usual source of care is increasing.* Approximately 27% of Americans say they have no usual source of health care. This number has increased from 23% in 2010.
4. *Training: Too few physicians are being trained in community settings, where most primary care takes place.* Physicians are primarily being trained in large urban settings. There are geographic discrepancies between where physicians are being trained, and where people live and work. In some states, only 6% of residents train in rural or medically underserved counties.

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PLASTICEMIA: MICROPLASTIC ACCUMULATION IN THE HUMAN BODY AND ITS HEALTH IMPLICATIONS

Zachary G. Jacobs, MD

Dr. Jacobs (jacobsz@ohsu.edu) is an assistant professor in the division of hospital medicine at the Oregon Health & Science University (OHSU), program director for the OHSU Health Hillsboro Medical Center Transitional Year Residency, and assistant program director for global health for the Internal Medicine Residency at OHSU.

Habituation is a powerful cognitive response. As you read this, think about the sensation of your shirt against your skin. The outline of your nose in the center of your vision. The taste of your saliva. Now that I mention them, it's as if they pop suddenly back into existence. In the same way, plastics have become such a pervasive part of the human experience that so often they go entirely unnoticed. How many times do you think you came into contact with a plastic object today? To name a few: the cup that held your morning coffee and the straw you drank it with. Your desk chair, mouse, and keyboard. The cellphone in your pocket and the watch on your wrist. Your bottled water. These are self-evident, but plastics are also found in places you may not even realize, like chewing gum, aluminum cans, sunscreen, and the clothes you wear. Plastic remnants have been found almost everywhere imaginable on Earth, from its highest mountains to deepest ocean trenches, inside its remotest icecaps, and even in the air we breathe. In the last several years, tiny plastic particles have even been identified in the most unwelcome of places: accumulating within the human body.¹

Largescale production of plastic began following the Second World War and sharply increased over time. Worldwide, more than 400 million metric tons of plastic are now produced annually; by 2050, this is estimated to reach a staggering 1.1 billion metric tons per year.² Between 1950 and 2017, approximately 9.2 billion metric tons of plastic were made, the vast majority of which still remains to this day as waste in the natural environment, threatening global ecosystems. Microplastics (typically defined as *plastic particles* ranging between 1 and 5,000 micrometers in size) and nanoplastics (less than 1 micrometer in size) are formed when larger plastic objects degrade from regular use, or gradually break down in the environment. They are also manufactured at this size—so called *microbeads*—for consumer purposes.^{2,3} Micro- and nanoplastic particles are particularly concerning in that they exist on a scale where cellular uptake can occur.¹

Microplastics were first detected in the environment nearly four decades ago, but only identified in human

tissue for the first time in 2019.¹ They primarily enter our bodies via ingestion of food, water, and other beverages; inhalation; and, to a lesser extent, direct skin contact with personal care products, cosmetics, and soil.¹⁻³ According to a recently published literature review,¹ over the last 4 years, microplastics have been detected in a variety of human bodily fluids (feces, saliva, sputum), circulating in the bloodstream, and in various human tissue samples, including the colon, lung, liver, lymphatics, and spleen. They have also been found in meconium, breastmilk, and placenta, suggesting humans are exposed to microplastics as early as in utero and immediately after birth.

Despite their ubiquity, the human health implications of cumulative microplastic exposure remain poorly understood. There is growing evidence suggesting the potential for harm, with several possible mechanisms by which this could occur:

1. via direct effect from the foreign microplastic particles themselves (via local irritation, inflammation, cytotoxicity, oxidative stress, carcinogenesis, etc.)
2. from the chemical additives used in the manufacturing of the plastic, which are associated with a number of adverse health outcomes like diabetes, reproductive issues, and altered neurodevelopment^{2,3}
3. due to the tendency of microplastics to adsorb and transport organic pollutants from their environment, which can then exert further toxic effect when released into the human body.¹⁻³

Research has demonstrated a number of direct health impacts in mice/rats as well as human-derived cells, including toxicity to the intestinal tract, central nervous system, heart, and reproductive and immune systems; impaired pulmonary function; disruption of the metabolic system; and an increased risk of certain types of cancers.¹ Importantly, communities of color, indigenous populations, and low-income families will bear the greatest weight of these health impacts as they are disproportionately

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CONNECTING PATIENTS WITH SNAP AND WIC BENEFITS AT CHURCH HEALTH IN MEMPHIS, TENNESSEE

Ms. Callie Walls; Mrs. Sharon Moore; Christopher Jackson, MD

Ms. Walls (cwalls5@uthsc.edu) is a second-year medical student at the University of Tennessee Health Science Center. Mrs. Moore (moores@churchhealth.org) is the manager of nutrition services at Church Health. Dr. Jackson (cjacks67@uthsc.edu) is associate professor of medicine and senior associate program director for curriculum at the University of Tennessee Health Science Center (UTHSC) Internal Medicine Residency.

Health is not just about the time one spends in a doctor's office. It is impacted by innumerable factors, including food, mental health, shelter, financial security, and support. These social determinants of health must be addressed for patients to achieve true health. For example, food insecurity is a prevalent issue in almost every community. This article aims to highlight the need to expand access to Supplemental Nutrition Assistance Program (SNAP) resources within federally qualified health centers (FQHC), such as Church Health, to address food insecurity and provide lasting health.

Church Health is a clinic for uninsured families in Memphis, Tennessee. Not only does Church Health address medical needs but also they also seek to address the various social determinants of health (SDoH) that affect the lives of patients. One specific area of focus is food insecurity, and it is being addressed by connecting patients with resources like SNAP. Moving forward, Church Health hopes to create its own SNAP clinic to support patients seeking these necessary benefits.

SNAP is a federally funded program that provides nutrition benefits to supplement a family's food budget so they can purchase healthy food. The number of benefits received is based on income and household size. Additionally, applicants must meet other requirements: a U.S. citizen or a U.S. national or qualified alien and employment if between the ages of 16-59. The application requires information on their income, expenses, and resources as well as required documents, such as a Social Security Number and bank statements. In addition to applying, an interview must be completed before applicants can be approved. Clearly, the application and interview process are complex, and many people could likely benefit from extra support. The Tennessee Justice Center (TJC) demonstrates the benefits of providing this support by showing how utilizing SNAP benefits correlates to better health outcomes and reduced rates of poverty.¹ By establishing a SNAP clinic at Church Health, patients can

receive SNAP support in the same place they are coming for their health care.

The need for social programs like SNAP is great in Memphis and Shelby County as a whole. To be eligible to receive SNAP benefits, households must be under 130% of the Federal Poverty Guidelines (FPG).² In Memphis, 22.6% of people are living in poverty.³ Simply based on income eligibility requirements, many of the people in this category are likely eligible to receive SNAP benefits. Even though people are eligible, they do not always access these resources, possibly due to the barriers previously discussed. Based on data from Shelby County from 2017-19, 38.5% of individuals were eligible for SNAP but of the eligible individuals, only 74% accessed SNAP benefits.³

Before moving forward in establishing a Church Health SNAP clinic, information was gathered from previously established clinics in the state. There are already SNAP clinics that are helping connect patients to these resources. The SNAP clinics help individuals understand the application process and sometimes assist with completing the application. Additionally, organizations such as the TJC are also able to pre-screen individuals for eligibility and provide support if they are wrongfully denied access to benefits. Since the SNAP application process is so complex, it will likely be beneficial to have a Church Health SNAP clinic. To establish a SNAP clinic within Church Health, there would need to be an effective flow from the patient-provider interaction to the patient-SNAP connector interaction.

As Church Health works to address the social determinants of health (SDoH), it will be necessary to implement systems that streamline and clarify patient needs. Moving forward, Church Health clinics plan to begin using ICD-10 codes related to the SDoH to identify patients in need and to refer them to appropriate support resources. The ICD-10 codes pertaining to SDoH issues are categories Z55-Z65.⁴ For example, issues specific-

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THE SUBJECTIVITY OF SUCCESS: RECOMMENDATIONS FOR THE EVALUATION OF STUDENT HOTSPOTTING

Camille R. Murray, BSA, BA; Roshan D. Modi, BS; Maximilian P. Brady, BS;
Hannah Marcovitch, BA; Sara D. Turbow, MD, MPH

Ms. Murray (camille.murray@emory.edu) is a Master of Public Health Candidate at the Emory University Rollins School of Public Health. Mr. Modi (roshan.modi@emory.edu) is a third-year medical student at Emory University School of Medicine. Mr. Brady (maximilian.brady@emory.edu) is a third-year medical student at Emory University School of Medicine. Ms. Marcovitch (hannah.marcovitch@emory.edu) is a fourth-year medical student at Emory University School of Medicine and a Master of Public Health Candidate at the Emory University Rollins School of Public Health. Dr. Turbow (sara.turbow@emory.edu) is an associate professor of medicine and preventive medicine in Departments of Medicine and Family and Preventive Medicine at Emory University School of Medicine.

Healthcare spending in the United States remains heavily concentrated amongst a small group of patients: 5% of the population accounts for roughly 50% of annual expenditures and 1% of the population accounts for nearly a quarter of annual spending.¹ National programs have sought to reduce spending and improve healthcare quality by connecting high-need, high-cost (HNHC) patients to existing services within healthcare institutions and broader communities. The Camden Coalition of Healthcare Providers (CCHP) was a pioneer in identifying and working with HNHC patients. The CCHP coined the term *hotspotting* from using data-driven mapping techniques to visualize health care utilization “hot spots” ripe for intervention. They utilize admission data to identify patients who are HNHC and provide individualized, in-person support in navigating their complex medical and social needs.¹ Interprofessional teams are at the core of this program. These teams consist of doctors, nurses, anthropologists, social workers, medical assistants, and other professionals with the intention of integrating strengths and expertise from each professional’s training to provide a patient with high quality, holistic care. Hotspotters collaborate to connect patients with appropriate medical care, community organizations, and government programs in an effort to achieve patient care goals, improve overall health, and reduce excess healthcare utilization.¹ In 2013, CCHP partnered with the American Association of Medical Colleges and Primary Care Progress to bring hotspotting to students in different professional programs.² Student hotspotting has shown great promise as both a tool for interprofes-

sional education as well as an innovative way to provide patients with support beyond the traditional healthcare system. Here, we describe our experiences running a multi-institutional interprofessional student hotspotting program, and offer suggestions for evaluating outcomes in student hotspotting and other programs designed to support HNHC patients.

Our own interprofessional hotspotting program, Atlanta Interprofessional Student Hotspotting (AISH), has been operational since 2017. AISH is student-run and based out of Grady Memorial Hospital, Atlanta’s public, safety-net hospital. We work with complex patients who may require intervention across multiple social and medical domains to improve their overall health and utilization of healthcare services. Our student members come from pharmacy, medical, nursing, social work, public health, and mental health counseling programs at academic institutions across the Atlanta metropolitan region. We leverage our skillsets by working in institutionally diverse, interprofessional teams to provide patient support and help address the complex social determinants of health of our patients via a nine-month partnership. Housing, food access, and transportation are among the top areas for support our patients identify.

While there is limited data regarding the effectiveness of hotspotting programs, a randomized control trial of the CCHP model found no significant effect on patient readmission rates after 180 days.¹ This study used quantitative, electronic health record-based metrics in evaluating hotspotting outcomes and program effectiveness. As noted by the authors, this study did

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CLEARANCE

Susan C. Hirsch, MD; Rosemarie L. Conigliaro, MD

Dr. Hirsch (SHirsch@northwell.edu; Twitter: @susanhirsch49) is an assistant professor in the Department of Medicine at Zucker School of Medicine at Hofstra/Northwell and attending physician, Division of General Internal Medicine, and Medical Site Director. Dr. Conigliaro (rconigliaro1@northwell.edu) is a professor of medicine at Zucker School of Medicine at Hofstra/Northwell and section chief, Women's Health, Division of General Internal Medicine.

Clearance. Medical clearance. Preoperative clearance. Surgeons request patients to be cleared for procedures, and they specifically want that word *clearance*. What does this mean? Does it imply that one is attesting that there is no risk of complications from anything that they do, or that, if something happens, the liability will fall upon the person who “cleared” the patient? We know that this is not so because unexpected and untoward outcomes can happen, even in the best scenarios, and we do not have that crystal ball to predict those.

As general internists who see patients requiring preoperative assessment, we take pride in practicing evidence-based medicine. Patients often bring in a form provided by the surgeon's office. These forms are varied, often requesting specific testing that is unique to the surgeon or practice, not based on published guidelines. Some forms espouse outdated recommendations—the “ACC/AHA guidelines suggest that preoperatively administered beta blockers reduce perioperative ischemia and may reduce the risk of MI in high-risk patients.”¹ Many of the forms are almost threatening—“PATIENT WILL NOT HAVE SURGERY IF THIS FORM IS NOT FAXED BY 48 HOURS PRIOR TO SURGERY” and “MUST USE THE WORD CLEARANCE” in all caps. And almost all of them ask for labs that are redundant—a SMAC-20 and LFT's?—or unnecessary and not indicated. Clearly these forms do not reflect current evidence—is anyone even looking at them? Rather it is merely the process to have the form completed that becomes the goal. And the same form/process for everyone? A healthy 28-year-old going for arthroscopic knee surgery, a 68-year-old with ESRD on dialysis going for TURP with the same requirements? Surely this is not evidence based.

Many patients come one or two days prior to their scheduled procedure, not enough time to optimize the patient, if indeed that was truly the reason for the visit. If there actually was an intervention that might lower a patient's pre-operative risk—is one day enough time to do so? No, the day prior is fine, because it's just a formality, the goal being to get the form to the surgeon's office by.... well you get the idea.

The biggest offender is the “medical clearance” for cataract surgery, a 20-minute, ambulatory, bloodless surgery, using only topical anesthesia and no sedation, that

has an exceedingly rare risk of non-ophthalmologic complications (0.014% mortality risk).² Despite many patients undergoing cataract surgery are elderly with co-morbidities, there are very few conditions that preclude them from undergoing this procedure, which incurs little physiologic stress. We have more than 20 years of evidence³ attesting to the disutility of preoperative assessment for patients undergoing cataract surgery. Now, we have data suggesting that all this does is delay a procedure needed by elderly patients who cannot see, and in the interim may have falls, possibly with fracture, and additional adverse events such as MVAs, further cognitive decline, and increased mortality,⁴ all while awaiting “clearance.” Indeed, the 2021 Society for Ambulatory Anesthesia position statement recommends that cataract surgery not be postponed in the absence of a severe acute medical illness.²

A recent patient who underwent pre-operative assessment was then told that her “clearance” expired five days prior, and she required an updated assessment. Was it 30 days? 60 days? What is magical about any of those time frames? If everything was normal prior, what is the likelihood that a new abnormality will emerge? And then there is the known “care” cascade of abnormal testing, resulting in repeat testing, follow-up imaging and visits, etc., with low rates of utility, and great potential for harm. The Centers for Medicare and Medicaid Services (CMS) has dropped the requirement for a history and physical examination before ambulatory surgery, recognizing the lack of benefit of routine testing for these patients.

This is far from patient-centered; this is patient-onerous. Why are we still doing this? One answer may be the potential for lost revenue with streamlining the process and eliminating inefficiencies. Since there are about 1.5 million cataract surgeries performed annually in the United States, this is a very lucrative process for any health system as it generates visits, tests, and interventions. A 68-year-old man with atrial fibrillation, hypertension and obstructive sleep apnea may be asked to undergo “clearance” from cardiology, pulmonary and primary care, even for a simple orthopedic procedure performed without general anesthesia. By participating in this process, we are not serving our patients, but serving the system. But by not participating in this process, we

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may be depriving our patients of procedures that greatly improve their quality of life. What a dilemma.

So, is there any value in doing a pre-operative assessment? Absolutely. These visits should be viewed as an opportunity to bring patients into care who might not otherwise come. These patients may be more motivated to address and improve health habits in the preoperative period (e.g., smoking cessation). Presurgical care can be looked at as a chance to potentially mitigate poor outcomes, address unstable or non-optimized medical conditions to prevent increased length of stay, infection, and readmissions.⁵ This is possible if we are given adequate time prior to the surgery. In addition, all patients can benefit from a good medication reconciliation, a discussion of their health risks, and ways to improve their health. Optimally, this process should be individualized and tailored to the patients' needs—if they have multiple co-morbidities or take multiple medications. The process should never be automated, since one size

does not fit all, and many patients can forego the process safely.

CMS may finally be changing their reimbursement policy for unnecessary and non-essential preoperative testing. From the CMS 2023 Final Rule: *...the medical necessity for the clearance must be evident. The necessity is determined by the scope and potential risks of the procedure itself, along with the patient's general state of health and possible risk factors. For a patient with a chronic, stable condition(s) who is undergoing a surgical procedure which is not inherently associated with high risk (e.g., cataract surgery), a preoperative clearance may not be medically necessary.* Thus, a financial disincentive may have more impact than years of available evidence. Perhaps it is this disincentive that will finally allow us to deliver evidence-based care to our preoperative patients.

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IMPROVING CARE: PART I (continued from page 6)

ly related to food insecurity can be recorded using the code Z59.4 which identifies patients with a “lack of adequate food and safe drinking water.”⁴ Z-codes could be used to get patients from the exam room with the physician to the office with the social worker. Additionally, Z-codes could allow clinicians and social services to document SDoH issues in a standardized way. Other potential benefits to using Z-codes for SDoH issues are the format is already used for insurance requests, and the codes can provide a way to keep track of patient needs. The utility of Z-codes extends beyond addressing food insecurity as they can be applied to other non-medical needs patients have.

To address the issue of food insecurity experienced by many of their

patients, Church Health in Memphis, Tennessee, is working to establish a SNAP clinic. By creating these resources and relationships, Church Health will be able to address food insecurity by providing patients with the necessary support and assistance needed to receive benefits. In the future, Church Health hopes to expand this model to other social determinants of health that are impacting the lives of patients.

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not examine patients' perceptions of healthcare use or other patient-reported benefits of the hotspotting intervention; however, we believe these metrics are critical to consider when evaluating the effectiveness and benefit of hotspotting programs.

An intervention's "success" is subject to the biases of the evaluator, the metrics, and the demands of larger institutions, but it is important and relevant to tailor metrics so that they address the needs of the target population. In a patient-centered intervention, such as hotspotting, the metrics should reflect patient goals. This is in line with the Triple Aim objectives: improve patient care, improve the health of populations, and reduce the per capita cost of health care.³ At the core of the CCHP hotspotting framework and curricula are concepts such as empowerment, self-esteem, skill-building, social support, knowledge of and confidence with social services, and health literacy. Furthermore, assessing interprofessional collaboration merits an analytic toolbox that takes advantage of diverse approaches to research. For these reasons, we recommend that studies evaluating hotspotting programs expand the evaluation framework, rather than relying solely on quantitative data, and identify outcomes targeting patient perceptions and hotspotter growth as key metrics of success.

First, we suggest that studies evaluating hotspotting programs utilize a mixed methods approach to quantitatively analyze healthcare outcomes and qualitatively examine these outcomes from a patient perspective. Qualitative data is inherently hypothesis-generating. Incorporating it into the framework for program assessment will provide a richer picture of program efficacy and further contribute to the generation of future research. Adding open-ended questions to patient progress and outcome surveys becomes an opportunity to center interventions on patients' needs,

advancing the overall mission of a patient-centered program. In AISH's program evaluation, for example, we will be collecting baseline and endpoint data on psychosocial self-efficacy of people living with diabetes using the 28-item Diabetes Empowerment Scale⁴ as well as collecting narrative feedback every two months about progress towards patient goals. We aim to elicit how our hotspotting intervention has impacted patients, including the effects on their therapeutic relationships with providers, understanding of their health conditions, and progress toward their overall healthcare goals. With this approach, patients have space to define their barriers and facilitators to health care and health outcomes that we may not have considered.

We further recommend that studies consider outcomes specifically related to the hotspotting members when defining program success—especially when evaluating student-run hotspotting programs. In this context, hotspotter skill-building is a key dimension of analysis. Proficiency in root cause analysis, community resource navigation, and interprofessional collaboration are unconventional, albeit relevant, variables to include in hotspotting program evaluation. Promoting interprofessional education (IPE) is an investment in the future of the public health and healthcare workforces and can influence team dynamics and performance. Monitoring these variables, especially with mixed methods, may offer a more meaningful description of a program's success from a professional development perspective. To assess IPE, AISH will collect baseline and endpoint data using the IPE Collaborative Competency Self-Assessment.⁵ We also plan to conduct a focus group with graduating hotspotters at the end of our program year to better understand attitudes and perceptions of the AISH IPE curriculum. We hypothesize that understanding the breadth of this impact will

strengthen the case for the value of hotspotting.

We recognize that AISH's approach to implementation and evaluation may not apply to all hotspotting programs given our unique methodology and the student-driven nature of our program. However, incorporating mixed methods and redefining primary outcomes of success are the first steps to understanding the impact that hotspotting can truly have on a community. We believe that hotspotting is an effective community-based intervention best evaluated using an integrated approach to understand patient perspectives as well as hotspotter experiences as holistic measures of success.

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Recommendations for Reducing Microplastics Exposure, Limiting Plastic Waste, and Advocating for Change in Environmental Policy

Limiting Microplastics Exposure

- Use plastic alternatives like glass when storing and microwaving food
- Avoid preparing and heating baby formula in plastic bottles
- Drink filtered tap water rather than bottled water
- Avoid takeaway paper (plastic-lined) cups, especially for hot beverages
- Use cosmetics and personal products that are free of plastics and microbeads
- Wear natural, non-synthetic clothing; avoid polyester fleece fabrics
- Dust and vacuum your home regularly to reduce inhalational exposure
- Use loose-leaf tea rather than plastic-containing tea bags
- Choose products packaged in non-plastic containers whenever possible

Reducing Plastic Waste

- Take the 4Rs pledge^a to Refuse (single-use plastics), Reuse, Reduce, Rethink
- Encourage others in your social network to also take the pledge
- Avoid single-use plastics like disposable cups, straws, coffee pods, water bottles, toiletries, etc.
- Ask food delivery services and restaurants to hold single-use utensils and straws
- Keep a plastics diary and strive to reduce personal waste over time

Advocating for Change

- Support non-profit organizations like Plastic Pollution Coalition,^b Beyond Plastics,^c and Greenpeace^d
- Sign petitions^{b-d} and join campaigns^e to end plastic waste and pollution
- Contact representatives in support of legislation under discussion,^f like the Break Free From Plastic Pollution Act (H.R.2238/S.984), Reducing Waste in National Parks Act (H.R. 5533/S.2960), Plastic Reduction and Recycling Research Act (H.R.2821/S.984), and Protecting Communities from Plastics Act (H.R.9388/S.5163)
- Look for upcoming opportunities to support the U.N. Global Plastics Treaty

^a <https://connect.plasticpollutioncoalition.org/take-the-pledge>

^b <https://www.plasticpollutioncoalition.org/>

^c <https://www.beyondplastics.org/>

^d <https://www.greenpeace.org/usa/issues/fighting-plastic-pollution/>

^e <https://www.surfrider.org/campaigns>

^f <https://www.congress.gov/>

ately affected by plastic waste and production and are at the greatest risk of microplastic accumulation.²⁻⁴ More high-quality research, including prospective, population-level studies are needed to fully understand the scope of the problem and risk of adverse outcomes. Comprehensive monitoring of microplastics in the environment is also needed, including the atmosphere, food and water supplies, and soil.

Meanwhile, action must be taken to curb the exponential growth of plastic waste. Corporations frequently tout recycling and other “green” initiatives as the answer, but this is woefully inadequate: since the 1950s, less than 10% of all plastics have been recycled or reused.²⁻⁴ Instead,

the solution must involve a reversal of the meteoric rise in plastic production. This will require federal legislation to strengthen policies around production and disposal, as well as to reduce reliance on single-use plastics. New regulations should simultaneously support environmental justice by reattributing the burden of plastic waste from those currently shouldering it—the most vulnerable communities—to those ultimately responsible: the corporations producing it. Some examples of relevant legislation under consideration are highlighted in the table.

From a health perspective, public awareness campaigns are needed to engage and educate local communities, as many remain uninformed of

the potential risks. This should include messaging around minimizing personal exposure to microplastics, such as avoiding heating and microwaving of plastic storage items to reduce leaching of microplastic fragments and harmful chemicals; avoiding takeaway beverage cups, polyester fleece fabrics, and any products containing microbeads; and reducing bottled water consumption, among other recommendations.³ Chemical-free plastics or, better yet, non-plastic substitutes like glass should be used for food storage whenever possible, though these costly alternatives will need to be subsidized for low-income families. Healthcare professionals can play a role through

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WHERE ARE YOU REALLY FROM? STRUCTURAL BIAS IN HEALTH CARE AND INFORMATICS

Elisabeth L. Scheufele, MD, MS, FAAP, FAMIA; Matthew Sakumoto, MD;
Tiffany I. Leung, MD, MPH, FACP, FAMIA; Saira Haque, PhD, FAMIA, ACHIP

Dr. Scheufele (elisabeth.scheufele@childrens.harvard.edu) is a physician in general internal medicine & pediatrics and a physician informaticist at the Boston Children's Hospital. Dr. Sakumoto (matthew.sakumoto@ucsf.edu; Twitter: @MattSakumoto) is a Virtualist Primary Care Physician and Informatics Physician Champion at Sutter Health. Dr. Leung (Editor.SocietyGIMForum@gmail.com; Twitter: @TLeungMD) is Editor-in-Chief of SGIM Forum. Dr. Haque (Saira.Haque@pfizer.com) is a senior director of clinical informatics at Pfizer and associate editorial board member of Applied Clinical Informatics.

Race-based and cultural bias is prevalent and widespread in many medical and clinical informatics environments for patients, caregivers, providers, and staff. Patients of non-rationally dominant races or cultures can be subject to bias that negatively impacts their medical experience and health outcomes. The types of impacts vary, however, as Asian American health is often studied by examining this group as a monolithic category. This racially convenient labelling of heterogeneous individuals perpetuates bias and homogenizes health risks within this diverse group. As one of many examples, machine learning may perpetuate disparities based on insufficiently representative data.¹ This faultiness results from studies that do not appropriately account for race-based considerations and idiosyncrasies in their methods and interpretation. Additional scenarios range from practitioners who may have been educated on race-based misinformation to patients who may not speak the culturally dominant language, and hence receive medical management that would not be on par with those who speak it.

In this perspective, we summarize relevant issues and literature in relation to gaps we have encountered in our professional work as clinical informatics professionals. With respect to the diversity of clinical informatics practitioners and professionals, bias also can contribute to limitations in career advancement and employment opportunities across numerous sectors, including academia, health care, industry, and government. There is a tendency in professional settings to mythicize Asian Americans as a “model minority,” which both glamorizes and stereotypes certain characteristics of professionals of Asian descent.² There is also a “bamboo ceiling,” or underrepresentation of professionals of Asian descent in leadership positions in the United States, even though the perception is that there is overrepresentation

of this group in the natural sciences and engineering disciplines.^{3,4}

Professionals of Asian descent commonly experience race-based microaggressions (i.e., “*Where are you really from?*” or “*Your English is really good.*”), other forms of discrimination, and, more recently since the COVID-19 pandemic, an uptick in hate and harassment. Patient and caregiver experiences coupled with the need for culturally competent care can impact outcomes.⁵ Such phenomena must be exposed, identified, and acknowledged for resolution that can enable change and optimization of experiences and outcomes of those impacted for patients, staff and informaticists alike. Additionally, there are other opportunities to address previously overlooked issues, for example:

- Developing culturally sensitive patient educational materials and education for health professionals on these issues to support clinical practice
- Highlighting racism and racial and cultural bias, including how to identify and address it in different organizational settings for clinicians, staff and leaders
- Providing mentoring programs for different types of career challenges and stages (e.g., scholarly communications, such as scientific publication) and sponsorship to promote professional communications and advancement, with a focus enabling diversity and inclusion in informatics and adjacent professions
- Highlighting the impacts of underrepresentation in clinical trials and databases, which in turn inform and introduce bias into predictive analytic models, and advancing methods to address underrepresentation such as recruitment and different analytic techniques focusing on responsible artificial intelligence

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There are many other purposes in gathering at #SGIM23. I encourage you to spend time thinking about the purpose of this meeting for you. Ask yourself why you are here, what you are hoping to get out of the meeting, and how you can contribute. Show up with an intention not only to consume but also to participate and do the work. Come prepared and be ready to engage, listen, and learn. Bring a sense of curiosity and openness to the meeting. Take time to learn about someone you don't know at workshops, poster sessions, or in the hallways. Welcome our residents and fellows and ask them about their interests and passions.

We are a diverse group, and it is our diversity that gives us strength and nurtures creative problem solving that will move us forward. What unites us is that we are academic general internists passionate about our work. Over this next year, I want us to think collectively about what it means to be an academic general internist, in any setting, and why our care is central to the health of patients and populations. We need to be better at articulating this message for our patients, policy makers, and trainees; and I need your help doing this.

My purpose for #SGIM23 is to meet and listen to you and our key committee and commission leaders to hear ideas, build collaborations,

and develop strategies for moving SGIM's work forward. We face wicked problems in general internal medicine. These are problems (e.g., payment reform, increasing under-represented minorities in the physician workforce, providing care to marginalized communities) that are difficult to solve, may not be fully understood, have many interdependencies, involve multiple stakeholders, and have no easy solutions.³

I remain committed to the priorities I set last year to address these challenges, and I need your help identifying and moving solutions forwards:

- *Increase and support our "pipeline" of academic generalists especially those from under-represented minorities* through outreach, support, and career development in our regions and at all career stages
- *Leverage our leadership and resources through strategic partnerships* with like-minded societies to speak out about the inequities in health care and strain on physicians and all healthcare workers
- *Promote healthy workplaces* through our wellness training programs and advocacy for organizational change to support high quality patient care

and workforce wellness within institutions and with local, state, and federal policymakers.

- *Keep SGIM on firm financial footing* through the work of the Philanthropy Committee to assure that we can grow in ways to benefit members and keep the pipeline of general internists and leaders strong.

Enjoy our time together at #SGIM2023 and join me in working on these priorities! Get involved in one of our regional or national committees or work groups and join in the conversations on GIMConnect. We need each other to make progress on these priority areas.

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- Identifying and disseminating the ways by which informatics and allied professionals can identify bias against patients and colleagues to become better informed and prepared allies.

In the spirit of Asian Pacific American Heritage Month, we look forward to the opportunity to share our perspectives live at a panel discussion of the American Medical Informatics Association's Clinical Informatics Conference in late May. There, we will engage

with our fellow informaticists in dialogue on race-based and cultural bias in clinical informatics work and learning environments and to identify ways of addressing these issues. As professionals with training and personal experience in these spaces, we believe that greater awareness is needed about the impact such biases can have on patients, medical practitioners, informatics practitioners and professionals across various settings, such as academia, health care, industry, publishing, and government. We also welcome readers

to contact us further regarding their own experiences and viewpoints on how best to address these challenging structural biases in health care and informatics.

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Limited data in CI training programs suggest <25% of CI fellowship program applicants are women (2016-17), and in that same survey, one applicant identified as having Black or African-American race and zero identified as having Hispanic or Latino ethnicity.³ Regardless of formal training, understanding ethical, legal, social, and policy issues pertaining to technology applications in health care is going to increasingly become an essential skill in our routine practice.

Our work is set out for us as technologies evolve, whether or not they are intended for health care and med-

icine. Let's be sure we are equipped and engaged to tackle these issues as they arise—and support our patients to do the same. I look forward to #SGIM23, at which time the SGIM presidency transitions from LeRoi Hicks to Martha Gerrity, penning her first President's column in this issue, as one of many places to continue these vital discussions on our communities' professional development.

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FROM THE SOCIETY (continued from page 4)

5. *Research: There is almost no federal funding available for primary care research*. The National Institutes of Health allocates approximately 0.2% of its total budget to primary care research. This percentage was unchanged from 2017 to 2021.

It should be noted that this data does not consider physician burnout or the aging workforce. The report, while sobering, likely represents a more positive view than the real-world situation.

EB: What should SGIM do to act upon the findings?

CN: This scorecard shows that

the nation has a long way to go to achieve the goals laid out in the NASEM report. While the data are quite troubling, the fact that we now have national data and a tracking system is an important step forward in restructuring our healthcare system. With the information provided in the scorecard, SGIM and other stakeholders and supporters of primary care can advocate for changes at the federal level. As changes will be needed broadly, Congressional hearings on the national report card findings may be needed.

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MEDICAL EDUCATION: PART II (continued from page 13)

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In addition to a focus on meeting content, the program committee has carefully considered primary sources of general in-person meeting emissions, including venue-specific carbon and waste reduction, meeting consumables, meeting travel, and sustainable catering. Meeting planning is a long process, with venue selection occurring years in advance. Despite the protracted planning schedule, knowledge is an important first step, and there are still many ways to minimize our environmental impact at #SGIM23.

Gaylord Rockies, this year's venue, happens to have made several commitments to environmental sustainability and social impact. Their goal is to implement innovative approaches to energy efficiency, water conservation, waste reduction, and air cleanliness. The resort also works to minimize waste by offering cardboard and plastic recycling, post-consumer recycled paper products, bulk purchasing, reduced packaging and manufacturer take-back initiatives, an ink cartridge and toner cartridge program, and on-site business center.

From a programmatic perspective, the digital app avoids the need for paper schedules, attendee contact lists, and surveys. Individual attendees can avoid waste at the meeting by bringing their own: lanyards, reusable water bottles, and warm beverage containers. Additionally, digital business cards save paper and can be created quickly online.

In-person attendees can elect to purchase carbon offsets for air travel, which by some estimates is responsible for ~90% of meeting emissions.³ Carbon offsets are best used temporarily by individuals, businesses, and organizations to address residual emissions until other environmentally sustainable solutions are available. Care must be taken to ensure the carbon offset project follows certain principles since some projects have been known to further damage ecologies or harm Indigenous populations.

Practice Greenhealth offers guidance on how to choose carbon offset projects following principles from the World Resources Institute, and important considerations while offsetting health system emissions.⁴

Other individual steps toward carbon reduction include: using public transportation to and from the home airport, foregoing house-keeping services when able, turning off hotel water/lighting when not in use, and turning down hotel thermostat/AC when not in use. The Gaylord Rockies Resort has a number of energy efficiencies in place and encourages guests to turn down heating/cooling systems when leaving their rooms. Meeting attendees that hop on the train out of Denver International Airport can access the hotel's complimentary shuttle 9.5 miles down the line. Further details for how to access the shuttle will be available on the meeting website and app.

Sustainable catering is another key opportunity to decrease the carbon footprint of events—it is best done through reduced food waste and prioritizing plant-based food options. With 25-30% of global food left unused, the Intergovernmental Panel on Climate Change attributes 8-10% of global emissions to food waste.⁵ Furthermore, diets containing mostly plants are good for both human and planetary health since plant proteins produce fewer greenhouse gas emissions and require less land and water. The Gaylord Rockies has pledged to support local, organic, and sustainable farming and uses on-site pulping to reduce food waste from all restaurants and banquets. Individual attendees promote sustainable food practices while choosing plant-based meal options, choosing fruit or unpackaged meals over foods wrapped in plastic, and only taking food that will be consumed in order to avoid waste.

Reflecting on the range of environmentally sustainable meeting solutions, all #SGIM23 attend-

ees should feel ProudtoBe[S]GIM. Attending or not, each member is invited to confront climate change through supporting environmentally sustainable meeting planning, submitting more abstracts which address climate and health, supporting other opportunities at regional and national meetings to learn how to protect patients from the health impacts of climate change, and continuing to educate physician leaders whose careers will be defined by the consequences of climate change.

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SIGN OF THE TIMES (continued from page 11)

legislative advocacy, community education, and patient counseling on reducing microplastic exposure when discussing nutrition and preventive health. The table summarizes ways to minimize individual exposure, reduce plastic waste, and join the fight for change.

Plastics have undeniable benefits—they are durable, lightweight, and versatile. From electronics to healthcare technology, they have revolutionized our lives in countless ways. But as Judith Enck, president of the non-profit group Beyond Plastics, recently wrote in her testimony to the U.S. Senate, “we’re not seeing trees festooned with IV tubing, [or] car bumpers [...] in our rivers and streams.”⁴ Plastic-based technologies with meaningful impacts on health and quality of life represent a negligible fraction of those being produced and discarded, and, in most cases, are utilized for years, not minutes.

Recently, a major step was taken toward curbing the plastic pollution crisis: in March 2022, at the fifth session of the United Nations Environment Assembly (UNEA-5.2), representatives from 175 countries ratified a historic resolution to end plastic waste and to develop an international, legally binding agreement for doing so by 2024.⁵ Negotiations are still underway, so work is needed to hold our leaders accountable. In addition to all of the health implications described above—which we are

only beginning to understand—the substantial negative impact of plastic waste on the environment and its contribution to climate change are well established.²⁻⁴ Reducing plastic production and disposal is critical not only for the health of ourselves and of our children but also for the survival of our planet.

The word *plastic* is derived from the Latin *plasticus* and the Greek *plastikos*, meaning “able to be shaped or molded.” The future of our health and planet is still plastic—the end of this story has not yet been written and we can still impact the outcome. We are at the precipice of understanding these newly identified interlopers in our bodies and their impacts on our health, both known and hypothetical. Do not be fooled by habituation: The problem, like the outline of your nose, is right before your eyes. *Now* is the time to act.

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