The American Ophthalmological Society

Established 1864

Marilyn T. Miller Lecture

2024

Council Introductory & Editorial Comments

2024 MARILYN T. MILLER, MD LECTURE

Introductory Comments

AOS Council

In 1904, alarmed by the state of medical education in the United States, the AMA Council on Medical Education initiated an evaluation through the Carnegie Foundation. Six years later, what has come to be known as the Flexner report[1] catalyzed a sea change in medical education and practice in the United States. These changes included standardization of medical education with eventually an accreditation body (now the Accreditation Council for Graduate Medical Education or ACGME), establishment of various medical specialty boards that certified practitioners, and state and federal licensing medical boards that monitor practitioners after completion of their formal training. This structure has undoubtedly improved the training of physicians and practice of medicine in the U.S.

As has been appropriately recognized, however, Flexner's recommendations led to the closing of many Black medical schools and the subsequent restriction of various racial groups and women from medical training. Although not the sole cause of the lack of diversity and inequitable health delivery in US medicine, the changes made in response to the Flexner report were contributory. A direct outcome of the Flexner recommendations was that medical education became much more standardized. The current ophthalmic curriculum for residency training programs is codified with the ACGME, with accountability through regular program evaluations by the Review Committee. Further feedback on the effectiveness of training is provided through the certification process of the American Board of Ophthalmology. Similar accreditation and certification processes are in place for medical schools.

Training programs in ophthalmology require residents to acquire a completely new knowledge and skill set, compared to what was covered in medical school. Arguably, this occurs to a greater extent for ophthalmology residents than for those training in any other discipline. Currently, ophthalmologists are trained in an extremely rigorous, relatively inflexible curriculum, such that in four years, trainees advance from minimal knowledge of eye disease and surgery to competence as practitioners. Critically, the clinical portion of this training must take place in a fashion that provides care to patients that is on par with that provided by ophthalmologists who are already licensed and certified. The difficulty in successful completion of ophthalmic training is reflected in one of the highest first-time failure rates for Board Certification, 15%.[2]

Some aspects of the design and assessment of medical school education and assessment are changing. Increasingly, medical schools are implementing competency-based curricula so that students progress through the curriculum in a more individualized fashion. Part I of the United States Medical Licensing Examination (USMLE) is now pass/fail, and grading in the basic sciences and clinical rotations is often pass/fail. Medical education is becoming less quantitatively standardized, making comparative assessment of an individual medical student's performance challenging. This, and other factors, could affect the ability of those entering ophthalmology residency to succeed with the current training design. Interestingly, the scaled score for the OKAP examination has shown a steady drop for US trainees for the past 5 years.[3] Many factors can affect test scores, but is this a "red flag" suggesting we should assess our curriculum or the flexibility of training programs? Will the declining performance on the OKAP be reflected in an even higher first-time failure rate for Board Certification? Most importantly, ophthalmology residency should lead to the success of trainees in clinical practice and vision science. Achieving this goal requires a thoughtful balance between the admission process and the training curriculum.

At the 2024 meeting of the AOS, the Saturday Symposium, *Parallel Populations – Institutionalizing Inequity?* with the Keynote Miller Lecture by George Bartley, *Equity and Equal Opportunity: Finding Balance in Ophthalmology*, focused on how our profession can begin to address some of the inequities in the delivery of eye care. We have included Dr. Bartley's excellent Miller Lecture in this edition of the *Transactions*.

As you read this lecture, with the context provided in this editorial, we encourage you to consider:

1. Should the curriculum of ophthalmic residency programs become more flexible, perhaps adopting a competency-based progression as is being employed in medical school training?

2. Is our current method for selecting residents (application, brief interview, residency match) adequate to achieve the optimal residency class?

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2024 MARILYN T. MILLER, MD LECTURE

Equity and Equal Opportunity: Finding Balance in Ophthalmology

George B. Bartley, MD

Dr. Marilyn Miller was an icon in our field. Born in Chicago in 1933, she was a graduate of Purdue and the University of Illinois Chicago, where she completed her ophthalmology training and then joined the faculty in 1965. Dr. Miller made fundamental contributions about congenital ocular anomalies and in particular, the consequences of teratogens such as thalidomide. She was a consummate teacher and, for more than a quarter century, traveled to many countries, especially Nigeria, to pass on her wisdom and experience. Dr. Miller was a charter member of The American Association for Pediatric Ophthalmology and Strabismus and served as its first woman president, and was also the first woman president of the American Ophthalmological Society. Among the many honors bestowed on Dr. Miller were the AOS medal and the American Academy of Ophthalmology's Laureate Award. I had the privilege of hosting Dr. Miller when she came to Mayo Clinic some years ago as a visiting professor and the good fortune to work closely with her husband, Dr. Ron Fishman, with the Cogan Ophthalmic History Society. Dr. Miller passed away in 2021, and I am greatly honored to present this lecture in her remembrance.

Greatly honored but greatly challenged. When David Wilson invited me, on behalf of the Program Committee and the AOS Council, to opine about "Equity vs. Equal Opportunity: Finding the Right Balance in Ophthalmology," my initial reaction was to decline. What standing do I have to address this complex topic, and in less than 30 minutes? How about a presentation on thyroid eye disease, orbital surgery, or the contributions of Edward Jackson to our profession? However, after chewing on this for a while I realized that I would learn much from such a project and accepted, but with the suggestion that the title be revised slightly to: "Equity and equal opportunity: finding balance in ophthalmology," as it seemed that equity and equal opportunity ought to be complementary, and I certainly have no pretensions to knowing what balance might be "right" for our specialty.

Regardless, the title is vague but pluripotential. Should the context be clinical care, education, professional achievement, resource allocation, ownership, language, or some other perspective? With the disclaimers that what follows is not a systematic review but more akin to an op-ed, and that I am not speaking on behalf of the American Board of Ophthalmology or the Mayo Clinic, I will try to share some thoughts about equity and equal opportunity that I hope may be generalizable and will conclude with some suggestions about finding balance that I hope may be actionable.

One of my favorite aphorisms is attributed to Socrates – that the beginning of wisdom is the definition of terms[1] – so I started with a Google search. The number of results for "equity" and "equal opportunity" was astonishing – millions within microseconds – as was the broad spectrum of perspectives. And it quickly became clear that these topics pose a potential minefield when one of the very first hits posed the question, "When Did Equity Become a Trigger Word?"

Like Dante, I found myself in a dark woods.[2] With Virgil nowhere in sight and probably of minimal help anyway, I thought it would be enlightening to seek the opinions of some colleagues who are way smarter than I am. You'll recognize most of these names.* As the point of departure for our conversations, I asked each person to define what equity, equal opportunity, and balance meant to them. Although there were some common themes, I was surprised by and impressed with the wide range of viewpoints that I heard. I regard these individuals as friends as well as colleagues and am most grateful for the honest and insightful perspectives, and in some cases, very personal stories that they shared with me. So, with homage to Shakespeare ("Words, words, words")[3] and Rabbi Abraham Joshua Heschel ("Words create worlds")[4] let me share a sampling of what I learned, both from listening and from the literature.

Equity

First, although some prominent public figures have declared that equity requires equal outcomes, it should be clear that such expectations are unrealistic (and, not surprisingly, none of my interviewees went down that path). As a brief personal example, my first grandchild was born with the external clinical features of Sturge-Weber syndrome. Although fortunately lacking the intracranial components of the disorder, she does have glaucoma in her right eye, has undergone proton beam therapy for a choroidal hemangioma, has anisometropic amblyopia, and has received more than 20 laser treatments for her port wine stain. But benefitting from superb care at the University of Minnesota and Mayo Clinic, and the diligent attention of two wonderful parents, she has developed into a bright, confident, well-adjusted 9-year-old. But her visual outcome will never be equal to that of her cousins.

So, if equity does not require equal outcomes, how does equity relate to equality? The difference is nicely illustrated by a cartoon from the Robert Wood Johnson Foundation (Figure), which I suspect most of us have seen, or a variation of the metaphor with persons attempting to watch a ball game over a fence. Images are helpful, but let's return to words, words, words.

One of the more succinct commentaries about equity, ranging from real estate to public policy, that I came across was by Kai Ryssdal, the host of Marketplace. He wrote that the word first appeared in English in the 1300s, from the Latin root *aequus* (meaning fair, equal, or even) through the French *equité*, which connotes "justice and rightness…plus a splash of fairness."[5] Indeed, a more recent iteration of the ball game metaphor includes the element of justice.

When searching Google, the definition proffered by the National Association of Colleges and Employers came up even before that by Merriam-Webster: The term "equity" refers to fairness and justice and is distinguished from equality: Whereas equality means providing the same to all, equity means recognizing that we do not all start from the same place…"[6] Focusing from equity writ large to health equity, several medical organizations have adopted a similar definition.[7] And focusing further from health equity and equity in ophthalmology, I enthusiastically recommend the work of Stephen McLeod.[8] In his lecture entitled "Advancing Equity in Vision Health," Stephen refers to a widely cited definition of equity from the writings of Paula Braveman: "Everyone has a fair and just opportunity to attain full health potential, and no one is disadvantaged from achieving this potential because of their social position or other socially determined circumstances."[9] But Stephen points out that the terms "fair," "just," and "full health potential" relate to individuals. In a complex system such as health care, all elements need to work. If one element fails (for example, medications that the patient cannot afford, transportation challenges getting to the physician, etc.), then the system fails.

Furthermore, again from Stephen's talk, "Equity is not defined by a specific outcome or endpoint but is multidimensional. Equity can only be measured or proved by demonstrating the universal—one would have to capture the entire universe of measures. In contrast, it is easier in science to prove failures – a disparity can be confirmed with a single measure. Thus, achieving equity is aspirational; in the "real world," we need to identify practical, achievable targets." This call for objectivity was consonant with an observation by David Parke [personal communication, 28 November 2023]: "The social definition of equity is made difficult by the absence of agreed-upon, short-term metrics and timelines. Often, aggregate measures are used as surrogates."

Wrapping our arms around the concept of equity is challenging. I could use my entire time allotment sharing what I learned from the literature and the many insightful quotes that I heard from my interviewees, but to conclude this section, let me highlight just a few. Ruth Williams pointed out that participation and representation are important to achieve equity, but ownership is even more so [personal communication; 27 November 2023]. Ruth has worked hard for this to occur at the Wheaton Eye Clinic, and her cousin in Sweden is involved with efforts to increase land ownership by women.[10]

Hans Grossniklaus opined that "equity requires being heard, not being talked past" [personal communication; 13 January 2024]. David Herman asserted that "equity must be individualized, personalized, and tangible" [personal communication, 29 January 2024].

Ambar Faridi commented that "Diversity is a fact. Equity is an act. Inclusion is the bridge." As such, equity requires "fair access to resources and support for all people, based on the unique needs of each person" [personal communication, 6 December 2023]. And that is a good segue to the topic of equal opportunity.

Equal Opportunity

Two complementary metaphors resonated with me. The first was from Keith Carter, who views equal opportunity as "the chance to get into the room. However, once in the room, people must have the tools and qualifications to succeed" [personal communication, 12 December 2023]. Keith Warren agreed: equal opportunity is "having the necessary equipment once on the field to succeed," but added, "Then it is up to the individual" [personal communication, 13 January 2024]. As with equity, equal opportunity affects individuals, each of whom has unique needs, goals, abilities, and motivations.

Our current AOS President, Tim Olsen offered a useful insight: "Think of equity as the "push": boosting those who may need help but without diminishing others, and equal opportunity as the "pull" where all qualified, eligible individuals are given an equal chance to pursue a stated objective" [personal communication, 14 February 2024]. A personal example for Tim and his wife, Virginia, is Virginia's sister, violinist Elizabeth Suh-Lane.

Ms. Suh-Lane auditioned from behind a screen for a prominent European orchestra and was rated the top contestant for the position of concertmaster. However, once her identity was revealed, the conductor indicated that she would have "difficulty" being successful in the role. Sensing a hostile environment, Ms. Suh-Lane declined and joined the Chamber Orchestra of Europe and ultimately the London Symphony. Even though a screened audition may promote equal opportunity, equity may not always be served.

I'd like to return to another comment from Stephen McLeod [personal communication, 9 January 2024], who noted that the word "equal" in equal opportunity can be challenging. Providing the same – or equal - opportunity to all may inadvertently disadvantage some groups. So, terms such as "fair" and "just" may be preferred. This raises some potentially uncomfortable questions: Is it unjust that different insurance coverages confer different levels of access? Are "concierge" programs inherently unjust? And in my granddaughter's case, was my ability to facilitate appointments with specific physicians unjust? I suspect that most of us in this room have "greased the skids" for family and friends who need medical care. Stephen and I concluded that these situations are justifiable if the care delivered is equal. Questions such as these might be a reasonable theme for a future AOS Saturday morning symposium.

Finding Balance

When researching ways to find balance in ophthalmology, Michael Chiang reminded me that "great minds think… differently" [quoting Marie Bernard, MD, Chief Officer for Scientific Workforce Diversity, National Institute of Health; personal communication, 18 February 2024]. Once again, images are helpful, such as one that Tamara Fountain kindly provided from a lecture she presented at Duke, that shows two persons looking at the numbers 6 and 9 from different perspectives – both are correct.

And a few comments from my interviewees: I like Andy Schachat's definition of balance: *equipoise*, such as what we attempt to achieve with the arms of a randomized clinical trial [personal communication, 15 February 2024]. Hans Grossniklaus pointed out that achieving balance may need to be incremental, such as transferring pebbles from one arm of the scale to the other, rather than rapid adjustments, which can be damaging [personal communication, 13 January 2024]. Our current Academy President, Jane Edmond, also used the scale metaphor and quickly dashed off a drawing during our conversation to illustrate that leaders are responsible for establishing balance even when competing forces on the scale may be seriously out of balance [personal communication, 15 March 2024]. Emeritus AAO President Ruth Williams again: "We are not there yet" in ophthalmology, but we are less defensive about addressing imbalances once discovered. It's about process, goals, and values. Change requires awareness. Some imbalances are rectified naturally, but others require active diligence and intervention. Participation, especially by those who are under-represented, is necessary." As an example, Ruth encourages people to join the finance and audit committees of the organizations to which they belong, as the work of those committees is fundamentally important to understand how an organization functions [personal communication, 27 November 2023].

Such promotion of inclusivity reminds me of a saying favored by the Reverand Doctor Steve Goyer, our pastor at St. Simon Island Presbyterian Church: "Either/or, I abhor. Both/and, I take my stand" [personal communication, 22 April 2024].

Context and Caveats

Next, I wish to present a few options we can consider to move towards balancing equity and equal opportunity…but framed by context and caveats.

For context, O'Rese Knight opined that it is difficult to change minds without first changing hearts, and that achieving equity and equal opportunity is not about correcting the past, it is about ensuring a better future [11 December 2023].

That sentiment was the theme of a recent essay by Lance Morrow in which he wrote: "Great grievances, too often and too vividly remembered, seal off the way forward... The memories themselves aren't historically false. The fallacy occurs when grievance gets stuck in permanent rage, a tradition of hate that forestalls essentials of flourishing life: goodwill, acknowledgment of the facts of progress, the grace of forgiveness, and what ought to be the healing effect of time."[11]

During my conversation with new AOS member Mildred Olivier, she encouraged us to look first at ourselves to identify our biases and assumptions; to ask what we can do in our sphere of influence; and then to find the resources to do so [personal communication, 8 December 2023]. One of my personal blind spots in trying to treat everyone equally is not sufficiently recognizing that each person starts from a different place. This has been described as the "distance traveled" and is a key element of holistic review and admission processes.[12, 13] To ensure that ophthalmology, and medicine overall, attracts qualified persons, numerous sources have emphasized that adequate resources need to be directed as early as possible in the educational process, i.e., K – 12.[14, 15] As an aside, I learned from Fasika Woreta that "pathway" is preferred to "pipeline" [29 November 2023].

Speaking of pathways, Preston Blomquist brought to my attention [personal communication, 24 January 2024] the Joint Admission Medical Program in Texas, which has enhanced opportunities for economically disadvantaged undergraduate students, guaranteeing admission to a medical school in Texas if all criteria are met.[16] Holistic reviews and admissions reportedly have been successful at UC Davis, as well.[17]

Attracting superb medical students to consider ophthalmology has been enhanced by the Rabb-Venable Excellence in Oph-

thalmology Research scholarships and the Minority Ophthalmology Mentoring Program. Keith Carter shared with me that he asks his MOM Program mentees to remain in academics for the first 5 years so that they serve as visible role models for med students who follow [personal communication, 12 December 2023]. I learned from Anne Coleman of another successful program, the UCLA EyeJEDI, which provides scholarships for visiting medical students to do an elective at Stein Eye [personal communication, 11 April 2024]. We need more initiatives such as these, which support Tamara Fountain's assertion that we must actively look for qualified candidates…but they must be qualified. Valid and reliable measures are needed, especially if Step 1 scores and other traditional metrics have been abandoned [personal communication, 17 February 2024].

When it's time for medical students to apply for residency, Preston Blomquist posed the intriguing question of whether a lottery would be more equitable (and certainly more cost-effective) than the current match program [personal communication, 24 January 2024]. Maybe another topic for future AOS (and AUPO) cogitation.

Regardless of how applicants for residency are recruited, evaluated, and matched to programs, once there, we need to ensure that the environment for trainees promotes equity. One step in this direction would be to eliminate resident clinics that treat primarily indigent patients with minimal attending oversight. Such situations normalize a "separate but equal" model, which is then perpetuated when residents enter their practices. Additionally, medical students take note, and the disconnect does not attract them to our specialty. I thank AUPO President-Elect Terri Young for pointing out that addressing this problem has been AUPO policy since 2020 [personal communication, 29 January 2024]. Another AUPO initiative, in collaboration with the National Medical Association, is the INTREPID program for junior faculty members. Terri Young has been instrumental in its development, along with Fasika Woreta from Hopkins.

ARVO, too, has been working on this for several years, with its Envisioning Equity in Eye Care initiative and its partnership with Genentech for the Career Development Award for Underrepresented Minority Emerging Vision Scientists.

While we are on the theme of supporting faculty, Eve Higginbotham has authored or coauthored several excellent papers about inclusive leadership.[18, 19] In her article with Aysola et al,[20] I appreciated that inclusion requires both "soft" benefits such as appreciation and camaraderie as well as objective metrics such as equitable rewards and recognition, specifically compensation. One feature of the Mayo Clinic culture that I've always found admirable is that compensation is by straight salary – physicians doing the same job take home the same pay. To me, this is an example of how equity, equal opportunity, and equality can functionally integrate.

One final example of where progress has been made, albeit belatedly, is the American Board of Ophthalmology. Although established in 1916, the board of directors was composed solely of men until 1938, when Georgiana Theobald joined. It took only another six decades before its second female member, Susan Day, was elected. The trend subsequently has been more equitable, and in recent years, women have equaled or outnumbered men on the board.

Before heading down the home stretch, I wish to briefly highlight a few resources for your consideration:

The ACGME has a comprehensive website, entitled *Equity Matters*,[21], that has many educational modules.

The publication *Unequal Treatment*,[22], although released more than two decades ago by the National Academy of Medicine, is worth a careful read, as is the recent book, *We'll Fight It Out Here*,[23], by David Chanoff and Louis Sullivan.

Most of us are likely familiar with the February 2023 supplement to *Ophthalmology*, entitled *Disparities in Visual Health*,[24], which contains a wealth of information. Kudos to Paul Lee, Stephen McLeod, and Russ Van Gelder for making this happen.

And from Michael Chiang, I learned about Section 508.[25] This refers to a 1998 amendment to the Rehabilitation Act of 1973, which requires federal agencies to ensure that Information and Communications Technology is accessible to persons with disabilities. For instance, as Mike pointed out, during a presentation, we may say, "As this slide shows…" without considering that some in the audience may be visually impaired [personal communication, 18 February 2024]. Although not required for non-governmental situations, Section 508 makes good sense, and I am embarrassed that I wasn't aware of it and disappointed that I haven't complied with it very well during this presentation.

Two caveats before concluding. First, one unintended consequence when promoting equal opportunity is that some persons from groups historically underrepresented in medicine may be viewed as "diversity hires" even though they may have excelled on standardized tests and other traditional metrics. This is a pernicious disservice that leaders should be on the lookout to dispel.

Second, at an AOS meeting some years ago, Tim Stout asserted that there are three types of people in the world: those who understand math and those who don't. One person besides Tim who does understand arithmetic is David Parke, who, during our conversation, in typical CEO fashion, quickly jumped to the challenges of operationalizing the laudable but simplistic equity bicycle metaphor, asking: "Who makes the decisions about the desired outcomes, definitions of success, involved groups, resources, motives, and processes? How can you be sure that short-term success is translatable into the long-term objective behind the equity initiative? You must accept some ambiguity, some inadequate or incomplete data, and decide as to what is in the greater good. No matter how you slice that process, it will be assailed by some, regardless of attempts to find metrics

and proxies. Equity is difficult." [personal communication, 28 November 2023]

Conclusion

After wrestling with my assigned topic for several months now, I better appreciate what has been termed Anderson's Law: "I have yet to see any problem, however complicated, which, when you looked at it in the right way, did not become still more complicated."[26] I hope, though, that we as a Society (the AOS), and we as a society (small s) will aspire to go beyond balance to improvement.

"The ultimate goal of equity and equal opportunity should be improved patient care." That's an assertion conveyed in almost the same words by Esther Bowie, David Wilson, and Terri Young. [personal communications, 1 December 2023, 29 January 2024, 29 January 2024, respectively]

And thinking of improvement always brings me back to the words of Avedis Donabedian, a major catalyst of QI in medicine: "Ultimately, the secret of quality is love. You have to love your patient, you have to love your profession, you have to love your God. If you have love, you can then work backward to monitor and improve the system."[27]

Well, that's inspirational and aspirational, vague but pluripotential, so let me leave you with a challenge that struck me directly during my conversation with the ever-wise Keith Carter [personal communication, 12 December 2023]. His succinct summary: "Leaders have to do better." We have to do better. For sure, I have to do better. Thank you for your kind attention.

**Grateful thanks to the following individuals who graciously shared their perspectives with me:*

Preston Blomquist, Esther Bowie, Keith Carter, Michael Chiang, Anne Coleman, Jillian Dy/Benjamin Bartley (my daughter-in-law and son, who years ago introduced me to the concept of Social Determinants of Health), Jane Edmond, Ambar Faridi, Tamara Fountain, Steven Goyer, Hans Grossniklaus, David Herman, Eve Higginbotham, O'Rese Knight, Ryan May, Stephen McLeod, Mildred Olivier, Timothy Olsen, David Parke, Andrew Schachat, Joanne Shen, Russell Van Gelder, Keith Warren, Ruth Williams, David Wilson, Fasika Woreta, Terri Young

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Figure

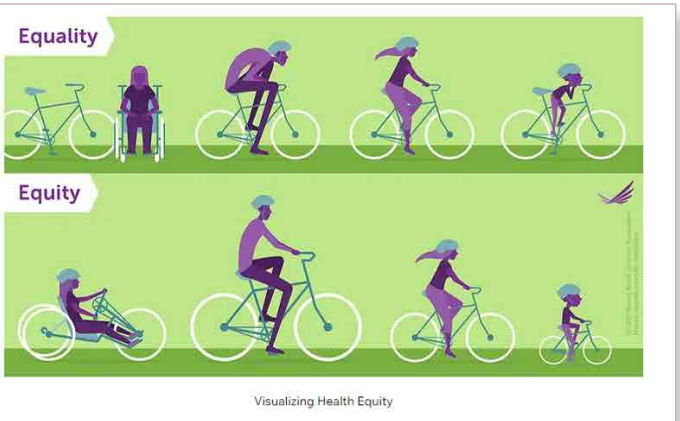

Image: Visualizing Health Equity by Robert Wood Johnson Foundation

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