



**COALITION
TO IMPROVE DIAGNOSIS**

**ACP Offers Resources to
Members and the Public**

Internists consider diagnosis the hallmark of their practice. Accordingly, the American College of Physicians (ACP), the medical specialty society for internal medicine physicians, was one of the first organizations to join the Coalition to Improve Diagnosis (CID). Since then, ACP has been contributing to the coalition's collective actions, with involvement on the CID's subcommittees, and has taken individual action to create resources available to the public, as well as ACP members.

Comprising general internal medicine (IM)—primary care internists and hospitalists, plus 12 subspecialties, including cardiology, gastroenterology, pulmonology and critical care—IM is the largest medical specialty in the United States. IM is focused on adult medicine; patients seen by IM physicians often have multiple systemic diseases, complex conditions, and a variety of medical comorbidities. IM physicians, therefore, face especially complex diagnostic challenges that often demand a measured, methodical approach. Phil Masters, MD, a vice president at ACP, observes, "Diagnosis is one of the great intellectual rewards of internal medicine clinical practice" (oral communication, November 2017).

ACP works on behalf of its 152,000 members to help make physicians' lives and medical

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**Creativity May Point the Way to More Resilience,
Less Burnout, and Better Diagnosis**

By Susan Carr

I live in a state of continued curiosity and wonder. I just find it amazing to be human! — Glenn Colquhoun¹

It's hard to imagine a better counterpoint to burnout than physician, teacher, and poet Glenn Colquhoun. Who wouldn't want some of what he's having?

Colquhoun declares his love of life in conversation with Nic Szecket and Art Nahill, cohosts of the IMReasoning podcast, which recently featured Colquhoun in a series of discussions about the connections between creative thinking and clinical reasoning.¹ In addition to reviewing the benefits for their medical practice—diagnosis in particular—they discuss their personal experiences with creativity's restorative, life-affirming effects.

Medicine and art have been "intertwined" since antiquity,^{2(p6)} but as the cultures of art, technology, and science became distinct and discordant in recent time, much of the connection has been lost.

Roughly 30 years ago, medical schools and continuing education programs began to offer training in creative thinking, humanities, and art appreciation.²⁻⁵ Improved psychological resilience—the ability to adjust emotionally and recover from adversity or disturbance—is not usually the main goal of these programs, but individuals often report it as an added benefit. Some physicians credit creative outlets, such as writing fiction or poetry, with improving their resilience, mental health, and personal satisfaction,^{1,2,5-7} which suggests that creativity may help individuals deal with distress and avoid burnout.

With high rates of burnout reported among physicians (10-70%) and nurses (30-50%),⁸ healthcare organizations are looking for ways to address this complicated and debilitating problem. One area of interest is to offer clinicians training in the arts and humanities, which may help by improving psychological

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resilience. Curiosity and creative thinking lead to heightened engagement in the world,^{5,9} in contrast to the classic symptoms of burnout, which include "fatigue, exhaustion, and detachment."⁸

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**SOCIETY to
IMPROVE
DIAGNOSIS in
MEDICINE**

Creativity May Point the Way

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Arts and humanities programs do not set out to turn clinicians into high-performing artists. Many programs focus on developing empathy and personal growth.^{4,9} Some emphasize observational skills to improve communication and teamwork,¹⁰ while others concentrate on using the arts to enrich and enliven learners' ability to reason.^{9,10} Most programs are designed for specific professions and specialties, but some, including The Fine Art of Healthcare at the University of Miami's Miller School of Medicine¹¹ and Medicine and the Muse at Stanford's School of Medicine,² are interdisciplinary.

Creativity in the Diagnostic Process

Creativity is often considered a gift that enables the lucky few to produce works of art, but the ability to think creatively is innate and can be taught, encouraged, and applied to anything. Medical arts and humanities programs are designed to help those with no prior arts experience tap into creative thought processes and help others reconnect with longstanding creative practices they put on a back-burner during medical training.

Emergency medicine physician Jay Baruch is a published fiction writer and director of the Program in Clinical Arts and Humanities at the Warren Alpert Medical School of Brown University. He offers a practical description of creativity that could also serve to describe the process of diagnostic reasoning and other kinds of problem solving:

Creativity encourages the search for new connections and relationships between disparate ideas, demands curiosity and the ability to ask different types of questions, emphasizes process on the road to product, and frames constraints as opportunities.^{12(p40)}

Originally a professional visual artist with an interest in clinical medicine, Alexa Miller is now a consultant in medical education. Since 2003, she has worked with medical schools and organizations across the country. Through experiences in visual arts, her workshops guide learners to enhance their capacity to confront clinical uncertainty, embrace it as a learning opportunity, and communicate about it.^{13,14}

Visual training heightens awareness of the variety and volume of visual features and possible interpretations present in works of art.¹⁵ Exposing

physicians to this training may increase the number of cues they pick up in clinical settings—for example, from patient exams, radiographs, and stories—and demonstrate the extent to which observations exist in the eye of the beholder. Witnessing how many different interpretations of a single artwork are possible in a room full of their peers may help physicians avoid pitfalls in reasoning, such as premature closure in diagnosis.

Miller points out that approaching diagnosis with creative thinking does not replace science. Similar to the complementary roles of System 1 and 2 thinking, creativity and science or rationality must coexist in diagnostic reasoning.¹⁶ Miller insists, “You need both,” and adds that visual artists “learn how to separate what they are actually seeing from what they think or expect to see” (oral communication, November 2017), much as diagnosticians pair intuitive pattern recognition with rational analysis. The trick is to notice the gut feeling, or intuition, of perception while also approaching problems in methodical, rational, and collaborative ways.

Embracing Uncertainty

Becoming more fluid, creative thinkers can also help physicians feel more comfortable with uncertainty—an inevitable aspect of medical practice¹⁷—and to be patient with themselves during the diagnostic process, to take time and care before reaching a conclusion.^{1,9,12,13} Medical students and young clinicians are often left feeling uncomfortable with the uncertainty and ambiguity that can result from creative thinking (A Miller, oral communication, November 2017).^{17,18} Accustomed to the quest for the “right answer” and aware of time constraints, students and clinicians may want to avoid uncertainty; arts and humanities programs are designed to help them see the benefits of embracing it, which takes confidence and resilience.

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Burnout and Resilience

Creative thinking won't fix all the problems that lead to burnout, but it may prove to be an

ImproveDx is a bimonthly publication of the not-for-profit Society to Improve Diagnosis in Medicine. The opinions expressed in this publication are not necessarily those of the Society to Improve Diagnosis in Medicine or its Board of Directors.

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effective antidote and treatment, at least for some. Miller strongly advocates that it be used in tandem with efforts to support patient care and improve workplace culture and not just to treat symptoms of an increasingly dispiriting workplace.

To address burnout, organizations should alleviate as many of the external, system-related contributing factors as they can. Clinicians should not be expected to perform well amid poorly functioning electronic medical records, burdensome data entry, immaterial performance measures, tight schedules, disrespectful work environments, and other dysfunctional elements of the workplace.^{8,19}

Healthcare organizations should also foster personal resilience among clinicians and members of the staff, to help them cope with system-related stresses that persist. Resilience also will help them

perform well and find personal satisfaction throughout their careers in what are inherently challenging professions.^{6,7,9,11,13}

The current state of healthcare contributes to burnout, but even without the external stressors, medicine is psychologically demanding.

Baruch observes:

Doctoring places great demands on the brain but asks more from the heart. It's an emotional contact sport.^{6(p186)}

Nurses and other frontline clinicians would surely agree. On top of bureaucratic frustrations and unwelcome changes in practice, healthcare workers experience emotional turmoil following unexpected adverse events, such as patient harm caused by medical error or staff harm caused by

violent patients or family members. Clinician support programs, offering the opportunity to talk with peers and receive coaching and emotional support, provide another way to improve resilience.²⁰ Even when things go well, the highly personal demands and responsibilities of healthcare may take a toll as well as offer great satisfaction.

In recent years, the patient safety community has called for healthcare to foster “joy in work” as a way to improve resilience, prevent burnout, and improve safety for all.²¹ Traditional resources are available to organizations and leaders who want to help promote joy in work.²² Creative thinking and arts training is another way to help workers experience joy in life, as well as in work. Miller uses the word “awe” to describe a related experience:

Artists are schooled in standing in a place of not knowing, in cultivating awe. While I usually talk about skills and attitudes, at the end of the day, standing before a work of art is fundamentally an experience of awe. We're beholding something that reflects a human potential much bigger than of any one of us. From there, we can directly dial in to to being alive. When we are with art, hopefully as it is when clinicians are with patients, we practice a kind of devotion. (oral communication, November 2017).

In “Where Medicine and Poetry Meet,” Colquhoun describes the strength he draws from writing, which derives more from the process than the product (poems, in his case). He says he can't imagine not writing poetry. It is how he develops a sense of self. It is how he taps the joy, wonder, and awe he sees in the world and in the practice of medicine:

One of the great struggles of being a doctor is figuring out as a human being how to manage those [difficult] feelings and I don't want to tell anyone else how to do that. That is what gives us our sense of self and this is vital in practising medicine. Poetry has been for me a way to find that independence... Every doctor needs to find their own way through.

[Poems] teach us to be. This is the heart of writing. It is the heart of medicine, too.⁷

Threads of joy in medicine are woven through the literature of creative thinking and arts appreciation in healthcare. They often trace back to the reasons why frontline caregivers chose their professions in the first place.

Resilience helps clinicians perform well and find personal satisfaction throughout their careers in what are inherently challenging professions.

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They may also point forward to solutions for the disaffection and frustration so many clinicians experience. The literature and discussions about creativity and resilience often imply important ideas and hypotheses that, as they are investigated and come more fully to light, may improve diagnosis as well as the health and safety of everyone involved. ■

References

- 1 Nahill A, Szecket N. Episode 33: turning the wheel—part 1—Glenn Colquhoun. IMReasoning [podcast]. October 7, 2017. <http://imreasoning.com/episodes/episode-33-turning-wheel-part-1-glenn-colquhoun/>. Accessed November 14, 2017.
- 2 Shafer A. Healing arts: the synergy of medicine and the humanities. *Stanford Med*. 2017;34(1):6-9.
- 3 Crawford P, Brown B, Baker C, Tischler V, Abrams B. *Health Humanities*. New York, NY: Palgrave MacMillan; 2015.
- 4 Schaff PB, Isken S, Tager RM. From contemporary art to core clinical skill: observation, interpretation, and meaning-making in a complex environment. *Acad Med*. 2011;86(10):1272-1276.
- 5 Fitzgerald FT. Curiosity [On Being a Doctor]. *Ann Intern Med*. 1999;130(1):70-72.
- 6 Baruch J. Speaking the unspeakable. In: Kohn M, Donley C, eds. *Return to The House of God. Medical Resident Education 1978-2008*. Kent, OH: The Kent State University Press; 2008.
- 7 Colquhoun G. Where medicine and poetry meet. Ko Awatea website. <http://koawatea.co.nz/medicine-poetry-meet/>. Published May 9, 2017. Accessed November 16, 2017.
- 8 Lyndon A. Burnout among health professionals and its effect on patient safety. Perspectives on Safety. Patient Safety Network. Agency for Healthcare Research and Quality; February 2016. <https://psnet.ahrq.gov/perspectives/perspective/190/>. Accessed November 16, 2017.
- 9 Liou KT, Jamorabo DS, Dollase RH, et al. Playing in the “gutter”: cultivating creativity in medical education and practice. *Acad Med*. 2016;91(3):322-327.
- 10 Naghshineh S, Hafler JP, Miller AR, et al. Formal arts observation training improves medical students’ visual diagnostic skills. *J Gen Intern Med*. 2008;23(7):991-997.
- 11 Weinstein D. The healing arts. *Miami*. 2011;18(1):np. <http://www6.miami.edu/miami-magazine/fall2011/featurestory4.html>. Accessed November 25, 2017.
- 12 Nahill A, Szecket N. Episode 35: turning the wheel 2. IMReasoning [podcast]. October 29, 2017. <http://imreasoning.com/episodes/episode-35-turning-wheel-2/>. Accessed November 14, 2017.
- 13 Baruch JM. Doctors as makers. *Acad Med*. 2017;92(1):40-44.
- 14 Miller A, Schiff G. The art of uncertainty: unlocking its tools and diagnostic potentials in visual arts. Mini-workshop presented at: Diagnostic Error in Medicine 9th International Conference; November 6-8, 2016; Los Angeles, CA.
- 15 Jasani SK, Saks NS. Utilizing visual art to enhance the clinical observation skills of medical students. *Med Teach*. 2013;35(7):e1327-e1331.
- 16 Garland C. Cognitive buoyancy: the trigger to innovative thinking. Paper presented at: ISPIM Innovation Forum; March 13-16, 2017; Boston, MA.
- 17 Bentwich ME, Gilbey P. More than visual literacy: art and the enhancement of tolerance for ambiguity and empathy. *BMC Med Educ*. 2017;17:200. doi:10.1186/s12909-017-1028-7. Accessed December 10, 2017.
- 18 Klugman CM, Peel J, Beckmann-Mendez D. Art rounds: teaching interprofessional students visual thinking strategies at one school. *Acad Med*. 2011;86(10):1266-1271.
- 19 Dyrbye LN, Shanafelt TD, Sinsky CA, et al. *Burnout Among Health Care Professionals: A Call to Explore and Address This Underrecognized Threat to Safe, High-Quality Care*. Washington, DC: National Academy of Medicine; 2017.
- 20 Shapiro J, Galowitz P. Peer support for clinicians: a programmatic approach. *Acad Med*. 2016;91(9):1200-1204.
- 21 Roundtable on Joy and Meaning in Work and Workforce Safety, The Lucian Leape Institute. *Through the Eyes of the Workforce: Creating Joy, Meaning, and Safer Health Care*. Boston, MA: National Patient Safety Foundation; 2013.
- 22 Joy in work. Institute for Healthcare Improvement website. <http://www.ihl.org/Topics/Joy-In-Work/Pages/default.aspx>. Accessed November 26, 2017.

Membership in the Society to Improve Diagnosis in Medicine includes access to the peer-reviewed journal, *Diagnosis*; the newsletter, *ImproveDx*; and more. Join today!

<http://tinyurl.com/supportSIDM>



ACP Offers Resources for Members and the Public

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practices better through educational programs and patient care resources. To ensure that it addresses current needs and interests, ACP surveys members on a regular basis. The 2018 survey will include questions about diagnostic errors and safety in order to refine future plans to address this complex problem.

Current ACP programs and resources designed to help physicians, as well as educators and patients, participate in improving diagnosis include:

- *Patient Safety in the Office-Based Practice Setting*¹ acknowledges that diagnostic error is the most frequent error in office-based physician practices. The paper offers 7 recommendations for improving patient safety, including diagnosis, in ambulatory medicine. They cover topics such as culture of safety, teamwork, patient and family engagement, metrics, and health information technology.
- ACP's Center for Quality and Patient Partnership in Healthcare is considering future projects, such as designing resources to help patients talk with physicians about diagnosis, including times when they think the diagnosis is not correct. The Center is also preparing tools to help physicians talk with patients about diagnostic uncertainty.
- In 2015, ACP published *Teaching Clinical Reasoning*,² the most recent addition to the Teaching Medicine Series. Edited by internists Robert Trowbridge, Joseph Rencic, and Steven Durning—members of the Society to Improve Diagnosis in Medicine (SIDM)—the book provides insight and practical advice about teaching, for example, strategies for deploying knowledge reliably in patient care.
- ACP offers a series of 10 web-based clinical cases called “Getting It Right: Cases to Improve Diagnosis,” which are available for free to all on the ACP website.³ Developed in collaboration with SIDM's Education Committee, each case stimulates thinking about the diagnostic decision process, discovering pitfalls in reasoning, and reflecting on the effect of diagnostic errors on patients and providers. Covered topics include:
 - Understanding the diagnostic process
 - Analyzing cognitive and systems contributions to diagnostic errors
 - Partnering with patients and families on the diagnostic process
 - Physician and patient factors in diagnostic decision-making

- Recognizing and responding to errors

The series includes a summary, links to related resources for education and background, the cases, and a series of multiple-choice questions. The program responds to an incorrect answer with a detailed explanation of the right answer. The series offers CME and MOC credit.

“Getting It Right” is based on the format ACP used for a series of online cases about high-value care.⁴ The spirit of the series on diagnosis also mimics the high-value care series in that it helps physicians be better at what they do. It does not find fault or cast blame; it's meant to help physicians improve. The cases do not test knowledge of diagnosis and diagnostic error; instead, they offer physicians a way to learn, discover, and reflect by working through realistic clinical cases. According to Masters,

Physicians who have practiced medicine for any period of time know they've missed a diagnosis, messed up the diagnostic process, made a wrong diagnosis, or been distracted from the appropriate diagnosis through whatever bias is in play. But no one ever talks about that because they haven't been given permission to acknowledge the problem (oral communication, November 2017).

The ACP resources are designed for a diverse membership that is united in its desire to improve this key component of internal medicine practice. ■

References

- 1 Crowley RA. *Patient Safety in the Office-Based Practice Setting*. Philadelphia, PA: American College of Physicians; 2017. https://www.acponline.org/acp_policy/policies/patient_safety_in_the_office_based_practice_setting_2017.pdf. Accessed December 10, 2017.
- 2 Trowbridge RL Jr, Rencic JJ, Durning SJ, eds. *Teaching Clinical Reasoning*. Philadelphia, PA: American College of Physicians; 2015.
- 3 Getting It Right: Cases to Improve Diagnosis. American College of Physicians. <https://www.acponline.org/cme-moc/online-learning-center/getting-it-right-cases-to-improve-diagnosis>. Accessed December 7, 2017.
- 4 Online Interactive High Value Care Cases. American College of Physicians. <https://www.acponline.org/clinical-information/high-value-care/resources-for-clinicians/high-value-care-cases>. Accessed December 7, 2017.

The Coalition to Improve Diagnosis, comprised of leading healthcare organizations, has been established to bring awareness, attention, and action to the problem of diagnostic error. SIDM established and leads the Coalition. To learn more, and to view a list of the Coalition's 31 members, visit www.DxCoalition.org.

Notable Progress and Promising Plans for 2018

By Mark L. Graber, MD
 Founder & President
 Society to Improve
 Diagnosis in Medicine

As I reflect on the last 12 months of the Society to Improve Diagnosis in Medicine (SIDM), I am so proud of all we have accomplished. In October, at the Diagnostic Error in Medicine (DEM) conference, we released *Mobilized for Action*, the SIDM Annual Report. I recommend you take the time to look through the report and see what we, as a community, are doing to improve diagnosis and better serve patients.

There is of course, more that can be done. I invite you to encourage your home institution and professional societies to join the more than 35 patient groups, medical societies, and health-care organizations that are part of the Coalition to Improve Diagnosis. The Coalition is a place where leaders in healthcare are working together to develop and implement strategies to improve the diagnostic process. In 2018, the Coalition will be commencing a major campaign to increase awareness among patients, clinicians, payers, and policymakers of the harms that are caused by diagnostic error. And take a minute to encourage your medical library to subscribe to our journal, *Diagnosis*.

Of special note in the annual report are SIDM's efforts to help the policy community understand the problem of diagnostic

error and the urgent need for more research to evaluate interventions to improve diagnostic accuracy and timeliness. As noted in the annual report, the Senate Labor, Health and Human Services, and Education appropriations report includes language requesting the Agency for Healthcare Research and Quality to lead the development of a coordinated, multi-agency agenda for research to improve diagnosis, a key recommendation of the 2015 National Academy of Medicine (formerly Institute of Medicine) report. We need to continue our efforts with the policy community to ensure that funding for this agenda gets codified.

The SIDM policy strategy was developed and led by SIDM board member David Newman-Toker. David has conducted some of the most cutting-edge research around diagnostic error. He is a critical thinker who understands the many challenges we face to address the systemic and cognitive causes of diagnostic error. That is why I am so pleased that the SIDM Board of Directors has elected David to serve as our next president starting at DEM 2018, and as president-elect in the interim. When Paul Epner, Elizabeth Montgomery, and I founded SIDM in 2011 we were hopeful that our little organization could change how we think about and begin to address the challenging problem of diagnostic error. With all we have accomplished to date, and with a bright future under David's leadership, I can only imagine what we will do next. ■

The Society to Improve Diagnosis in Medicine recognizes corporate members and organizations that support the society and its mission of attaining better outcomes through better diagnosis.

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FROM THE FIELD

Diagnosis Articles Listed in PubMed

Diagnosis, the official journal of SIDM, has been accepted for listing in [PubMed](#), the "go to" search engine (developed at the National Library of Medicine) guiding medical research and clinical decision-making. This represents a significant accomplishment. Listing is highly competitive, like applying for a grant. Journals are judged on 20 different metrics in regard to the quality of accepted articles, the quality of editorial review and publication, importance to the field, and adherence to best publication practices and principles. To be listed, journals must score at least 3.75 on a scale of 1 to 5.

All *Diagnosis* articles going forward will be indexed automatically, and all articles published to date will also be included retrospectively.

The latest issue of *Diagnosis*, published this month, includes articles about the role of nursing in diagnosis and diagnostic improvement, the impact of electronic records on diagnosis, simulation and the diagnostic process, and more. SIDM members, can access *Diagnosis* as a benefit of membership at www.improvediagnosis.org. ■