Whereas, Our American Medical Association supports augmented intelligence (AI) systems that advance the quadruple aim (H-480.939), specifically:

(1) To enhance the patient experience of care and outcomes,
(2) To improve population health,
(3) To reduce overall costs for the healthcare system while increasing value, and
(4) To support the professional satisfaction of physicians and the healthcare team; and

Whereas, Our AMA seeks to identify opportunities to integrate practicing physicians’ perspectives into the development, design, validation, and implementation of health care AI (H-480.940); and

Whereas, Research from the medical device industry has provided evidence that physicians substantially contribute to medical device innovation, specifically that:

(1) Physicians contributed to a fifth of medical device patents and generated a significant number of citations, demonstrating the importance of physician involvement in medical device innovation1;
(2) Physician patents were cited more times by subsequent patents than those without physician involvement, suggesting that physician-led innovation sparks more subsequent follow-on innovation1;
(3) Physician patents generated more follow-on innovations from a more diverse set of disciplines, emphasizing the broad impact of physician involvement in research1; and

Whereas, Research on the implementation of electronic health records (EHRs) has indicated that technology developed with physician involvement is associated with improved perceived ease of use and acceptance by physicians2; and

Whereas, Current research on AI has indicated that:

(1) Physicians assisted by AI models can outperform physicians or AI alone, specifically in diagnosing metastatic breast cancer and diabetic retinopathy3,4;
(2) Physicians can use interactive AI-based technologies in medical image segmentation and identification, providing evidence that physicians and AI technologies can work together to better fulfill the quadruple aim5; and

Whereas, Our AMA has launched pathways for healthcare innovation, but these pathways are greatly targeted to physicians currently involved in AI, such as Health 2047, a business that connects our AMA to leading experts in AI and machine learning to produce healthcare solutions6; and
Whereas, Our AMA has supported physician innovation, especially in the field of AI, through the Physician Innovation Network (PIN), an online forum board for entrepreneurs to seek medical specialists to “connect the health care innovation ecosystems to improve the development of emerging healthcare technology solutions”; and

Whereas, Early analysis of the PIN has identified that early engagement of physicians and respecting a physician’s time and expertise contribute to more meaningful connections between physicians and entrepreneurs; and

Whereas, The PIN currently experiences limited physician utilization, as evidenced by:

1. Interviews with current physicians on the PIN suggest that the PIN only appeals to a small subset of physicians who have already realized early in their careers that they wish to pursue a nontraditional path in medicine and innovation,

2. As of 2018, only 2,600 physicians were reported to be on the network, or about 1% of our AMA’s physician membership base; and

Whereas, Our AMA advocates that our organization, national, and medical specialty societies and state medical associations (H-480.939):

1. Leverage medical expertise to ensure clinical validation and assessment of clinical applications of AI systems by practicing physicians,

2. Outline a new professional role to aid and guide health care AI systems; therefore be it

RESOLVED, That our American Medical Association augment the existing Physician Innovation Network (PIN) through the creation of advisors to specifically link physician members of AMA and its associated specialty societies with companies or individuals working on augmented intelligence (AI) research and development, focusing on:

1. Expanding recruitment among AMA physician members,

2. Advising AMA physician members who are interested in healthcare innovation/AI without knowledge of proper channels to pursue their ideas,

3. Increasing outreach from AMA to industry leaders and companies to both further promote the PIN and to understand the needs of specific companies,

4. Facilitating communication between companies and physicians with similar interests,

5. Matching physicians to projects early in their design and testing stages,

6. Decreasing the time and workload spent by individual physicians on finding projects themselves,

7. Above all, boosting physician-centered innovation in the field of AI research and development (Directive to Take Action); and be it further

RESOLVED, That our AMA support selection of PIN advisors through an application process where candidates are screened by PIN leadership for interpersonal skills, problem solving, networking abilities, objective decision making, and familiarity with industry. (Directive to Take Action)

Fiscal Note: Not yet determined

Received: 10/11/22
REFERENCES:

RELEVANT AMA POLICY

Augmented Intelligence in Health Care H-480.940
As a leader in American medicine, our AMA has a unique opportunity to ensure that the evolution of augmented intelligence (AI) in medicine benefits patients, physicians, and the health care community. To that end our AMA will seek to:
1. Leverage its ongoing engagement in digital health and other priority areas for improving patient outcomes and physicians professional satisfaction to help set priorities for health care AI.
2. Identify opportunities to integrate the perspective of practicing physicians into the development, design, validation, and implementation of health care AI.
3. Promote development of thoughtfully designed, high-quality, clinically validated health care AI that:
   a. is designed and evaluated in keeping with best practices in user-centered design, particularly for physicians and other members of the health care team;
   b. is transparent;
   c. conforms to leading standards for reproducibility;
   d. identifies and takes steps to address bias and avoids introducing or exacerbating health care disparities including when testing or deploying new AI tools on vulnerable populations; and
   e. safeguards patients and other individuals privacy interests and preserves the security and integrity of personal information.
4. Encourage education for patients, physicians, medical students, other health care professionals, and health administrators to promote greater understanding of the promise and limitations of health care AI.
5. Explore the legal implications of health care AI, such as issues of liability or intellectual property, and advocate for appropriate professional and governmental oversight for safe, effective, and equitable use of and access to health care AI.
Citation: BOT Rep. 41, A-18

Augmented Intelligence in Health Care H-480.939
Our AMA supports the use and payment of augmented intelligence (AI) systems that advance the quadruple aim. AI systems should enhance the patient experience of care and outcomes, improve population health, reduce overall costs for the health care system while increasing value, and support the professional satisfaction of physicians and the health care team. To that end our AMA will advocate that:
1. Oversight and regulation of health care AI systems must be based on risk of harm and benefit accounting for a host of factors, including but not limited to: intended and reasonably expected use(s); evidence of safety, efficacy, and equity including addressing bias; AI system methods; level of automation; transparency; and, conditions of deployment.
2. Payment and coverage for all health care AI systems must be conditioned on complying with all appropriate federal and state laws and regulations, including, but not limited to those governing patient
safety, efficacy, equity, truthful claims, privacy, and security as well as state medical practice and
licensure laws.

3. Payment and coverage for health care AI systems intended for clinical care must be conditioned on (a)
clinical validation; (b) alignment with clinical decision-making that is familiar to physicians; and (c) high-
quality clinical evidence.

4. Payment and coverage for health care AI systems must (a) be informed by real world workflow and
human-centered design principles; (b) enable physicians to prepare for and transition to new care delivery
models; (c) support effective communication and engagement between patients, physicians, and the
health care team; (d) seamlessly integrate clinical, administrative, and population health management
functions into workflow; and (e) seek end-user feedback to support iterative product improvement.

5. Payment and coverage policies must advance affordability and access to AI systems that are designed
for small physician practices and patients and not limited to large practices and institutions. Government-
conferred exclusivities and intellectual property laws are meant to foster innovation, but constitute
interventions into the free market, and therefore, should be appropriately balanced with the need for
competition, access, and affordability.

6. Physicians should not be penalized if they do not use AI systems while regulatory oversight, standards,
clinical validation, clinical usefulness, and standards of care are in flux. Furthermore, our AMA opposes:
a. Policies by payers, hospitals, health systems, or governmental entities that mandate use of health care
AI systems as a condition of licensure, participation, payment, or coverage.
b. The imposition of costs associated with acquisition, implementation, and maintenance of healthcare AI
systems on physicians without sufficient payment.

7. Liability and incentives should be aligned so that the individual(s) or entity(ies) best positioned to know
the AI system risks and best positioned to avert or mitigate harm do so through design, development,
validation, and implementation. Our AMA will further advocate:
a. Where a mandated use of AI systems prevents mitigation of risk and harm, the individual or entity
issuing the mandate must be assigned all applicable liability.
b. Developers of autonomous AI systems with clinical applications (screening, diagnosis, treatment) are in
the best position to manage issues of liability arising directly from system failure or misdiagnosis and must
accept this liability with measures such as maintaining appropriate medical liability insurance and in their
agreements with users.
c. Health care AI systems that are subject to non-disclosure agreements concerning flaws, malfunctions,
or patient harm (referred to as gag clauses) must not be covered or paid and the party initiating or
enforcing the gag clause assumes liability for any harm.

8. Our AMA, national medical specialty societies, and state medical associations—
a. Identify areas of medical practice where AI systems would advance the quadruple aim;
b. Leverage existing expertise to ensure clinical validation and clinical assessment of clinical applications
of AI systems by medical experts;
c. Outline new professional roles and capacities required to aid and guide health care AI systems; and
d. Develop practice guidelines for clinical applications of AI systems.

9. There should be federal and state interagency collaboration with participation of the physician
community and other stakeholders in order to advance the broader infrastructural capabilities and
requirements necessary for AI solutions in health care to be sufficiently inclusive to benefit all patients,
physicians, and other health care stakeholders. (New HOD Policy)

10. AI is designed to enhance human intelligence and the patient-physician relationship rather than
replace it.

Citation: BOT Rep. 21, A-19; Reaffirmation: A-22