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AI & Your Medical Staff: the Good, the Bad, the Ugly, & the Unknown

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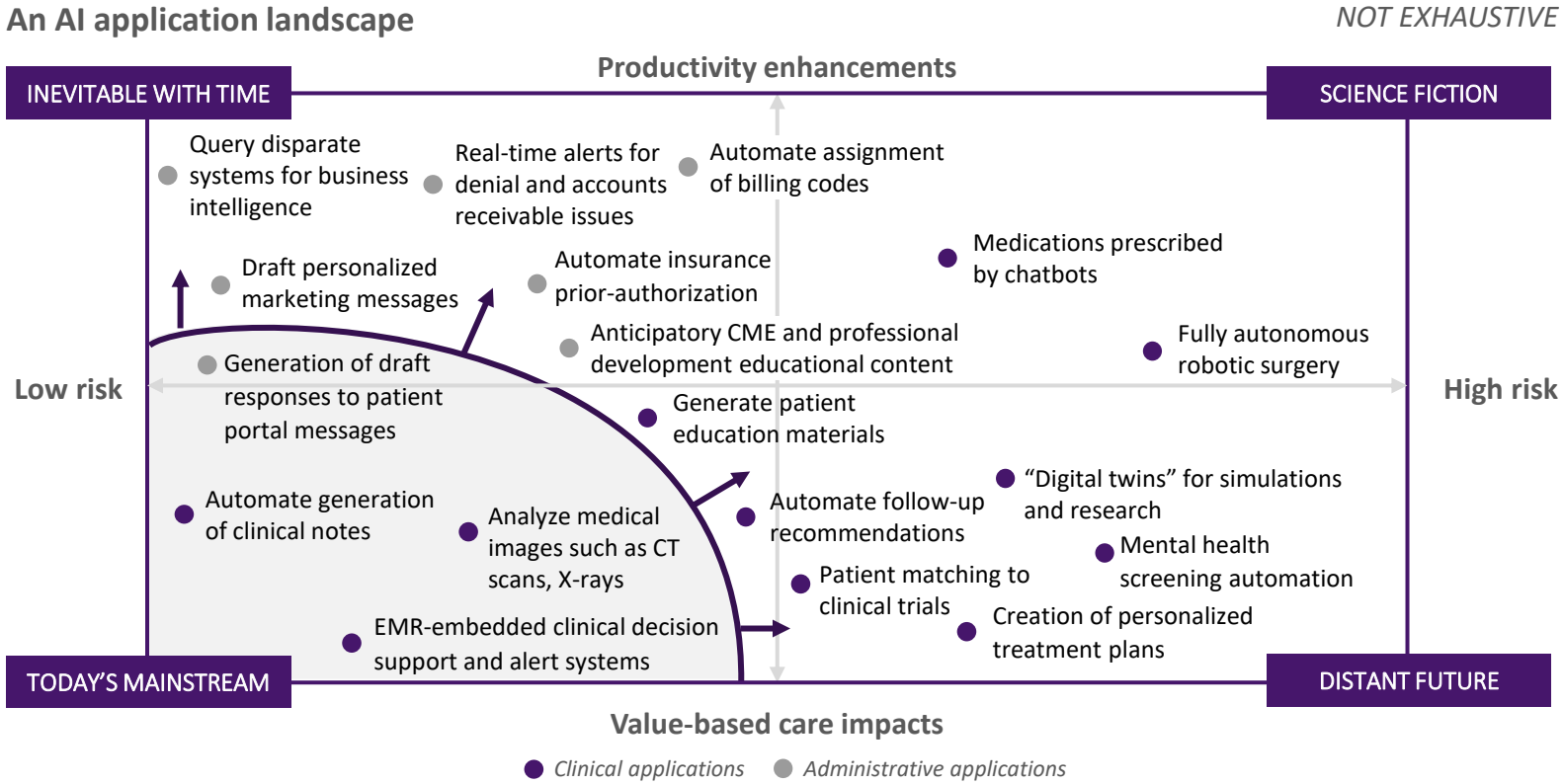
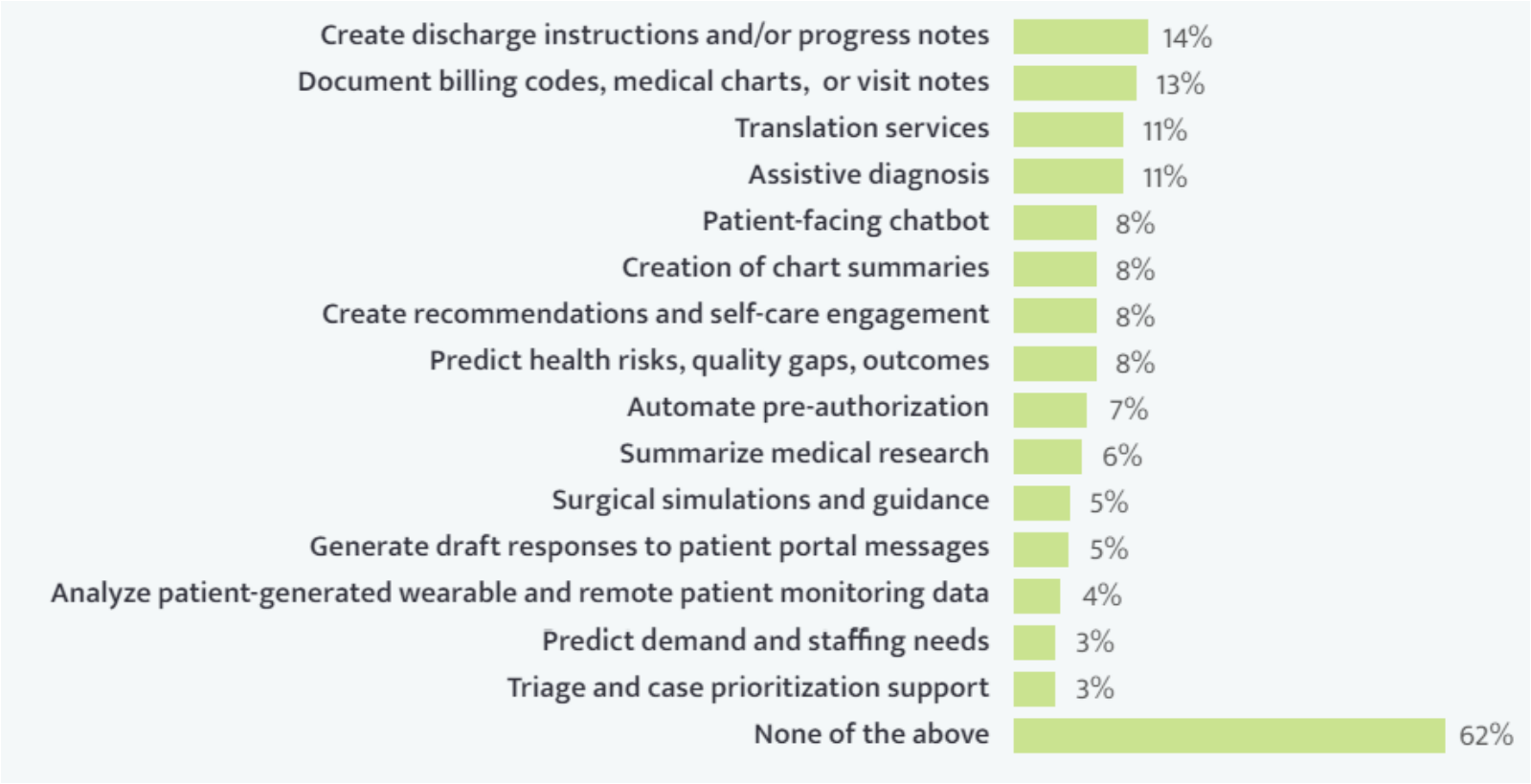
Session Learning Objectives

- Gain insights into the current landscape and future prospects of AI in medicine, in order to explore the advancements, challenges, and potential applications of AI technologies.
- Look at the ethical considerations surrounding the implementation of AI in healthcare. This will include issues related to patient privacy, data security, algorithm bias, and the implications for patient-provider relationships.
- Examine the role of AI as a complementary tool for physicians within the hospital setting. They will explore ways in which AI can enhance clinical decision-making, improve patient outcomes, and streamline healthcare delivery processes.
- Through discussions and case studies, participants will identify strategies for optimal preparedness in leveraging AI technologies effectively and ethically within medical practice. Topics will include workforce training, infrastructure investment, regulatory compliance, and fostering a culture of innovation and collaboration among medical staff.

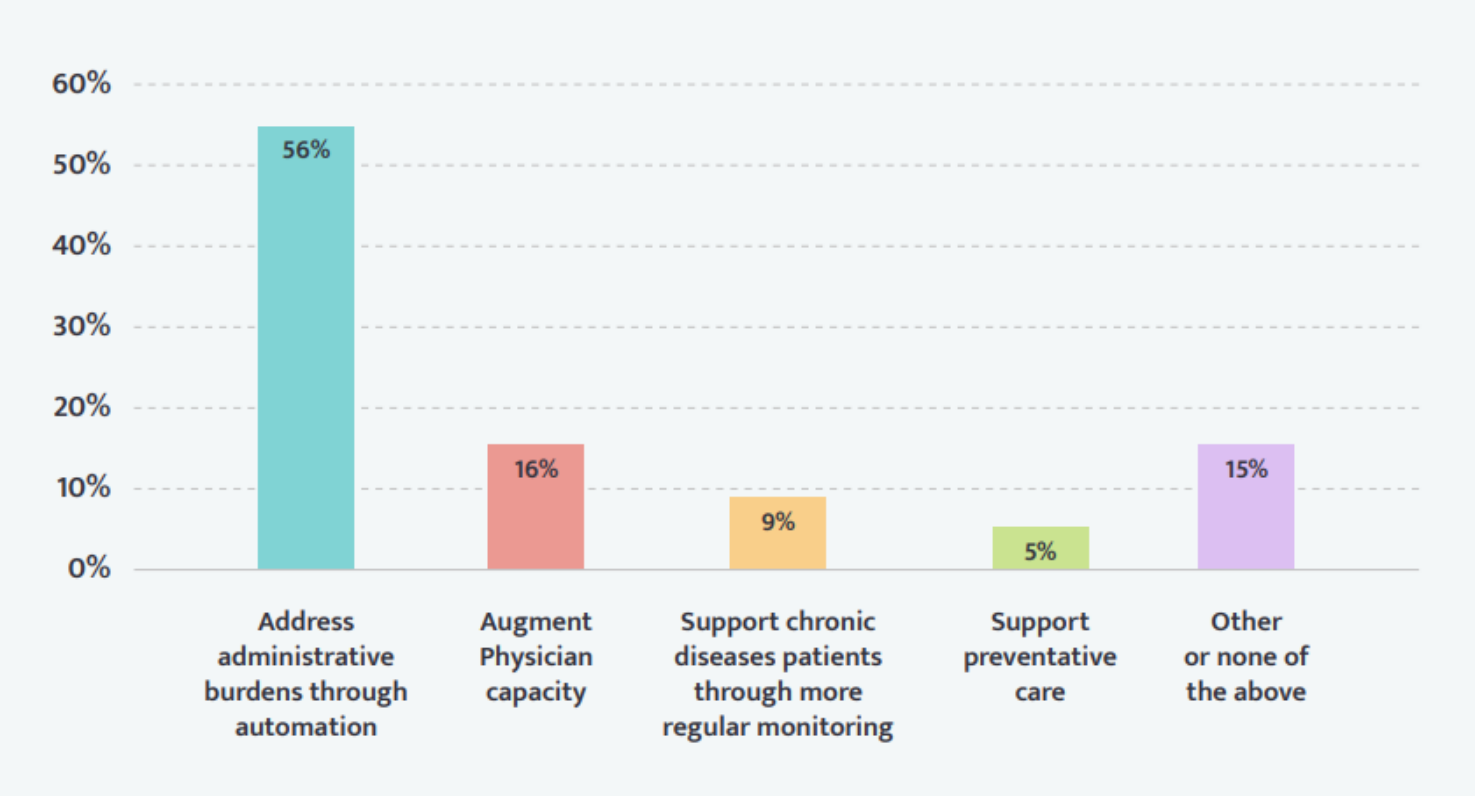
Where AI is at and where it's going



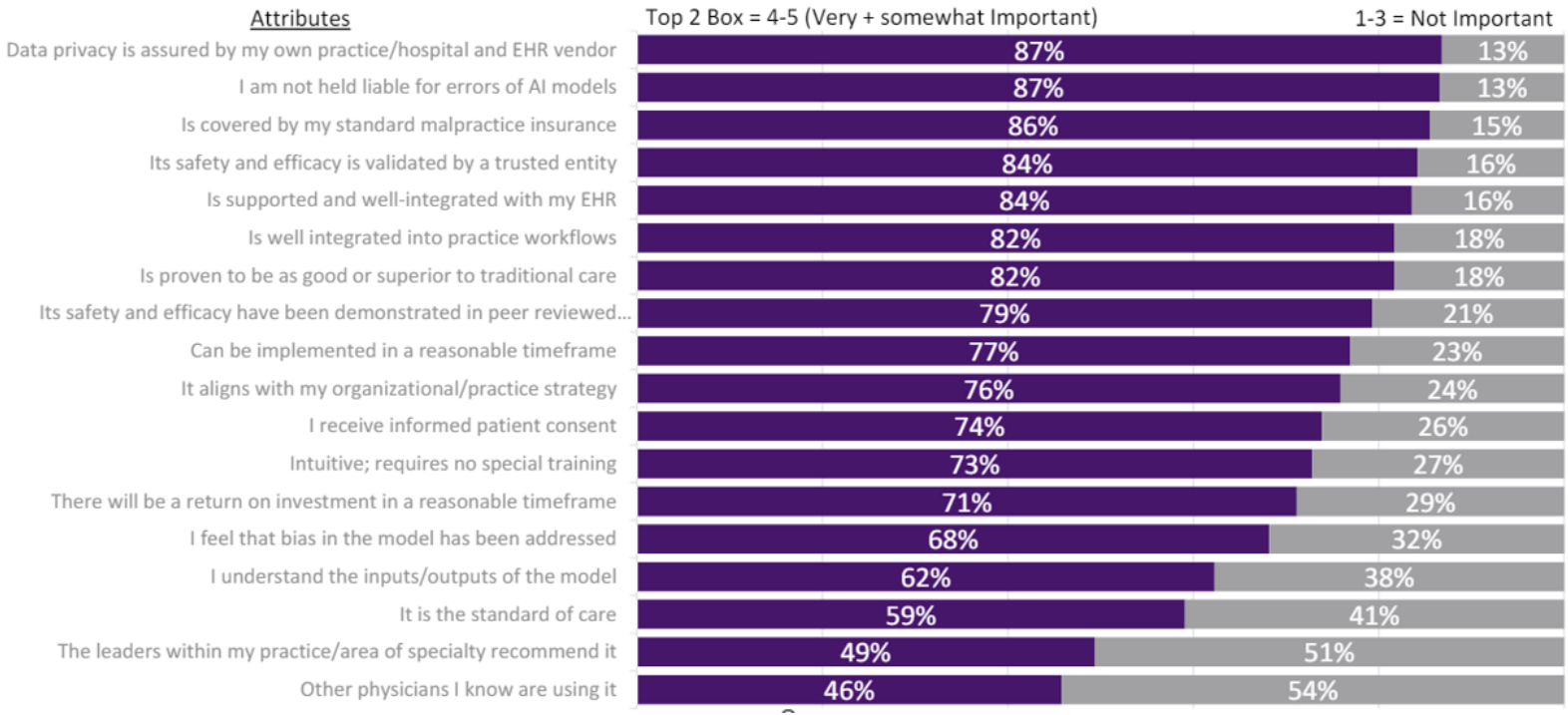
Current AI use cases across specialties



Key opportunities for AI in health care



Risks and Challenges



Ethical and medical legal considerations with AI

Ethics, Evidence, and Equity Framework

Ethics

Physician practices uphold the fundamental values of medicine.

Evidence

AI products used in practice meet the highest standards for scientific inquiry in design and development; provide clinically relevant evidence of safety and effectiveness.

AMA's vision for health equity

All people live in thriving communities where resources work well, systems are equitable and create no harm, everyone has the power to achieve optimal health, and all physicians are equipped with the consciousness, tools, and resources to confront inequities as well as embed and advance equity within and across all aspects of the health care system.

Guidance for physicians

Does it work?

Does it work for my patients?

Does it improve health outcomes?

AI and the Quadruple Aim as the North Star

Patients' rights are respected, they are empowered to make an informed decision about the use of AI in their care, and research demonstrates that its use improves their clinical outcomes, quality of life and satisfaction.

Health care AI addresses high-priority clinical needs and advances health equity by closing disparities rooted in historical and contemporary injustices and discrimination, benefitting all patients regardless of demographic or socioeconomic factors.

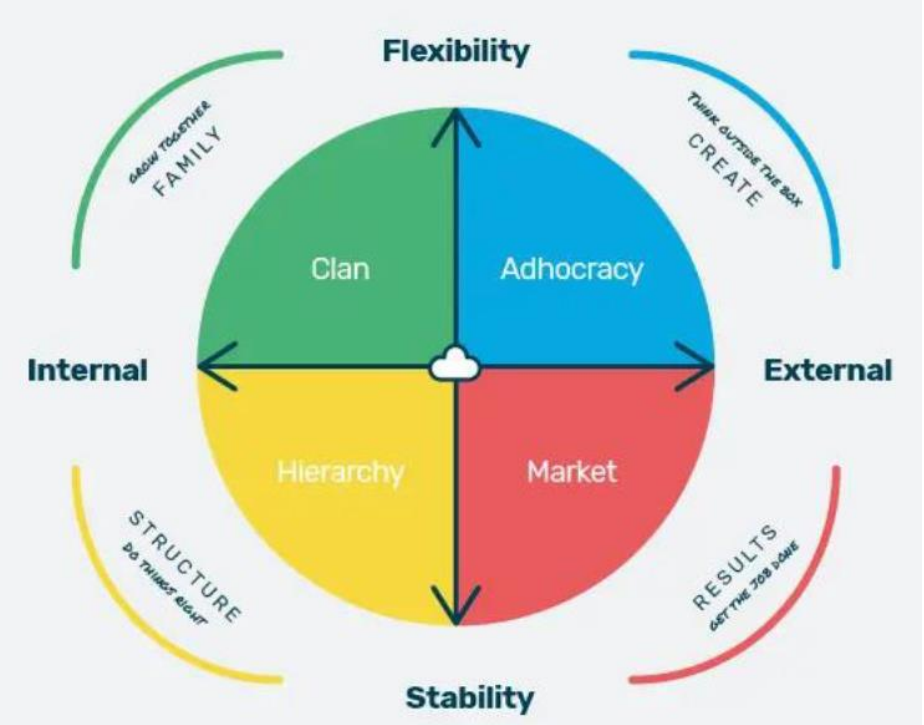
Oversight and regulatory structures account for the risk of harm and benefit posed by health care AI systems. Payment and coverage is conditioned on complying with appropriate laws and regulations, providing appropriate levels of clinical validation and high-quality evidence, and advancing affordability and access.

Physicians are engaged in developing and implementing health care AI tools that augment their ability to provide high-quality clinically validated health care to patients and improve their well-being. Barriers to adoption such as lack of education on AI and liability and payment issues are resolved.

Key strategies to drive the successful implementation and use of AI

Building a Strong Organizational Culture of Innovation

- **Leadership**
  - Clear vision
  - Cohesive team
- **Decision making and structure**
  - Clear roles and responsibilities
  - Aligned organizational structure
- **People**
  - Right talent for success
  - Effective development of talent
- **Processes**
  - Effective program processes
  - Effective support structures

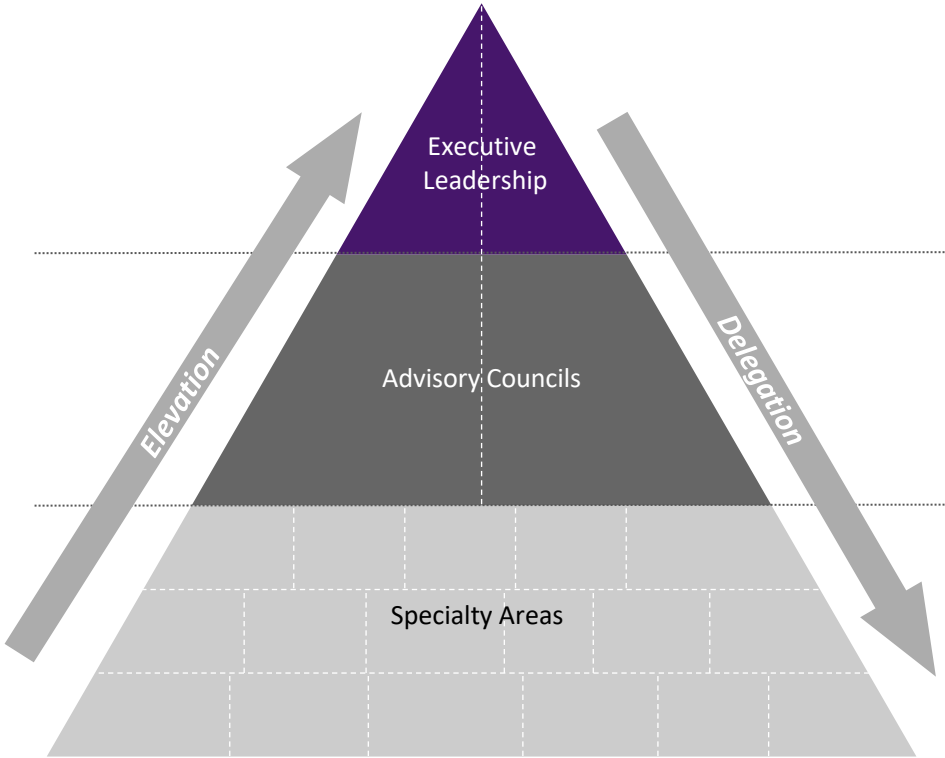


Important themes for building culture

- ✓ Understand the current state of the organization's culture and address gaps and challenges up front
- ✓ Bring end users in early (physicians, care team members, front line managers, patients) to collaborate
- ✓ Don't be a part of the problem, be a part of the solution
- ✓ Don't try to boil the ocean, small incremental changes lead to big results
- ✓ Set up the governance structure

The Role of Clinical Informatics

Creating a Governance Structure



Strategic

- Define the strategic direction and vision to align with priorities set by executive team
- Serve as final decision-making body for issues not resolved at subgroup or champion levels
- Address issues / risks of enterprise-wide concern

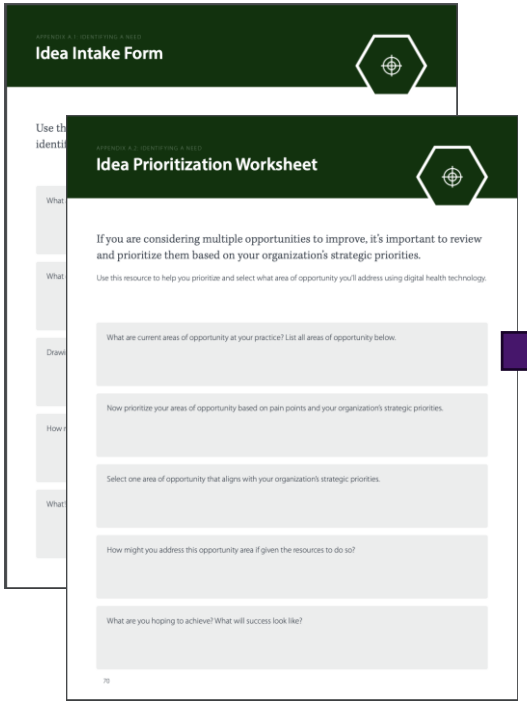
Advisory

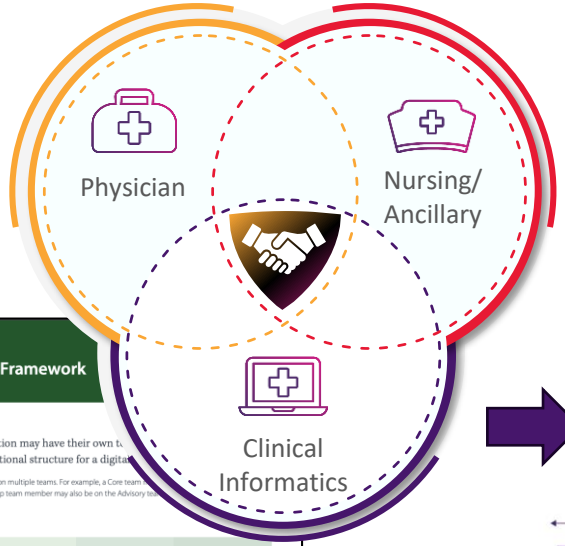
- Understand and provide guidance on all upcoming clinical technology changes
- Champion and communicate changes to colleagues
- Update leadership on critical technology enhancements and elevate topics with significant enterprise-wide impact

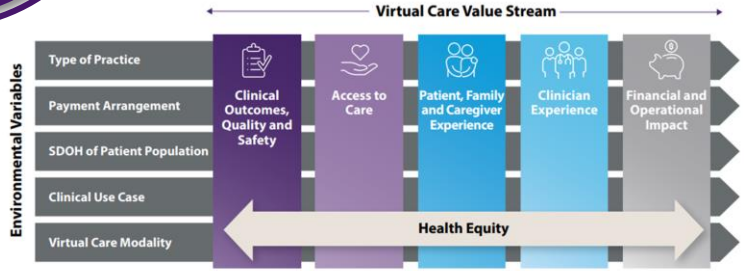
Clinical Ops

- Monitor execution of updates
- Manage milestone delivery to ensure timely, effective, and efficient rollout of clinical technology solutions
- Elevate topics requiring guidance and support to Leadership

Addressing the Fundamentals







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Bringing in the Right Technology

APPENDIX D.1: EVALUATING THE VENDOR

Selecting a Vendor Guide

There are many factors to consider when evaluating and selecting a remote patient monitoring vendor.

Use the criteria below to guide your evaluation of each vendor under consideration, so you can make a comprehensive and informed decision when selecting a partner.

On the following pages, you will find a sample vendor-information request form, which can be sent directly to your vendor or used as a guide to create your own form.

BUSINESS

- ❑ Cost of service
- ❑ Business model
- ❑ Ability to demonstrate ROI or Return on Health (ROH)
- ❑ Reimbursement rates
- ❑ Financial viability
- ❑ Commitment to organizational diversity, equity, and inclusion

INFORMATION TECHNOLOGY

- ❑ Ease/cost of integration with existing technology
- ❑ Customization
- ❑ Connectivity
- ❑ Patient access to data
- ❑ EHR integration
- ❑ Updates and maintenance process

CUSTOMER SERVICE

- ❑ Pre-launch support
- ❑ Ongoing clinical support
- ❑ Patient training
- ❑ Patient support
- ❑ Data analysis

EFFICACY/CLINICAL VALIDATION

- ❑ Previous results
- ❑ Case studies or testimonials
- ❑ Peer-reviewed literature/ clinical evidence
- ❑ Ability to deliver on your organization's goals, metrics, and KPIs
- ❑ Product and outcomes research includes patients from historically marginalized and minoritized populations

DATA SECURITY/PRIVACY

- ❑ HIPAA/HITECH compliance
- ❑ Third-party audits (SOC 2, HITRUST)
- ❑ Penetration testing for software and device
- ❑ Liability structure
- ❑ User authentication and authorization
- ❑ Transparency on collected data use practices and processes

USABILITY

- ❑ Data accuracy
- ❑ Device ease of use for patients
- ❑ Dashboard/workflow assimilation
- ❑ Front/back-end user interface
- ❑ Multi-disease state application
- ❑ Cross-system interoperability
- ❑ Diverse users considered in the development and design of the technology and user experience

76

APPENDIX D.2: EVALUATING THE VENDOR

Vendor Information Intake Form

BUSINESS INFORMATION

Company Name and Corporate Structure (LLC, B-Corp, C-Corp, etc.):

Company Category:

- ❑ Population Health
- ❑ Clinical Decision Support
- ❑ Medical Device
- ❑ Big Data/Analytics
- ❑ Personalized Medicine/Precision Medicine
- ❑ Telemedicine
- ❑ Patient Education/Self-Care
- ❑ EHR Interoperability
- ❑ Other: _____

Company Size and Stage of Development:

Current Number of Customers:

Current State of Financial Viability:

In a few sentences, describe your company and your main value proposition:

What differentiates you from your competitors?

Do you have a commitment to diversity, equity, and inclusion? If yes, can you share your formal statement of commitment?

77

APPENDIX D.3: EVALUATING THE VENDOR

Cybersecurity 101: What You Need to Know

The AMA's research[1] on cybersecurity indicates that physicians are increasingly recognizing the importance of good cyber hygiene in their practices.

The increased industry focus on digital health technology, including telehealth, underscores the need for practices to consider how they will keep their patients' protected health information (PHI) private and secure. Generally, once outside data is incorporated into the patient's electronic medical record, it becomes PHI. Physicians are responsible for the privacy and security of PHI under the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

WHAT YOU NEED TO KNOW ABOUT CYBERSECURITY ATTACKS:

- Cybersecurity is not just a technical issue; it's a patient safety issue.
- 4 out of 5 physicians[2] have experienced some form of cyberattack.
- While inappropriate employee use and disclosure of PHI (e.g., inappropriate sharing or selling of patient information) are more of a concern among large health systems, phishing and viruses are the most common types of cyberattacks in small practices.

WHAT YOU NEED TO KNOW ABOUT HOW CYBERSECURITY CAN AFFECT YOUR PRACTICE/ORGANIZATION:

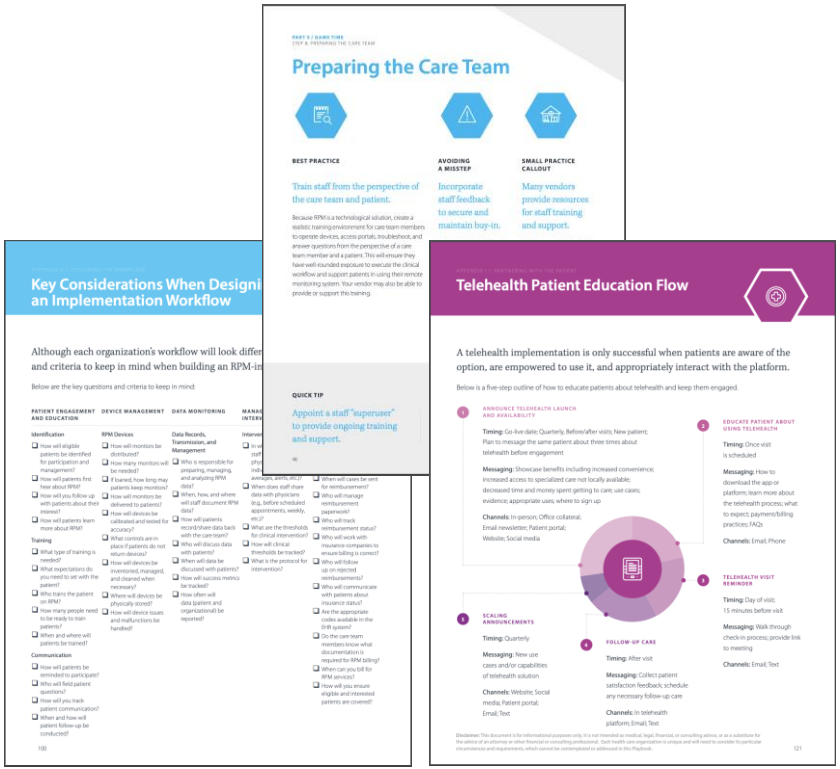
- Cyberattacks can cause interruptions in practice operations, compromised electronic health records (EHR) security, and direct threats to patient well-being.
- 2 out of 3 physicians have experienced downtime of up to four hours because of a cyberattack; 1 in 10 have experienced downtime of up to two days.

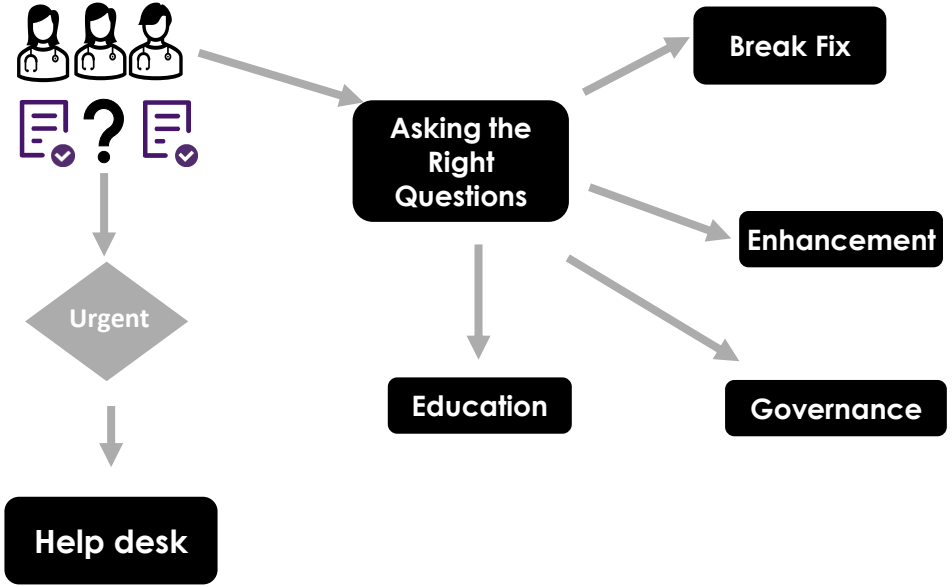
WHAT YOU NEED TO THINK ABOUT WHEN IMPLEMENTING TECHNOLOGY:

- Your practice's health information technology (health IT) network[4] is comprised of several different components, and it is important to consider all of them when figuring out how to securely implement new technology. For example, not only are your practice's internet connection and EHR part of your network but also things like copiers, telephones, and practice management systems. You must also consider how a new telehealth solution will impact your health IT network, especially if outside your current EHR vendor. Physicians need to look at their networks holistically to ensure that all the "entry" and "exit" points for information coming in and out of the practice are effectively protected.
- Only 20% of small practices have internal security officers, so they typically rely on health IT vendors for security support. Physicians should understand basics about cybersecurity[5] so that they are well informed enough to ask vendors the right questions. Such knowledge will help to equip physicians with the autonomy they need to confidently implement new technologies into their practice.

100

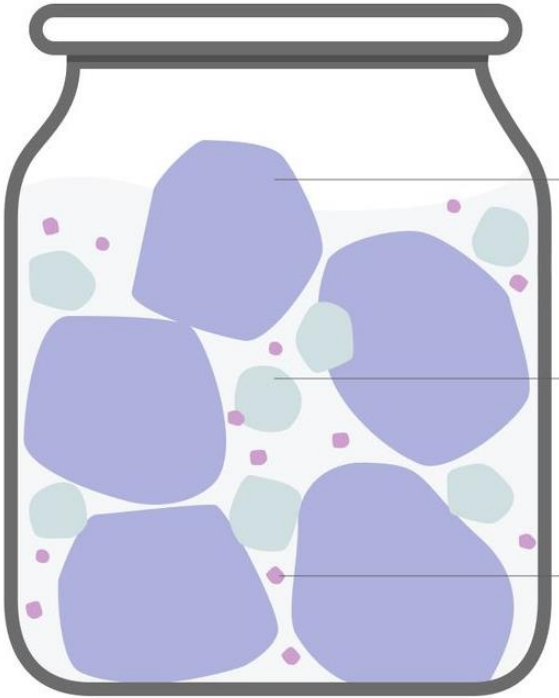
Planning for the End User Experience & Flow





Expanding and Scaling AI

Prioritization for future implementations & upgrades



Rocks

Projects with high effort and impact

Pebbles

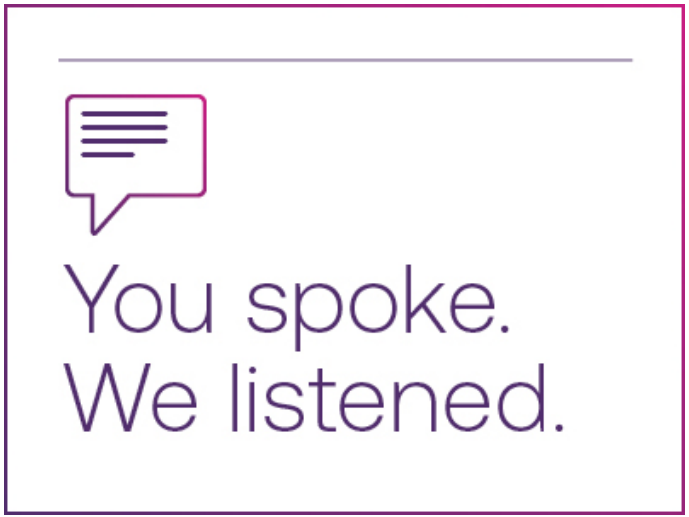
Projects with medium effort and impact

Sand

Minor improvements and enhancements

AI in Practice

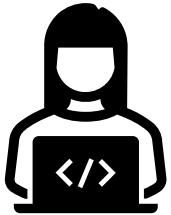
AI Governance in Action



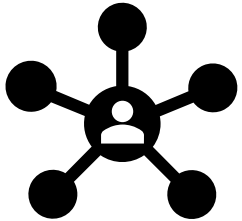
- Less time spent on documentation
- Improved EMR efficiency
  - Chart Review
  - InBasket
- Incidental Findings on Imaging Studies

AI for operational efficiencies

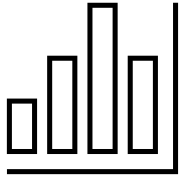
Streamline prior authorization



Create documentation efficiency



Capturing SDOH needs



Support reporting (quality, regulatory) and resource tracking (workforce, supplies)

Case study: *Ambient Listening Technology*

The American Academy of Family Physicians (AAFP) conducted a study to determine whether the use of an AI assistant reduced documentation time for physicians.

Results

1. Sixty percent of physicians (“adopted” physicians) continued to use (and started paying for) the AI assistant after the study concluded.
2. There was a 50%–72% reduction in median documentation time.
3. Participating physicians saved up to 3.3 hours per week.
4. Physicians indicated improved satisfaction and reduced feelings of burnout, improved satisfaction with workload and overall practice, and decreased feelings of burnout.

AI in Radiology

Common Use Cases:

- Triage for critical findings
- Image analysis and disease detection
- Quantification
- Incidental Findings
- Decision/workflow support

Common clinical areas

- Neurological abnormalities
- Detection and classification of tumors
- Radiation dosage optimization
- Diabetic retinopathy

Conclusion

Unknown: The landscape is evolving quickly.

Bad/Ugly: There are still significant ethical and legal considerations and risks surrounding the implementation of AI in healthcare and physicians and health care leaders need to prepare for them up front.

Good: AI has huge potential to positively impact patient care and physician satisfaction. Important factors for success include strong governance and effective workflow design.

Physicians' powerful ally in patient care

AMA AI Resources

- **AMA AI Physician Sentiments Survey:** https://www.ama-assn.org/system/files/physician-ai-sentiment-report.pdf
- **Future of Health: The Emerging Landscape of Augmented Intelligence in Health Care:** https://www.ama-assn.org/system/files/future-health-augmented-intelligence-health-care.pdf
- **Artificial Intelligence Learning Series:** https://edhub.ama-assn.org/change-med-ed/interactive/18827029
- **Framework for Health Care AI:** https://www.ama-assn.org/practice-management/digital/advancing-health-care-ai-through-ethics-evidence-and-equity
- **Principles for AI Development, Deployment, and Use:** https://www.ama-assn.org/system/files/ama-ai-principles.pdf