

SKYSCAPE BUZZ TALKS

PRIVATE NETWORKING GROUP, HOME CARE ALLIANCE OF MA

PRACTICAL TIPS FOR AI IN HEALTHCARE

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AGENDA

HUMAN INTERVENTION & ETHICS
PRIVACY & SECURITY IMPLICATIONS
BARRIERS TO AI/MEDICINE

TREATMENT CHOICES
EMPOWERING THE PATIENTS
PATIENT OUTCOMES

CURRENT OFFERINGS
SKYSCAPE DEMO

PRACTICAL APPROACHES

AI BENEFITS IN HEALTHCARE

MARKET INSIGHTS - SAVINGS
HIGH LEVEL EXPECTATIONS

HOME HEALTH & HOSPICE

STREAMLINE WORKFLOWS
BRIDGE TO EMR & MORE



POTENTIAL OF AI IN MEDICINE

- **By the Numbers^s**

- FDA accelerating approval of medical AI tools - since 1995, 520 AI/ML enabled medical devices approved, with a whopping 91 (17%) being approved just in 2022.
- Broader adoption of AI in healthcare could save 5-10% in healthcare spend (**\$200-\$360B savings**) - these estimates are based on current AI technology and attainable in the next 5 years
- **\$12.5 billion** in venture capital has gone into generative AI start-ups in 2023 year so far, compared to only **\$4.5 billion in all of 2022**

- **Benefits across the healthcare spectrum**

- **Hospitals and Clinical** - Optimizing operating rooms or detecting adverse events
- **Health insurers** - Incentive Management, Improved claim management, automating prior authorization, reducing readmissions with better provider relationship
- **Patients** - Accuracy of Diagnosis, Robotic Surgeries, Targeted Treatment Options
- **Home Health** - Streamlined operations to reduce hospital admissions, referral management and patient outcomes

^s Source - McKinsey and Harvard Research Report



WHY THE AI BUZZ NOW?



- **Generative AI – ChatGPT, Bard and more ...**

- AI has been around for quite some time (1995), but OpenAI's release in late 2022 opened the floodgates with ChatGPT playground open to all.

- **MIT Research**

- Spectacular Increase in 'White Collar Productivity' with ChatGPT
- ChatGPT did make work speedier with no sacrifice in quality for representative tasks

- **Tasks Tackled**

- Marketing, grant writing, data analysis, and human resources (and of course not to forget the ubiquitous poems!)

Photoshop enables inserting AI generated Images

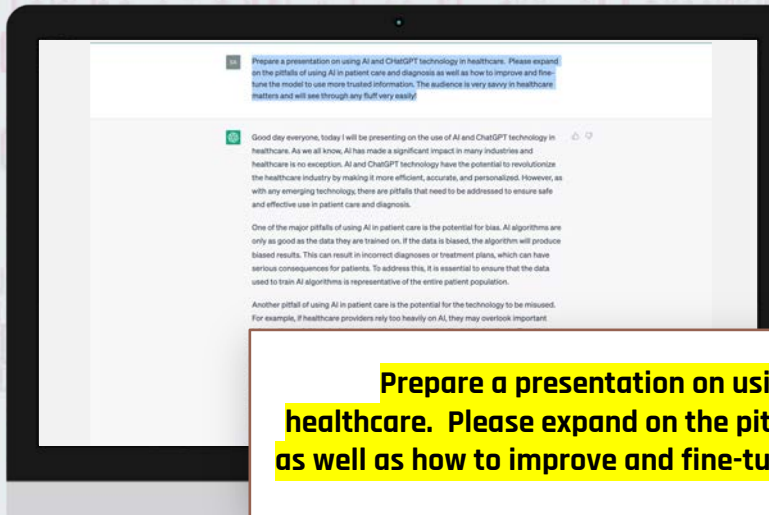
The ChatGPT users were 37% faster at completing tasks with roughly similar grades and with repetition, the ChatGPT group's quality went up significantly higher.

The CoPilot provides instant code completions for Programmers

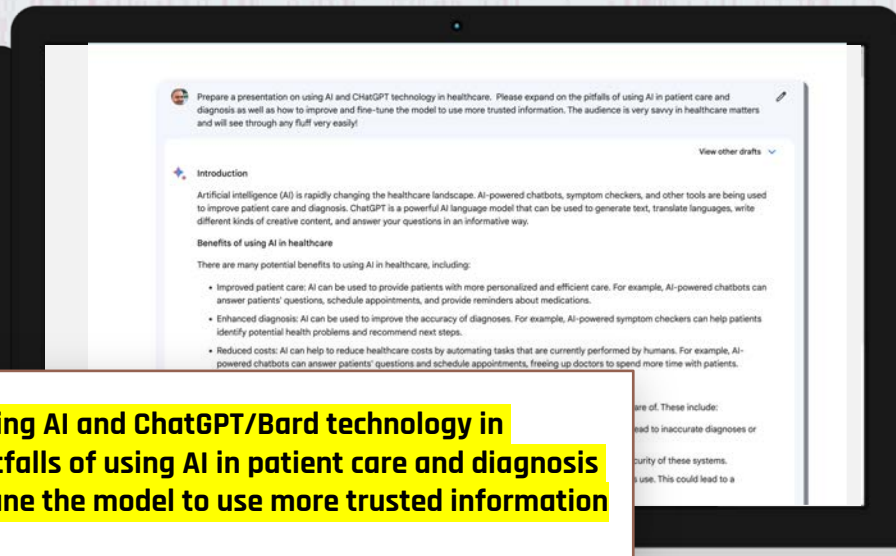


I HAVE TO CONFESS ...

OpenAI ChatGPT



Google Bard



Prepare a presentation on using AI and ChatGPT/Bard technology in healthcare. Please expand on the pitfalls of using AI in patient care and diagnosis as well as how to improve and fine-tune the model to use more trusted information



AI LIMITATIONS (IN GENERAL)

- **Limitations of ChatGPT, Bard, etc**
 - No “Live Mode” - “I'm sorry, but I am not able to browse the internet or access any external information beyond what I was trained on.”
- **Can We Rely on AI?**
 - According to OpenAI's Sam Altman, “It's a mistake to be relying on it for anything important right now,” and “ChatGPT can give you a misleading impression of greatness, while giving wrong answers!”
- **Mistakes can be Costly (\$120bn!),**
 - as in “Alphabet (Google) shares dive after Google AI chatbot Bard flubs an answer”

And, as the Bard would say, “therein lies the rub”.



BARRIERS OF AI IN HEALTHCARE

- **Human Surveillance and Empathy**

- Surgical robots operate logically, not empathetically - **vital human observations** can help prevent medical complications
- AI may **overlook social determinants** - care pathway may be prescribed based on medical diagnosis using AI tools but it may ignore socio-economic patient background or needs

- **Inaccuracies in Medical Diagnosis**

- Medical AI depends on lots of diagnosis data - however there may be very little data on certain rare conditions or demographics/environmental factors
- But the standards/regulations for safety & effectiveness are lacking

- **Security and Privacy Risks**

- ML continuously learns and data provided to the AI systems, could lead to **privacy breaches**
- **Cyber attacks on the rise - according to FBI data, 25% of all ransomware attacks in 2022 have been targeted in healthcare (50+M patient records breached)**

Accuracy must be checked (it sometimes does find old data or misrepresent data)



OVERCOMING CHALLENGES IN AI

- **Explainable AI (XAI) vs Black Box Model**
 - AI models if explained can be better complemented with human intervention when needed. Black Box Model just focuses on the output results
- **Improved Quality of Data**
 - Cleanse the data with uniformity applied to reduce AI “guesses”. Better quality data will lead to improved medication error alerts and overall outcomes
- **Enhance Organizational Security and Privacy Controls**
 - Internal team training on HIPAA compliance & system security and invest in privacy enhancing technologies

Cracking Open the Black Box. “Why did you do that? Why Not? ...”





BENEFITS - PATIENT OUTCOMES

- **Data Overload Relief**

- Interpretable AI can digest colossal amounts of data and streamline it in digestible format, allowing more valuable interaction time between patient and the specialist
- Interpretable AI allows the provider to review medical history, identify patterns and recommend interventions leading to better patient care

- **Transition from fee-for-service to value-based-care model**

- Advance tech platforms using AI can improve provider productivity, resource optimization - aligning with value based care model to deliver better patient outcomes

- **Population Health**

- Interpretable AI can analyze populations and broad community factors to help predict future outcomes
- High risk patients with co-morbidities or specific clinical conditions can be identified with early intervention, using predictive risk models



HOME HEALTH & HOSPICE CARE

- **Effective Communications – Improved Workflow**

- Real time secure communication amongst providers is a necessity to deliver better patient care including handoffs and referrals management
- Communication and Collaboration software with AI integration can streamline workflow and increase the speed of mundane, repetitive tasks (Skyscape's Buzz is a good example of such technology)

- **Knowledge Tools / ChatGPT**

- Prompts and access to trusted knowledge while discussing patient care - get reputed answers to diagnosis or dosages from known sources of content
- Use ChatGPT effectively to reduce mundane tasks such as drafting insurance referral letters, patient letters, insurance appeal letter
- Skyscape's Buzz enables both above, with increased privacy and security provided safeguarding any personal information being given to AI systems

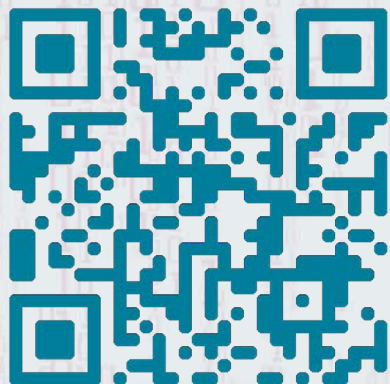
DEMO



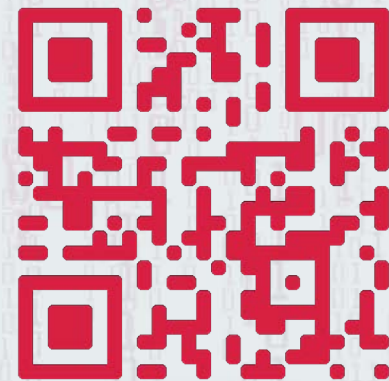
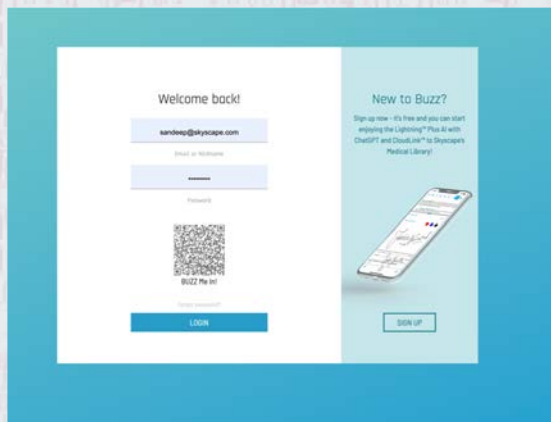
A Practical Example of AI



TEST DRIVE



Linked-In



Platform Login

Free Access to Attendees
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