Contemporary Technology Tips and Tricks for Medical Assisting Educators

67th AAMA Annual Conference
Orlando, Florida
Friday September 22, 2023
8:00 AM – 10:00 AM

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Department of Mathematics

Today’s Agenda and Goals
Innovative technology promotes student success and genuine interest in learning. These technologies can easily be adapted for various student ability levels and learning styles. Learn strategies and techniques for successfully implementing and facilitating technology and how to use technology for student assessment and program evaluation. Discover best practices for achieving optimal student success with technologies. Develop practical professional use of technology skills, and advance professional expertise and confidence.

Technologies Covered in Today’s Presentation

- Zoom/Class Engagement
- ChatGPT
- Magic School AI
- Startup Tabs in Browsers
- Microsoft OneNote
- Last Pass

Current Challenges in Education

Data Shows Drop In Student Academic Performance Post-Pandemic

As students return to college, a basic question persists: What are they learning?

The alarming state of the American student in 2022

A Fundamental Gap

Pandemic Prompts Historic Decline in Student Achievement on Nation's Report Card

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A Fundamental Gap
Technology Integration Goals

• Enhance student engagement, success and retention.
• Foster a positive and empowering learning environment.
• Create personalized learning environments for students.
• Differentiate instruction for students.
• Cultivate enthusiasm and excitement for the course content.
• Develop and foster peer-to-peer interactions.
• Elevate the student experience.
• Enhance educator efficiency with time-saving tools.
• Leveraging technology tools to help us become more efficient.

Zoom/Synchronous Class Engagement

• Interactive and enjoyable way to kick off Zoom/synchronous class sessions.
• Fosters a social-emotional learning environment.
• Promotes peer-to-peer and student-instructor interactions.
• Nurtures a supportive and interactive learning environment.
• Builds rapport between peers and instructor.
• Can be used in a regular, physical classroom.
• Ideas inspired from social media.

Zoom Humor

Engagement/Icebreaker Examples
**More Engagement Examples**

Approaching the Midpoint of the Term/Course Check-In

Checking-In: Based on the goat scale below, how do you feel today?

What resources helped you succeed in this course?

What Helps Me Succeed

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**Holiday Engagement Examples**

How are you feeling?

1. Happy
2. &,
3. ?
4. 
5. 
6. 

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**ChatGPT & Artificial Intelligence**

https://chat.openai.com/

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**What is AI (Artificial Intelligence) and how is it used?**

- AI is a computer system that can perform tasks that usually require human intelligence.
- These tasks can include things like learning from experience, understanding language, recognizing patterns, making decisions, and solving problems.
- AI systems are designed to mimic human cognitive functions and can range from simple rule-based systems to complex networks that learn and adapt over time.
- The goal of AI is to create machines that can think and act intelligently, similar to how humans do, but using algorithms and data instead of biological processes.
My First Experience with ChatGPT: January 27, 2023

- Beginning of the Semester Faculty Meeting
- 15 Minute Demo ➔ 2 Hours

ChatGPT is Evolving Rapidly

- ChatGPT, a popular large-language model (meaning an AI that is based in language/text) was first released online in November 2022 by OpenAI, and quickly went viral.
- In January 2023, Microsoft partnered with OpenAI to expand the use of AI. In less than a year, ChatGPT has continued to grow, learn, and improve its systems exponentially.
- The search engine Bing has incorporated GPT into its systems to compete with Google, and Microsoft has started incorporating ChatGPT into its productivity tools such as Word and Excel.
- Google also created its own experimental chatbot called Bard.
- **This is just the beginning!**

The Numbers: 1 Million Users in 5 Days!

ChatGPT Sprints to One Million Users

<table>
<thead>
<tr>
<th>Service</th>
<th>Time Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netflix</td>
<td>3 years</td>
</tr>
<tr>
<td>Kickstarter*</td>
<td>25 years</td>
</tr>
<tr>
<td>Airbnb**</td>
<td>2.5 years</td>
</tr>
<tr>
<td>Twitter</td>
<td>2 years</td>
</tr>
<tr>
<td>foursquare</td>
<td>13 months</td>
</tr>
<tr>
<td>Facebook</td>
<td>10 months</td>
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<tr>
<td>Dropbox</td>
<td>7 months</td>
</tr>
<tr>
<td>Spotify</td>
<td>5 months</td>
</tr>
<tr>
<td>Instagram**</td>
<td>3.5 months</td>
</tr>
<tr>
<td>ChatGPT***</td>
<td>5 days</td>
</tr>
</tbody>
</table>

* one million backers; ** 50 million monthly active users; *** 50 million downloads

Source: Company announcements via Business Insider, LinkedIn

How do I use ChatGPT?

You ask ChatGPT a question or provide a prompt, it replies using natural language.

I am a machine learning model trained by OpenAI. Specifically, I'm based on the GPT-4 (Generative Pre-trained Transformer) architecture. My primary function is to assist users by generating human-like text based on the data I've been trained on. I can answer questions, help with a variety of tasks, offer explanations on a wide range of topics, and more. However, it's important to note that while I aim to provide accurate and reliable information, I am not a substitute for professional advice in fields like medicine, law, or finance. My training data includes a vast array of sources, including websites, books, and other texts, but I can't access real-time information as my training only goes up until September 2021.
What do medical assistants do?

Medical Assistants play a critical role in the healthcare setting, serving as the backbone that keeps medical offices running smoothly. Their duties are diverse, spanning both administrative and clinical tasks. On the administrative side, they schedule appointments, manage patient records, and handle billing and insurance issues. Clinically, they may take patient histories, measure vital signs, and assist doctors during examinations. In some cases, they collect samples for lab tests or administer medications. Their versatility makes them invaluable team members in various healthcare environments like hospitals, clinics, and private practices. By fostering efficient operations and patient care, medical assistants contribute significantly to the overall healthcare experience.

What are the important vital signs that medical assistants need to check?

Medical assistants often play a crucial role in the healthcare system by assisting with patient care and administrative tasks. When it comes to patient care, one of the fundamental responsibilities is to collect vital signs. These provide a quick overview of a patient’s general physical condition and are essential for diagnosing, treatment decisions, and monitoring recovery. Here are some of the most important vital signs commonly checked by medical assistants:

1. **Blood Pressure**: Typically taken orally, medially, or by sphygmomanometer. Normal blood pressure is usually between 120/80 mm Hg.
2. **Oxygen Saturation**: Measures how much oxygen is in the blood and is generally obtained using a pulse oximeter. A normal level is generally around 95-100%.
3. **Pulse Rate**: Measures heart rate in beats per minute (BPM). It can be taken by palpating arterial pulse or by using electronic devices. A normal resting heart rate for an adult ranges from 60 to 100 BPM.
4. **Respiratory Rate**: The number of breaths a person takes per minute. A normal rate for adults is usually 12 to 20 breaths per minute, but it can be measured by observing the chest rise and fall.

What sets ChatGPT apart from Google?

Google

- Search
- Information
- Data
- Knowledge

ChatGPT

- Conversational
- Interactive
- Creative
- Adaptive

I think that I have COVID. Please tell me what to do.

I'm not a healthcare professional, but if you suspect you have COVID-19, it's crucial to contact your healthcare provider for medical advice tailored to your specific situation. You should get tested for COVID-19 as soon as possible and isolate yourself from others, including those in your household, to minimize the risk of transmission. Follow local public health guidelines for quarantine and isolation protocols.

While you're isolating, monitor your symptoms and seek medical help if you experience severe symptoms such as difficulty breathing, persistent chest pain or pressure, confusion, inability to wake or stay awake, or bluish lips or face. Follow your healthcare provider's recommendations on treatment options, which may include antiviral medications. Over-the-counter remedies to alleviate symptoms, or hospitalization for severe cases. Always follow local health guidelines and consider notifying people you’ve been in close contact with recently so they can take appropriate precautions.
My Experiences with Students & ChatGPT
Spring 2023: 360 students!

Student Perceptions
How many of you are using ChatGPT?

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
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<tbody>
<tr>
<td><img src="image1.png" alt="Before Image" /></td>
<td><img src="image2.png" alt="After Image" /></td>
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</table>
How are students using ChatGPT?

Replacement for Google!  Generating Ideas  Studying  Research
Writing & Presentations  Every subject!  Personal use  Plagiarism

AI in Education: Benefits of Student Use
1. Research and information gathering for essays (note: results may be inaccurate).
2. Study aides and tutoring: ask AI to explain difficult concepts to aid in understanding.
3. Language translation: help in understanding text and communicating to gain new language skills.
4. Organization and time management: Help develop schedules, set reminders, and stay organized.
5. Spark creativity and generate ideas: Brainstorm and outline presentations and essay topics.
6. Have ChatGPT take on a hypothetical scenario and have the student interview someone about it.

Write a 200 word essay about the importance of medical office management for medical assistants.

Effective medical office management contributes to a streamlined workflow, which enhances patient care. This is particularly important in healthcare settings where time is often at a premium. Medical assistants are often at the heart of office management techniques, ensuring efficient administrative processes, maintaining patient records, and coordinating billing, all of which fall under the broader umbrella of office management.

Medical office management is a crucial aspect of healthcare that often goes unnoticed, yet it serves as the backbone for smooth clinical operations. For medical assistants, understanding and participating in effective office management is not merely an additional skill; it is a requisite that ensures optimal patient care. The role of a medical assistant is multifaceted, encompassing both clinical and administrative responsibilities. Their administrative duties include scheduling appointments, managing patient records, and coordinating billing, all of which fall under the broader umbrella of office management.

Write an e-mail to an angry patient who cannot get an appointment with a doctor for three months.

Subject: Our Sympathies for the Delay in Scheduling Your Appointment
Dear (Patient's Name),

I hope this email finds you well. I am writing to acknowledge your frustration and apologize for the recent experience trying to schedule an appointment with our medical practice. I understand that a three-month wait time is inconvenient, and I appreciate your patience and understanding in the situation. The high demand for healthcare services, coupled with the constraints we are facing, have occasionally led to longer wait times. We are working diligently to improve the situation by hiring additional staff and optimizing our scheduling system, but we realize that the recent result on your immediate needs.

Here are some immediate steps we are taking to help:
1. Priority Walk-in: We have placed your name on a priority walk-in list. If you arrive early (at least 30 minutes before your scheduled appointment), we will accommodate you immediately.
2. Immediate Consultation: If you condition can be initially assessed through a telephone appointment, we could schedule this immediately. This could be followed up:
3. Consultation with a Physician's Assistant or Nurse Practitioner: If your situation is less critical, we could schedule a same-day appointment with a qualified Physician's Assistant or Nurse Practitioner who can evaluate your condition and provide guidance for immediate relief.
4. Telemedicine Consultations: In your condition requires immediate specialist care that we are unable to provide within our extended hours, we can assist with scheduling to another trusted healthcare provider.
5. Contact Us for Urgent Concerns: If you experience acute symptoms or any adverse outcomes, please do not hesitate to contact us; we encourage you to call our emergency contact line, or go to the nearest emergency room.

We are continuously providing you with the best care possible, and we deeply regret any inconvenience or distress our scheduling limitations have caused you. If you would like to discuss this matter further or have any questions, please do not hesitate to contact me directly at (Your Contact Information).

Thank you for bringing these issues to our attention, and thank you for your understanding as we work to improve our service. We value you as a patient and are committed to resolving the issues to your satisfaction.

Sincerely,
(Your Name)
(Your Position)
(Medical Facility's Name)
(Contact Information)

I'll call you health and well-living our top priority, and we are doing everything we can to expedite your appointment. Thank you for your patience and understanding during this challenging time.
Sometimes, ChatGPT pontificates. 😊 Please rewrite it so that it’s shorter in 100 words or less.

How else are students using ChatGPT?

Another Example

How can we use ChatGPT as educators?
I’m a medical assisting instructor. Write a lesson that I can use to teach students about administering medications.

Introduction (10 Minutes)

Teacher Activities:
1. Introduction to the topic.
2. Overview of the learning objectives.
3. Brief discussion: Ask students to share any experiences or thoughts about administering medications.

Key Points Covered:
- Importance of administering medication correctly.
- Rules associated with medication errors.

The Six “Rights” of Medication Administration (10 Minutes)

Teacher Activities:
1. Write “Rights” on the board.
2. Explain each right with examples.

Key Points Covered:
- Right Patient
- Right Medication
- Right Route
- Right Dose
- Right Time
- Right Documentation

Student Activities:
- Take notes.
- Ask questions for clarification.

Routes of Administration (15 Minutes)

Teacher Activities:
1. Definition and explanation of all routes.
2. Demonstration of each route.
3. Practice administering medication using different routes.

Key Points Covered:
- Advantages and disadvantages of each route.
- Factors affecting the choice of route.

Student Activities:
- Participate in the demonstration.
- Take notes.

Multiple Choice Questions (2 points each, 10 points total)

Instructions: Choose the best answer for each question.

1. What does the acronym HIPAA stand for?
   - Health Information Privacy Act
   - Health Information Privacy Act
   - Health Information Protection Act
   - Health Information Privacy Act

2. Which route involves administering medication through the skin?
   - Subcutaneous
   - Oral
   - Intramuscular
   - Intravenous

3. What is the abbreviation for fasting blood sugar?
   - FBS
   - HbA1c
   - BUN
   - Cr

4. What condition can cause muscle tone to increase?
   - Hypothyroidism
   - Hypertension
   - Hypoglycemia
   - Hypocalcemia

5. What are the two main components of a medical record?
   - Diagnosis and treatment
   - Problem list and progress notes
   - Medical history and surgical history
   - All of the above

Medical Records Exam

True or False (2 points each, 20 points total)

Instructions: Indicate whether each statement is true or false.

1. Electronic medical records include a patient’s psychological records?
   - True
   - False

2. If a patient’s medical record is lost in a fire, it can be reconstructed from secondary sources?
   - True
   - False

3. Patients have the right to access their own medical records?
   - True
   - False

4. Only physicians have the right to access a patient’s medical records?
   - True
   - False

5. Medical records should be stored securely?
   - True
   - False

Short Answer Questions (4 points each, 20 points total)

Instructions: Provide a brief but complete answer to each question.

1. What are the key elements of patient confidentiality in relation to medical records?

2. What does the term “reverse smoking” mean in the context of EHR?

3. What is “coding” in the context of medical records?

4. Why is it important to maintain accurate and complete medical records?

Essay Question (20 points)

Instructions: Answer the following question in a well-organized essay. Your response should be approximately 200-300 words.

Discuss the ethical and legal considerations that medical professionals must keep in mind when handling, storing, and sharing medical records. Give specific examples to support your points.
Write this conference presentation. No, ChatGPT did not write this presentation. 😊

Group Activity
Go to: https://chat.openai.com/
- Collaborate with your colleagues and try using ChatGPT in various ways.
- Share ideas for how it can be used in your job and with students.
- Discuss the benefits, limitations, and pros & cons!

MagicSchool.ai

What is MagicSchool.ai?
- Utilizes AI technology for streamlined lesson planning, individualized teaching approaches, assessment creation, and enhanced communication—plus more.
- Exclusively designed to meet the needs of educators.
  - Offers the ability to generate comprehensive lesson plans.
  - Assists in crafting educational content that resonates with students.
- Generates original academic content.
  - Alternative to outdated textbooks.
  - Customizes instructional content to suit individual student needs.
- Features a comprehensive toolset for creating assessments and rubrics.
- Facilitates the writing of emails, recommendation letters, and also includes a text rephrasing feature.
Lesson Plan Generator: Write an introductory lesson for medical assisting students on the importance of medical terminology.

Rubric Generator: Write a rubric for medical assisting students for a practical on taking vitals.

Vocabulary Based Text Generator: Circulatory system:
- arteries, veins, arterioles, capillaries, coronary circulation, pulmonary circulation, endothelium, aorta, pulmonary artery, carotid arteries, renal artery, axillary artery, coronary artery, heart murmur, organ, ventricles, muscle, radial artery, brachial artery, coronary artery, heart murmur, organ, ventricles, muscle, pulmonary artery, thoracic aorta, posterior tibial artery, popliteal artery, aorta, coronary artery, pulmonary artery, thoracic aorta, anterior tibial artery, axillary artery, thoracic aorta, abdominal aorta.
Multiple Choice Quiz Generator: Circulatory system
artery, atrium, atresia, arterioles, capillaries, collateral circulation, coronary circulation, coronary sinus, visceral circulation, cephalic vein, median cubital vein, brachial vein, basilic vein, cephalic vein, inferior vena cava, superior vena cava, inferior caval vein, superior caval vein, common carotid artery, internal carotid artery, external carotid artery, occipital artery, posterior auricular artery, subclavian artery, subclavian vein, brachiocephalic artery, arch of the aorta, thoracic aorta, abdominal aorta, thoracic duct, brachial artery, common carotid artery, radial artery, ulnar artery, coronary artery, ascending aorta, descending aorta, aortic arch, aorta, aortic valve, semilunar valve, pulmonary valve, tricuspid valve, mitral valve, atrioventricular valves, ventricles, atrium, heart, atrial septum, ventricular septum, posterior leaflet, anterior leaflet, mitral valve, tricuspid valve, aortic valve, pulmonary valve, left atrium, right atrium, left ventricle, right ventricle, pulmonary circulation, coronary circulation, systemic circulation, endocardium, epicardium, myocardium, endothelium, neuroendocrine system.

Letter of Recommendation Generator: Write a letter of recommendation for Karen, an excellent medical assisting student, that I instructed for a medical assisting job at Gastroenterology Associates.

Scavenger Hunt
Go to: https://app.magicschool.ai/
• Collaborate with your colleagues and try three tools of your choice.
• Discuss how you could use this with your students and beyond!

Use MagicSchool (and All AI Tools!) Responsibly
• Check for bias and accuracy: Sometimes, AI might product incorrect or bias content. Always double-check before using it with students.
• Use the 80-20 approach: Use AI for the initial work, but make sure to add your final touch, review for accuracy and bias, and contextualize appropriately for the last 20%.
• Your Judgement Matters: See AI-generated content as a starting point, not a final solution. Always adhere to your college’s guidelines.
• Know the Limits: Some tools stop at 2021, so be aware when dealing with recent topics.
• Protect Student Privacy: Don’t include personal student details like names or addresses. Always adhere to FERPA regulations and guidelines.
Startup Tabs in Google Chrome

In our daily work and lives, most of us visit the same websites on a daily basis.

Startup tabs in Google Chrome offer the convenience of automatically opening your most-visited or favorite websites each time you launch the browser.

No need to manually open each website every time; they're there as soon as you start Chrome.

Users can choose which tabs open at startup, tailoring their browsing to their needs and habits.

Automating a repetitive task like this allows mental energy to be focused on more critical tasks.

Time is precious and every second counts!

Setup is Simple!

Available in Most Browsers

- Chrome Reference: https://support.google.com/chrome/answer/95314?hl=en
- Firefox
- Microsoft Edge
Microsoft OneNote

- Free download: https://www.onenote.com/download
- Ideal for structuring tasks in teaching, work, and personal life.
- Great for teaching with documents including Word.
- Easy to organize and use: sections tabs.
- My experience: Optimal with Word (PDF) documents (portrait orientation).
- Easy sharing options with students.

Microsoft OneNote Tips

- Customized the Quick Access Toolbar.
- Organize your sections (tab).

Microsoft OneNote

- Annotate directly on documents and files.
- Utilize highlighting tools for instructional focus.
- Sync across multiple devices for on-the-go access.
- Search functionality for quick retrieval of information.
- Collaboration in real-time with students/colleagues in meetings.

LastPass
LastPass

- Free download:  https://www.lastpass.com/
  - Paid versions are available with more features.
- In today's fast-paced digital world, we juggle numerous accounts across various platforms, each requiring a unique password that often needs to be updated regularly.
- LastPass is a Password Management Service founded in 2008.
- Password Storage: Securely stores your passwords in an encrypted vault.
- Password Generator: Creates strong, unique passwords.
- Multi-Platform Support: Accessible on Windows, macOS, Android, iOS.

Contact Information

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