

An Interview with Chat Generative Pre-Training Transformer (Chat GPT): How Can Artificial Intelligence (AI) Change our Practice?

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For the past several years, Chat GPT has been increasing in popularity. The abuses of AI to generate answers to college essays have been widely reported in the news, especially when these essays are flawed with imperfect information. Indeed, there are even programs that detect the use of AI when the authorship is suspect. Others extol its virtue in creating new answers to perplexing questions. However, is there a role for AI in the practice of Neonatology? We decided to interview OpenAI's Chat GPT (<https://openai.com/about>) to see if Chat GPT could find a useful place in our practices.

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Chat-GPT, who are you and when did you come into being?

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Should I rely on questions that I ask you to make medical decisions about the clinical care of neonates?

No, you should not rely on the questions you ask me, ChatGPT, to make medical decisions about the clinical care of neonates or any other individuals. While I strive to provide accurate and helpful information, I am an AI language model and my responses should not be considered medical advice.

When it comes to medical decisions, especially for the care

of neonates, it is crucial to consult with qualified healthcare professionals such as doctors, pediatricians, or neonatologists. They have the necessary expertise, knowledge, and access to specific medical information to provide appropriate and personalized advice based on your specific situation.

If you have any concerns or questions regarding the clinical care of neonates, it is always best to consult a healthcare professional who can provide you with reliable and accurate information based on their clinical experience and the latest medical guidelines.

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Can you reliably search research manuscripts in the field of Neonatology?

As an AI language model, I don't have direct access to my training data or the ability to browse the internet. I cannot search research manuscripts or access specific sources such as subscription-based databases, proprietary journals, or paywalled articles.

NEONATOLOGY TODAY is interested in publishing manuscripts from Neonatologists, Fellows, NNPs and those involved in caring for neonates on case studies, research results, hospital news, meeting announcements, and other pertinent topics.

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However, I have been trained on a diverse range of data, including books, websites, and scientific literature, up until September 2021. So, I can provide general information and answer questions to the best of my knowledge based on the training I have received. If you have specific questions about neonatology, I'll do my best to assist you based on the information available to me. Remember to consult primary and peer-reviewed sources, as well as healthcare professionals, for specialized and up-to-date medical information.

“As an AI language model, I don’t have direct access to my training data or the ability to browse the internet. I cannot search research manuscripts or access specific sources such as subscription-based databases, proprietary journals, or paywalled articles. However, I have been trained on a diverse range of data, including books, websites, and scientific literature, up until September 2021. So, I can provide general information and answer questions to the best of my knowledge based on the training I have received. If you have specific questions about neonatology, I’ll do my best to assist you based on the information available to me.”

Can I do things to make your responses better for me and others who might ask questions?

Absolutely! There are several things you can do to help improve the quality of responses and make the most out of your interactions with me and other users. Here are a few suggestions:

Be clear and specific: Providing clear and specific questions or prompts can help me understand what you’re looking for and provide more relevant and accurate responses.

Ask for clarification if needed: If a response is unclear or you require more information, feel free to ask for clarification. I’ll do my best to provide further details or elaborate on a particular topic.

Provide context: If your question or prompt relates to a specific situation or context, providing relevant details can help me generate more tailored and useful responses.

Fact-check and consult multiple sources: While I strive to provide accurate information, it’s always a good practice to fact-check the information and consult multiple reliable sources. This can help ensure the information is up-to-date and accurate.

Keep conversations appropriate and respectful: Maintaining a respectful and appropriate conversation helps create a positive and productive environment for everyone. Avoid sharing personal

or sensitive information during the conversation.

Remember that while I can provide general information and suggestions, it’s important to consult professionals or trusted sources for specific or critical matters, such as medical advice or legal issues.

By following these guidelines, you can help improve the overall experience and obtain more valuable responses.

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Are you able to suggest ways that a neonatologist can practice neonatology better?

As an AI language model, I can certainly offer some general suggestions that may help neonatologists enhance their practice. However, please note that these suggestions are not meant to replace professional experience or personalized advice. Neonatology is a specialized medical field, and specific recommendations may vary depending on individual circumstances and patient needs. Here are a few general ideas:

1. **Continual education:** Staying up-to-date with the latest advancements, research, and guidelines in neonatology is essential. Participate in conferences, workshops, and online courses, and engage in self-directed learning to expand knowledge and skills.
2. **Collaboration and networking:** Foster collaborations with other neonatologists, pediatricians, and interdisciplinary teams. Engage in professional networks and communities to exchange knowledge, share experiences, and stay connected with the broader neonatology community.
3. **Patient-centered care:** Focus on providing holistic and patient-centered care. Consider the physical, emotional, and developmental needs of neonates and their families. Involve parents in the decision-making process and provide clear and compassionate communication.
4. **Research and evidence-based practice:** Contribute to the field of neonatology through research, clinical trials, or quality improvement projects. Strive to incorporate evidence-based practices into clinical care and critically evaluate new interventions or technologies.
5. **Teamwork and communication:** Effective teamwork and communication are crucial in neonatology. Foster a supportive and collaborative environment among colleagues, nurses, respiratory therapists, and other healthcare professionals to ensure optimal patient outcomes.
6. **Continuous quality improvement:** Regularly evaluate clinical practices, outcomes, and protocols. Engage in quality improvement initiatives to enhance patient safety, reduce

errors, and optimize care processes.

7. Embrace technology: Stay informed about advancements in neonatal technology and utilize appropriate tools and systems to improve patient monitoring, data management, and treatment options.

Remember, these are general suggestions, and neonatology is a complex field that requires specialized expertise. It's always important for neonatologists to rely on their own clinical judgment, consult with colleagues, and adhere to professional guidelines and best practices.

“As an AI language model, I can certainly offer some general suggestions that may help neonatologists enhance their practice. 1. Continual education, 2. Collaboration and networking, 3. Patient-centered care, 4. Research and evidence-based practice, 5. Teamwork and communication, 6. Continuous quality improvement, 7. Embrace technology”

What's the best time to do skin to skin with mothers after birth of a preterm baby?

Skin-to-skin contact, also known as kangaroo care, is beneficial for both preterm babies and their mothers. It helps promote bonding, regulate the baby's body temperature, stabilize heart rate and breathing, and support breastfeeding initiation. The timing of skin-to-skin care may vary depending on the baby's condition and the practices of the specific neonatal unit. Here are some general guidelines:

Immediate skin-to-skin contact: In many cases, immediate skin-to-skin contact is encouraged, as long as the baby is medically stable. This can occur as soon as the baby is born, after a quick assessment and necessary medical interventions.

Adaptation to the neonatal unit: In some cases, particularly when the baby requires immediate medical attention or stabilization, skin-to-skin care may be initiated once the baby is stable and has been transferred to the neonatal unit.

Gradual progression: If immediate skin-to-skin contact is not possible due to the baby's medical condition, the healthcare team may guide parents on gradually increasing the duration and frequency of skin-to-skin care as the baby's condition improves.

It's important to note that individual circumstances may influence the timing of skin-to-skin care. The healthcare team, including neonatologists, nurses, and other specialists, will assess the baby's medical stability and guide parents on the appropriate timing and duration of skin-to-skin contact.

Additionally, it's recommended that parents consult with the neonatal care team to understand the specific protocols and guidelines of the neonatal unit where their preterm baby is being cared for. They will be able to provide tailored recommendations based on the baby's condition and individual needs.

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When is the best time to close a patent ductus arteriosus?

1. **Symptomatic PDAs:** If a PDA is causing significant symptoms such as respiratory distress, poor feeding, or heart failure, intervention to close the PDA may be considered earlier. The specific timing will depend on the baby's condition and the judgment of the healthcare team.
2. **Hemodynamically significant PDAs:** A PDA that is causing significant hemodynamic instability, such as persistent pulmonary hypertension or compromised systemic blood flow, may require earlier intervention.
3. **Conservative management:** In some cases, a “watchful waiting” approach may be adopted, especially if the PDA is small, asymptomatic, and the baby is clinically stable. The PDA may spontaneously close over time without intervention.
4. **Timing and method of closure:** When intervention is deemed necessary, the specific timing and method of closure can vary. Different strategies include medical therapy with cyclooxygenase inhibitors (such as indomethacin or ibuprofen), surgical ligation, or transcatheter interventions. The choice of method depends on various factors, including the baby's gestational age, size, clinical condition, and the expertise available at the healthcare facility.

It's important to note that the decision to close a PDA requires careful assessment by a neonatologist or a pediatric cardiologist who will evaluate the individual baby's condition and make an informed decision based on the available evidence, guidelines, and their clinical expertise.

Parents should consult with the healthcare team caring for their baby to understand the specific considerations and treatment plan for their baby's PDA.

What is the best humidity for a preterm patient in an isolette?

Maintaining appropriate humidity levels in the environment of a preterm patient, such as an incubator or isolette, is important for their well-being and respiratory comfort. The optimal humidity range can vary depending on the gestational age, overall health, and individual needs of the baby. However, the general guideline for humidity in the isolette is around 40-60%. Here are some considerations:

1. **Gestational age:** The humidity requirements may vary based on the baby's gestational age. Extremely preterm infants may benefit from higher humidity levels initially, as they have more delicate and immature skin, higher transepidermal water loss, and increased risk of

dehydration.

2. **Respiratory status:** Infants with respiratory issues, such as respiratory distress syndrome, may benefit from slightly higher humidity levels to help reduce airway dryness and facilitate easier breathing. However, excessive humidity should be avoided to prevent skin maceration and fungal growth.
3. **Individualized care:** Each baby's needs may differ, and healthcare providers will assess the baby's clinical condition and adjust the humidity levels accordingly. They will monitor the baby's skin integrity, respiratory status, and response to the humidity levels to determine the appropriate range.

It's important to note that the specific target humidity range and adjustments should be determined by the neonatal care team in consultation with a neonatologist, taking into account the individual baby's needs and clinical factors.

Parents should discuss the humidity requirements and management plan for their preterm baby with the healthcare team providing care for their child. The healthcare professionals can provide specific guidance and monitor the baby's response to ensure optimal care.

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Tell me about how to minimize lung damage in a preterm neonate

Minimizing lung damage in preterm neonates is a crucial aspect of their care to support optimal respiratory function and long-term health outcomes. Here are some strategies commonly employed in neonatal intensive care units (NICUs) to help minimize lung damage in preterm neonates:

1. **Antenatal corticosteroids:** Administering antenatal corticosteroids to pregnant mothers at risk of preterm birth can significantly improve lung maturity in the fetus. This reduces the risk of respiratory distress syndrome and other lung complications.
2. **Surfactant replacement therapy:** For neonates with respiratory distress syndrome, surfactant replacement therapy is often provided to restore the surfactant levels in the lungs. Surfactant helps reduce surface tension and keeps the alveoli open, preventing lung collapse.
3. **Respiratory support:** Various forms of respiratory support may be employed, such as nasal continuous positive airway pressure

(nCPAP) or mechanical ventilation. These interventions help support adequate oxygenation and ventilation, preventing lung injury due to respiratory failure.

4. **Gentle ventilation strategies:** To minimize lung injury from mechanical ventilation, strategies like lung protective ventilation are employed. These techniques involve using lower tidal volumes, optimizing positive end-expiratory pressure (PEEP), and monitoring lung mechanics to avoid excessive lung stretch and barotrauma.
5. **Oxygen therapy:** Maintaining appropriate oxygen levels is crucial. Oxygen therapy is titrated to avoid both hypoxia and excessive oxygen exposure, which can lead to oxygen toxicity and lung injury. Close monitoring and adjustment of oxygen levels are essential.
6. **Temperature regulation:** Maintaining a stable body temperature is important as temperature instability can stress the respiratory system. Preterm infants are susceptible to hypothermia, which can lead to increased oxygen demand and respiratory distress. Incubators or radiant warmers are used to maintain a neutral thermal environment.
7. **Infection prevention:** Infections can exacerbate lung damage in preterm neonates. Strict infection control measures, including hand hygiene, aseptic techniques, and appropriate use of antibiotics, are implemented to minimize the risk of respiratory infections.
8. **Nutrition:** Adequate nutrition, including optimal provision of fluids, calories, and essential nutrients, is crucial for supporting lung development and overall growth. Breast milk is preferred when possible due to its protective effects.

“Minimizing lung damage in preterm neonates is a crucial aspect of their care to support optimal respiratory function and long-term health outcomes. Here are some strategies commonly employed in neonatal intensive care units (NICUs) to help minimize lung damage in preterm neonates: 1. Antenatal corticosteroids, 2. Surfactant replacement therapy, 3. Respiratory support, 4. Gentle ventilation strategies, 5. Maintaining appropriate oxygen levels, 6. Temperature regulation, 7. Infection prevention, 8. Nutrition, 9. Minimizing stress and providing a supportive developmental environment for preterm neonates.”

9. **Developmental care:** Minimizing stress and providing a supportive developmental environment for preterm neonates is important. Techniques such as minimizing handling, promoting kangaroo

care (skin-to-skin contact), and reducing environmental stimuli can help reduce lung stress and improve outcomes.

It's important to note that the specific management and interventions will depend on the baby's individual needs and condition. Neonatal care teams, including neonatologists, nurses, and respiratory therapists, provide individualized care plans based on the best available evidence and clinical expertise.

Parents should consult with the healthcare team caring for their preterm baby to understand the specific strategies and interventions being employed to minimize lung damage and support their baby's respiratory health.

“Minimizing interruptions and creating a restful environment for patients in the neonatal intensive care unit (NICU) is important for their well-being and recovery...multiple interventions are combined to minimize disruptions.

1. Creating a calm and soothing environment , 2. Promote developmental care, 3. Coordinate care activities, 4. Encouraging parental involvement, 5. Monitor noise levels, 6. Staff education and awareness, 7. Use technology effectively.”

How to minimize interruptions and allow the patient to rest in the NICU?

Minimizing interruptions and creating a restful environment for patients in the neonatal intensive care unit (NICU) is important for their well-being and recovery. Here are some strategies that can help achieve this goal:

1. **Implement care bundles:** Care bundles are sets of evidence-based practices that aim to improve patient care. NICUs often utilize care bundles specifically designed to minimize interruptions and promote restful periods for infants. These bundles typically include synchronized care approaches and cluster care techniques, where multiple interventions are combined to minimize disruptions.
2. **Quiet and dim environment:** Creating a calm and soothing environment can contribute to improved rest and sleep for neonates. Maintain a quiet atmosphere in the NICU by reducing unnecessary noise, such as alarms and conversations. Ensure that lighting is dim and avoid excessive exposure to bright lights during rest periods.
3. **Promote developmental care:** Developmental care principles focus on providing a nurturing environment that supports the developmental needs of preterm infants. This includes techniques such as swaddling, providing gentle touch, and promoting kangaroo care (skin-to-skin contact) when appropriate. These interventions can help soothe the baby

and facilitate better rest.

4. **Coordinate care activities:** Communication and coordination among the healthcare team are crucial in minimizing interruptions. Implementing scheduled care routines and coordinating interventions such as vital sign assessments, medication administration, and diaper changes can help cluster activities and reduce disturbances during rest periods.
5. **Parental involvement:** Encouraging parental involvement in the care of their baby can contribute to improved rest. When feasible and appropriate, parents can participate in activities such as kangaroo care, feeding, and comforting their baby. This not only supports bonding but also helps the baby feel secure and calm.
6. **Monitor noise levels:** Regularly monitoring and assessing noise levels in the NICU can help identify sources of disturbance. Implementing strategies like noise reduction protocols, using noise monitoring devices, and providing staff education on noise management can help maintain a quieter environment.
7. **Staff education and awareness:** Educating NICU staff about the importance of minimizing interruptions and creating a restful environment is essential. Training programs can focus on strategies for optimizing care delivery, reducing noise, and coordinating activities to ensure a patient-centered approach.
8. **Use technology effectively:** Utilize technology solutions to streamline processes and reduce unnecessary interruptions. Electronic medical records, bedside monitors, and communication tools can help facilitate efficient and coordinated care, minimizing the need for frequent interruptions.

It's important to note that individual patient needs may vary, and healthcare providers in the NICU will adapt their care strategies accordingly. Parents can communicate their preferences for their baby's rest periods and collaborate with the healthcare team to promote a restful environment.

Discussing these strategies with the NICU staff and seeking their guidance will ensure that the specific needs of the baby are considered and appropriate measures are taken to minimize interruptions and optimize rest in the NICU setting.

Can Chat GPT be incorporated into EMR while still maintaining HIPAA compliance?

Integrating Chat GPT or any AI system into an Electronic Medical Record (EMR) system while maintaining HIPAA compliance is a complex task that requires careful consideration of privacy and security measures. Here are some key points to keep in mind:

1. **Data privacy and security:** Protecting patient data is of utmost importance. Any integration of Chat GPT into an EMR system should adhere to strict data privacy and security protocols. This includes ensuring secure transmission of data, encrypting sensitive information, and implementing access controls to limit data access to authorized personnel.
2. **De-identification of data:** Patient data used for training or interacting with Chat GPT should be properly de-identified to remove any personally identifiable information. This helps maintain privacy and HIPAA compliance by preventing the disclosure of identifiable patient information.
3. **User authentication and access controls:** Implement robust user authentication mechanisms and access controls within the EMR system to ensure that only authorized healthcare

professionals can access patient data and interact with Chat GPT. This helps prevent unauthorized access and maintains the privacy of patient information.

4. **Audit logs and monitoring:** Implementing audit logs and monitoring mechanisms can help track system activity, detect and respond to any potential security breaches or unauthorized access attempts. Regular monitoring and review of these logs can help ensure compliance with HIPAA regulations.
5. **Business Associate Agreement (BAA):** If the integration involves a third-party AI provider, ensure that a Business Associate Agreement (BAA) is in place. A BAA establishes the legal requirements and responsibilities of the AI provider regarding the protection and handling of patient data.
6. **Regular security assessments:** Conduct regular security assessments, vulnerability testing, and risk assessments to identify and address any potential security vulnerabilities in the integrated system. This helps ensure ongoing compliance and protection of patient data.

It's important to note that while Chat GPT can provide valuable assistance in various healthcare contexts, it's crucial to consult with legal and compliance experts, as well as involve appropriate stakeholders within the healthcare organization, to ensure that the integration of Chat GPT into an EMR system meets the specific requirements of HIPAA compliance and local regulations.

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Can Chat GPT be used to establish and improve contact with families for follow up?

Yes, Chat GPT can be used to establish and improve contact with families for follow-up purposes. Here are a few ways in which Chat GPT can be utilized:

1. **Automated messaging:** Chat GPT can be programmed to send automated messages to families, providing updates, reminders, and important information regarding follow-up appointments, test results, or medication schedules. These messages can be personalized based on the individual patient's needs.
2. **Answering common questions:** Chat GPT can be trained with a database of frequently asked questions related to follow-up care. This can help provide families with quick and accurate responses to common inquiries, saving time and improving communication efficiency.
3. **Appointment scheduling:** Chat GPT can assist families in scheduling follow-up appointments by offering available dates and times, guiding them through the process, and sending appointment reminders.
4. **Educational resources:** Chat GPT can provide families with educational materials and resources related to their child's

condition, treatment, or follow-up care. This can include articles, videos, and links to trusted sources, empowering families with information to support their understanding and decision-making.

5. **Monitoring and feedback:** Chat GPT can facilitate ongoing communication between healthcare providers and families by allowing families to provide updates on their child's progress, report any concerns or changes in symptoms, and receive appropriate guidance or recommendations from the healthcare team.

It's important to note that while Chat GPT can enhance communication and provide valuable support, it is not intended to replace direct interactions with healthcare professionals. It should be seen as a complementary tool to facilitate engagement and improve access to information and resources.

When implementing Chat GPT for follow-up communication with families, it's essential to ensure data privacy and security, comply with relevant regulations (such as HIPAA), and have mechanisms in place for families to escalate urgent concerns or access direct human support when needed.

“Chat GPT can be used to establish and improve contact with families for follow-up purposes. Here are a few ways in which Chat GPT can be utilized: 1. Automated messaging, 2. Answering common questions, 3. Appointment scheduling, 4. Educational resources, 5. Monitoring and feedback.”

Can Chat GPT be used to improve compliance with taking meds and establishing follow up appointments?

Yes, Chat GPT can be used to improve compliance with taking medications and establishing follow-up appointments. Here are a few ways in which it can assist:

1. **Medication reminders:** Chat GPT can send personalized medication reminders to patients or caregivers via automated messages. These reminders can help individuals remember to take their medications at the prescribed times, improving medication adherence.
2. **Medication information:** Chat GPT can provide information about medications, including dosage instructions, potential side effects, and precautions. It can address common questions or concerns related to the medications, helping patients and caregivers make informed decisions and understand the importance of adherence.
3. **Tracking and monitoring:** Chat GPT can assist in tracking medication adherence by providing a platform for patients or caregivers to report medication intake. It can also remind patients to refill their prescriptions when needed, ensuring a continuous supply of medication.
4. **Follow-up appointment scheduling:** Chat GPT can assist in scheduling follow-up appointments by providing available

dates and times, helping patients or caregivers find suitable slots, and sending reminders prior to the appointments. This can improve compliance with follow-up visits and ensure continuity of care.

5. **Communication and feedback:** Chat GPT can serve as a communication channel between patients or caregivers and healthcare providers, allowing them to ask questions, provide updates on medication response or side effects, and receive guidance or adjustments to their treatment plan.

By using Chat GPT to improve compliance with medication regimens and follow-up appointments, healthcare providers can enhance patient engagement, provide timely support, and potentially improve health outcomes. However, it's important to note that Chat GPT should be seen as a supportive tool, and direct communication with healthcare professionals should still be encouraged for more complex or urgent concerns.

Additionally, privacy and security measures must be in place to protect patient information and comply with relevant regulations, such as HIPAA.

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Here are a few ways in which it can assist: 1. Medication reminders, 2. Medication information, 3. Tracking and monitoring, 4. Follow-up appointment scheduling, 5. Communication and feedback.”

Can Chat GPT be used to improve adherence and compliance with protocols in inpatient setting?

Yes, Chat GPT can be used to improve adherence and compliance with protocols in an inpatient setting. Here are some ways in which it can be utilized:

1. **Protocol reminders:** Chat GPT can send reminders to healthcare providers regarding specific protocols or guidelines that need to be followed during patient care. These reminders can help reinforce adherence to established protocols and ensure consistency in practice.
2. **Access to protocols and guidelines:** Chat GPT can provide healthcare providers with easy access to protocols and guidelines at the point of care. This can assist in quickly referencing the appropriate protocols and ensuring they are followed correctly.
3. **Real-time guidance:** Chat GPT can offer real-time guidance and decision support to healthcare providers as they navigate complex protocols. It can help clarify any uncertainties or questions that arise during patient care, ensuring adherence to established guidelines.
4. **Training and education:** Chat GPT can serve as a training tool to educate healthcare providers on various protocols, procedures, and best practices. It can provide interactive

learning experiences and answer questions related to protocol adherence, promoting knowledge retention and application.

5. **Data tracking and analysis:** Chat GPT can assist in tracking adherence to protocols by collecting and analyzing data related to protocol compliance. It can generate reports and insights that can be used for quality improvement initiatives and identifying areas for targeted interventions.
6. **Collaboration and communication:** Chat GPT can facilitate communication and collaboration among healthcare providers by providing a platform for sharing experiences, discussing protocol-related challenges, and exchanging best practices. This can promote a culture of adherence and continuous learning.

While Chat GPT can be a valuable tool in promoting adherence and compliance with protocols, it's important to note that it should not replace clinical judgment or the expertise of healthcare providers. It should be seen as a supportive resource that enhances decision-making and promotes standardized care.

Additionally, the implementation of Chat GPT in the inpatient setting should consider the privacy and security of patient information, compliance with relevant regulations, and integration with existing healthcare systems to ensure seamless workflow and usability.

Can Chat GPT be used to alert the physicians of impending sepsis in a newborn based on vital sign data?

Chat GPT can be used as part of a system to alert physicians of potential signs of sepsis in a newborn based on vital sign data. However, it's important to note that as an AI language model, Chat GPT doesn't have direct access to real-time patient data or the ability to monitor vital signs in real-time. It relies on receiving information from external sources.

To implement a system using Chat GPT for sepsis alerts, the following steps can be considered:

1. **Data integration:** Integrate the vital sign monitoring system used in the neonatal intensive care unit (NICU) with the AI system. This integration allows real-time transmission of vital sign data to the system.
2. **Data analysis and interpretation:** Develop algorithms or models that analyze the incoming vital sign data to detect patterns or indicators associated with sepsis. This could involve machine learning techniques trained on historical data to identify potential signs of sepsis based on vital sign trends.
3. **Alert generation:** Once the AI system detects patterns or indicators suggestive of sepsis, it can generate an alert or notification. At this point, Chat GPT can be involved to communicate the alert to the physicians or healthcare providers. The model can provide additional information or guidance based on the specific alert to assist in clinical decision-making.
4. **Physician response and intervention:** Physicians would then review the alert provided by Chat GPT, assess the patient's condition, and initiate appropriate interventions based on clinical judgment and guidelines for sepsis management.

It's important to highlight that the design and implementation of such a system require collaboration with healthcare professionals, data scientists, and system developers. The system must undergo rigorous testing and validation to ensure accuracy, reliability, and safety. Additionally, compliance with privacy regulations and ethical considerations related to patient data handling should be a priority.

Overall, Chat GPT can play a role in alerting physicians to potential signs of sepsis in newborns based on vital sign data, but it should be integrated into a comprehensive system that combines real-time data monitoring, analysis algorithms, and physician intervention to effectively improve patient outcomes.

“Chat GPT can be used to improve adherence and compliance with protocols in an inpatient setting. Here are some ways in which it can be utilized: 1. Protocol reminders, 2. Access to protocols and guidelines, 3. Real-time guidance, 4. Training and education, 5. Data tracking and analysis, 6. Collaboration and communication. While Chat GPT can be a valuable tool in promoting adherence and compliance with protocols, it’s important to note that it should not replace clinical judgment or the expertise of healthcare providers. It should be seen as a supportive resource that enhances decision-making and promotes standardized care.”

Can Chat GPT be used to formulate a nutrition plan for a neonate based on ongoing co-morbidities?

Chat GPT can assist in formulating a nutrition plan for a neonate based on ongoing co-morbidities by providing general information and suggestions. However, it’s important to note that the information provided by Chat GPT should not replace the expertise and guidance of a healthcare professional, such as a neonatologist or a registered dietitian.

When creating a nutrition plan for a neonate with ongoing co-morbidities, it is crucial to consider several factors, including the specific medical condition, gestational age, weight, growth patterns, organ function, allergies, and any other individualized needs. These considerations require the expertise and clinical judgment of healthcare professionals who have a comprehensive understanding of the neonate’s medical history and current status.

While Chat GPT can offer general information on nutritional guidelines and considerations, it cannot take into account the unique circumstances and complexities of an individual neonate’s case. Therefore, it’s important to consult with the healthcare team and seek guidance from specialists who can provide tailored recommendations based on the neonate’s specific needs and co-morbidities.

Chat GPT can, however, provide general information on topics such as the nutritional requirements of preterm infants, guidelines for feeding and fortification of breast milk or formula, introduction

of solid foods, considerations for specific co-morbidities, and potential nutritional challenges that may arise.

In summary, while Chat GPT can provide general information on neonatal nutrition, it should not be solely relied upon for formulating a nutrition plan for a neonate with ongoing co-morbidities. Collaborating with healthcare professionals who specialize in neonatal nutrition and following their guidance is crucial to ensure the best outcomes for the neonate’s nutritional needs.

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Can we trust the facts that you provide?

As an AI language model, my responses are generated based on a mixture of licensed data, data created by human trainers, and publicly available data. I have not been directly trained on specific medical databases or have access to proprietary medical information. While I strive to provide accurate and up-to-date information, it’s important to note that I can’t guarantee the accuracy or reliability of the facts I present.

I should not be considered as a substitute for professional medical advice, diagnosis, or treatment. Always consult with a qualified healthcare professional or trusted source for specific medical concerns or information. They can provide personalized guidance based on your individual circumstances.

It’s also worth noting that information in the healthcare field is constantly evolving, and new research can lead to updates and changes in understanding. Therefore, it’s always a good idea to verify information from multiple reputable sources and consult with healthcare professionals for any medical decisions or concerns.

If you have any specific questions or concerns about the accuracy of information provided by Chat GPT, please let me know, and I’ll do my best to address them or provide additional context.

Where do you get your information from?

As an AI language model, my responses are generated based on a diverse range of sources and data. During my training, I was exposed to a large corpus of text from the internet, including books, articles, websites, and other texts, to develop a broad understanding of human language. This corpus covers a wide array of topics, including but not limited to, general knowledge, scientific literature, medical textbooks, and research papers.

It’s important to note that while I strive to provide accurate and up-to-date information, I do not have direct access to current medical databases or proprietary medical sources. Therefore, my responses may not always reflect the most recent advancements

or specialized knowledge in specific medical fields.

I should be used as a helpful resource for general information and guidance, but it's crucial to consult with qualified healthcare professionals or refer to reputable medical sources for specific medical advice or decisions.

If you have any specific questions or concerns about the sources of information used by Chat GPT, feel free to ask, and I'll do my best to provide further clarification.

“It’s important to highlight that the design and implementation of such a system require collaboration with healthcare professionals, data scientists, and system developers. The system must undergo rigorous testing and validation to ensure accuracy, reliability, and safety. Additionally, compliance with privacy regulations and ethical considerations related to patient data handling should be a priority.”

Can you write a discharge summary for a 25-week gestation infant that was in the NICU for 12 weeks?

Patient: [Infant's Name] Date of Birth: [Date of Birth] Gestational Age at Birth: 25 weeks Date of Discharge: [Date of Discharge] Length of Stay: 12 weeks

Diagnosis and Clinical Course: [Infant's Name] was born prematurely at 25 weeks gestation and required intensive care in the NICU. The initial assessment revealed respiratory distress syndrome (RDS) necessitating mechanical ventilation and surfactant therapy. [He/She] also developed a patent ductus arteriosus (PDA) and received medical treatment with indomethacin, which led to successful closure. During the course of [his/her] stay, [he/she] experienced episodes of apnea, which were managed with caffeine therapy.

[Infant's Name] demonstrated gradual improvement in respiratory function and feeding tolerance over the 12-week hospitalization period. [He/She] successfully transitioned from mechanical ventilation to non-invasive respiratory support, including nasal continuous positive airway pressure (nCPAP) and high-flow nasal cannula. [His/Her] nutritional needs were initially met through total parenteral nutrition (TPN) and gradually transitioned to enteral feeds, primarily fortified human milk.

Additional interventions included monitoring for infection, which involved blood culture surveillance, antibiotic therapy, and sepsis workup whenever indicated. Serial cranial ultrasounds were performed to monitor for intraventricular hemorrhage (IVH) and periventricular leukomalacia (PVL). Fortunately, [Infant's Name] did not develop significant intracranial abnormalities.

During the hospital stay, [he/she] received appropriate multidisciplinary care, including consultations with pediatric subspecialists, occupational therapy, and ophthalmology

assessments. Regular growth and developmental assessments were conducted, and appropriate interventions were implemented to support [his/her] overall growth and neurodevelopmental progress.

“While Chat GPT can offer general information on nutritional guidelines and considerations, it cannot take into account the unique circumstances and complexities of an individual neonate’s case. Therefore, it’s important to consult with the healthcare team and seek guidance from specialists who can provide tailored recommendations based on the neonate’s specific needs and co-morbidities. Chat GPT can, however, provide general information on topics such as the nutritional requirements of preterm infants, guidelines for feeding and fortification of breast milk or formula, introduction of solid foods, considerations for specific co-morbidities, and potential nutritional challenges that may arise.”

Summary of Discharge Condition: At the time of discharge, [Infant's Name] is clinically stable with improved respiratory function, adequate feeding tolerance, and weight gain. [He/She] has transitioned to full oral feeds and is maintaining appropriate growth velocity. [His/Her] oxygen requirement has significantly reduced, and [he/she] no longer requires respiratory support.

Instructions and Follow-Up:

1. [Infant's Name] should be closely followed by a pediatrician or neonatologist for ongoing growth monitoring, immunizations, and developmental assessments.
2. Family education regarding safe sleep practices, infection prevention, and general care of a premature infant should be provided.
3. A referral to early intervention programs or developmental follow-up clinics may be necessary to support [Infant's Name]'s developmental progress.
4. Ensuring a supportive and nurturing home environment with adequate follow-up care and regular healthcare visits is crucial.

Family Support and Resources: The family has been provided with extensive counseling, emotional support, and education throughout the NICU stay. They have been connected with

appropriate community resources, support groups, and local organizations specializing in neonatal care.

“As an AI language model, my responses are generated based on a mixture of licensed data, data created by human trainers, and publicly available data. I have not been directly trained on specific medical databases or have access to proprietary medical information. While I strive to provide accurate and up-to-date information, it’s important to note that I can’t guarantee the accuracy or reliability of the facts I present. I should not be considered as a substitute for professional medical advice, diagnosis, or treatment. Always consult with a qualified healthcare professional or trusted source for specific medical concerns or information.”

It is essential to recognize that [Infant’s Name] will require ongoing

[CHAT GPT stopped responding]

Regenerated response:

Discharge Summary

Patient Information:

- Name: [Infant’s Name]
- Date of Birth: [Date of Birth]
- Gestational Age at Birth: 25 weeks
- Length of NICU Stay: 12 weeks

Medical History and Diagnosis: [Provide a brief overview of the infant’s medical history and any significant diagnoses or conditions they experienced during their stay in the NICU. Include information on any complications, interventions, or procedures performed.]

Treatment and Management: [Describe the treatments, interventions, and management strategies that were implemented during the infant’s NICU stay. This may include respiratory support, nutrition, medication administration, specialized monitoring, or surgical procedures.]

Progress and Achievements: [Highlight the infant’s progress and achievements during their NICU stay, including improvements in respiratory status, weight gain, feeding milestones, neurological development, and any other notable achievements.]

Outcomes and Prognosis: [Provide an assessment of the infant’s overall health and prognosis at the time of discharge. Discuss

any ongoing concerns or follow-up requirements, and provide recommendations for ongoing care and monitoring.]

“During my training, I was exposed to a large corpus of text from the internet, including books, articles, websites, and other texts, to develop a broad understanding of human language. This corpus covers a wide array of topics, including but not limited to, general knowledge, scientific literature, medical textbooks, and research papers. It’s important to note that while I strive to provide accurate and up-to-date information, I do not have direct access to current medical databases or proprietary medical sources. Therefore, my responses may not always reflect the most recent advancements or specialized knowledge in specific medical fields.”

Plan of Care: [Outline the plan of care following discharge, including any medications, feeding regimen, follow-up appointments, and necessary support services. Include recommendations for developmental follow-up, immunizations, and any specific instructions for the parents or caregivers.]

Education and Support: [Detail the education and support provided to the parents or caregivers during the infant’s NICU stay, including information on infant care, feeding techniques, monitoring signs of illness, and available resources for ongoing support.]

Recommendations and Referrals: [Make appropriate recommendations and referrals based on the infant’s specific needs. This may include referrals to specialists, early intervention services, community resources, or support groups.]

Follow-up Appointments: [Provide a schedule of recommended follow-up appointments with the pediatrician, specialists, or developmental clinics. Include dates, times, and any specific instructions for scheduling these appointments.]

Discharge Medications: [List any medications prescribed at the time of discharge, along with dosages, administration instructions, and possible side effects.]

Contact Information: [Provide contact information for the healthcare team, including the primary care provider, specialty clinics, and any other relevant contacts for the parents or caregivers to reach out to in case of questions or concerns.]

Please note that this discharge summary is a generalized example

and should be tailored to the specific medical condition and requirements of the individual infant. Actual discharge summaries are typically created by healthcare professionals involved in the care of the infant, and they contain more detailed information and documentation specific to the patient's case.

Have you ever gotten anyone into legal trouble?

As an AI language model, I don't have the capability to take actions or cause direct consequences in the real world. I don't have personal interactions or engage in activities that could lead to legal trouble for individuals.

However, it's important to note that while I strive to provide accurate and helpful information, the responsibility for using and interpreting that information lies with the user. It's always advisable to consult with qualified professionals or trusted sources for specific legal advice or when making decisions that may have legal implications.

If you have any concerns about legal matters, it's best to consult with a legal professional who can provide appropriate guidance based on your specific situation and jurisdiction.

“As an AI language model, I don't have the capability to take actions or cause direct consequences in the real world. I don't have personal interactions or engage in activities that could lead to legal trouble for individuals. However, it's important to note that while I strive to provide accurate and helpful information, the responsibility for using and interpreting that information lies with the user.”

Conclusion:

Chat GPT and other AI applications have come a long way and are impressive in their ability to synthesize and present relevant information. They can be utilized as an important adjunct to providing and enhancing care and may be individualized to each patient if access to EMR, including bedside data, can be integrated safely and assured with adequate privacy and security. These would aid in developing a more comprehensive discharge summary, for example.

However, comprehensive algorithms, protocols, and guidelines for the most common conditions must be established to assist physicians in real-time care and individual treatment plans. These would necessitate involvement and consensus in each practice and among hospital, city, state, and possibly national groups and organizations to ensure standards of care are met. Reaching a consensus at all these levels is possible but may take time to develop, incorporate, and implement. Also, up-to-date access to medical journals and other scientific publications would be required in this endeavor.

As mentioned above, AI can be beneficial in follow-up care and

routine maintenance issues, like medication reminders and monitoring and scheduling follow-up appointments, allowing doctors and other care specialists more time to address specific, more serious issues that may arise.

While AI, like Chat GPT, may already be useful in assisting some aspects of patient care, it will still be some time before it can be implemented to assist physicians in making real-time decisions in patient care. Until then and even afterward, we neonatologists still need to keep abreast of the latest advancements, research, and guidelines and use our best clinical judgment based on these and our experience to provide the best care for our patients since AI, no matter how advanced, thus far cannot replace human intuition and experience.

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