



מרכז שניידר לרפואת ילדים בישראל
مرکز شneider لطب الأطفال في إسرائيل
Schneider Children's Medical Center of Israel



CLALIT
INNOVATION

Dr. Co-Pilot (Panda)

Pediatric AI Navigation & Decision Assistant

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PANDA: Protocols and Textbook Knowledge

Enter query:

5-year-old with fever, cough,
and difficulty breathing

PANDA
AI Processing

Pediatric Pneumonia Protocol

1. Assess respiratory rate and O2 sat
2. Obtain chest X-ray
3. Initiate antibiotic therapy
4. Provide supportive care

Textbook Summary

Pediatric pneumonia often presents with:
- Fever, cough, tachypnea
- Chest retractions, nasal flaring
Ref: Nelson's Pediatrics, Ch. 428

PANDA's Comprehensive Response

The symptoms suggest pediatric pneumonia. Key points:

1. Assess vital signs, especially respiratory rate and oxygen saturation
 2. Look for signs of respiratory distress (retractions, nasal flaring)
 3. Follow pneumonia protocol for diagnosis (X-ray) and treatment (antibiotics)
- References: Hospital Pneumonia Protocol, Nelson's Pediatrics Ch. 428

PANDA Mobile App

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Pediatric pneumonia symptoms

Summary:

Common symptoms include:

- Fever
- Cough
- Rapid breathing
- Chest retractions

Ref: Nelson's Pediatrics, Ch. 428

Project Overview

Integrating generative AI with reliable medical information to support clinical decision-making and reduce treatment errors.
Developed in collaboration with Microsoft and Clalit Innovation.

Select Information Source

Nelson Textbook of Pediatrics

Hospital Guidelines

AI Assistant

You've selected Hospital Guidelines. How can I assist you today?

A 2 years old boy with short bowel presents with microcytic anemia, low iron levels, hgb 7.3, weight is 17kg. what tx do you suggest?

Enter your clinical scenario here...

Background: AI tools are expanding into medicine, enhancing patient care. Access to information systems based on professional literature, local protocols, and clinical guidelines is crucial. Our medical center has over 550 specialized treatment protocols, but accessing and navigating them requires skill, caution, and time.

Objective: Make extensive pediatric knowledge accessible as a quick decision-support tool and alert clinicians to deviations from treatment guidelines.

Method: Utilizing Generative AI, we developed a prototype, "Dr. Co-Pilot," for enhancing access to relevant medical information and identifying deviations from treatment protocols.

Results: The system provides accessible information based on textual descriptions of clinical problems, including organizing, filtering, and making local protocols, clinical guidelines, and pediatric literature readily

available to clinicians. Rigorous validation through expert review ensured its reliability.

Conclusion: Dr. Co-Pilot is an innovative support system that provides rapid access to medical knowledge for treatment decision-makers. It also alerts for potential errors in pediatric treatment protocols. The prototype demonstrates the efficacy of AI in delivering relevant medical information, precise references, and identifying deviations from protocols.

How it works?

- Generative AI answers clinical questions in free text.
- Access predefined medical resources.
- Provides user with specific reference.
- Detects and corrects potential errors