Artificial Intelligence at Cedars-Sinai

Presentation to the Joint Assembly Health and Privacy & Consumer Protection Committee

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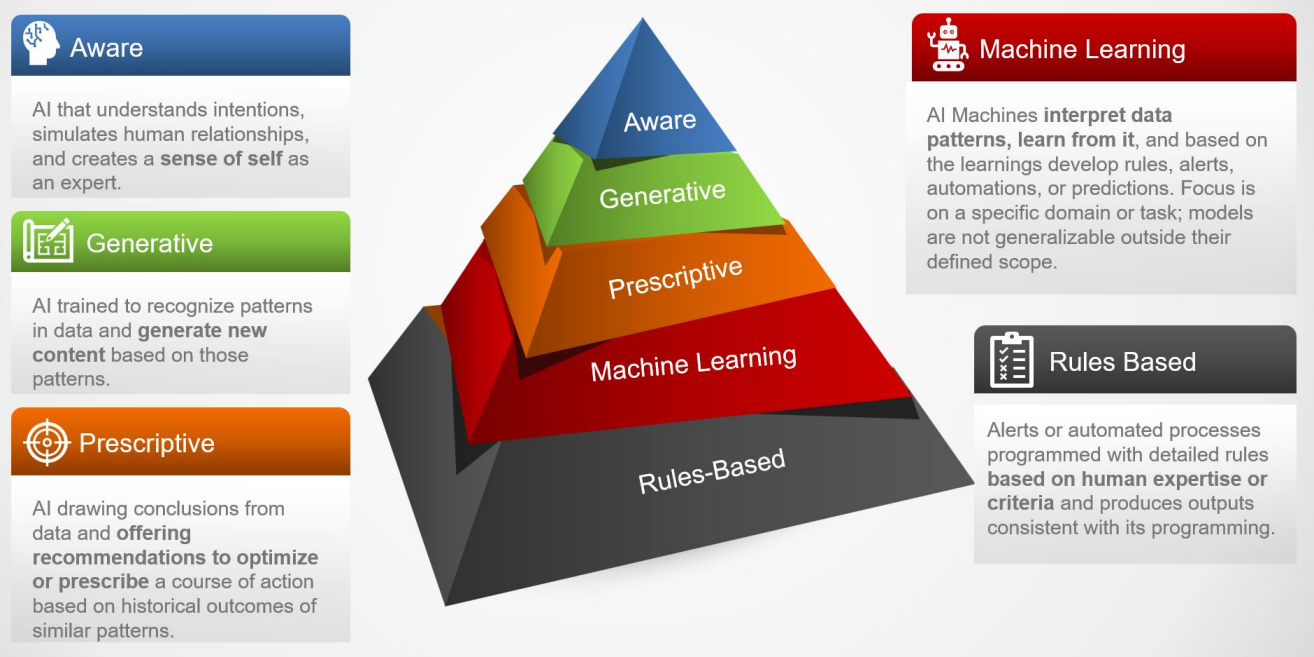
What is AI

Artificial intelligence constitutes computational methods that enhance, extend, and expand human intelligence capabilities. Artificial intelligence is the capacity of machines to memorize and learn from experience, to think and create, to assist and augment decisions that influence the healthcare of our patients.



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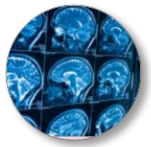
AI Capabilities

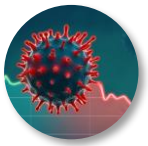
Enable Early Detection & Treatment

Identification of Vulnerable and At-Risk patient populations

Medical Imaging to identify acute anomalies, prioritize review, and augment diagnosis



Assisting physicians and nurses, enhancing **caregiver wellbeing** and focus on patients..



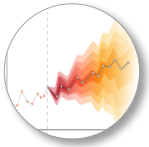
Disease Pattern Modeling to predict disease patterns and epidemic modeling

Assisting Surgeons with robotic hands for precision surgery and outcomes

Patient-Trial Matching to pair clinical trials to eligible patients

Deliver Superior Experiences

Simulation Modeling and **Predictive Analytics** for capacity planning and hospital flow



Robotics assisting clinical staff with non-patient facing tasks so they can focus on the patient.

Virtual Assistants at the Bedside to accommodate patient needs and automate caregiver escalation

Workflow agents to assist in managing technician workflows

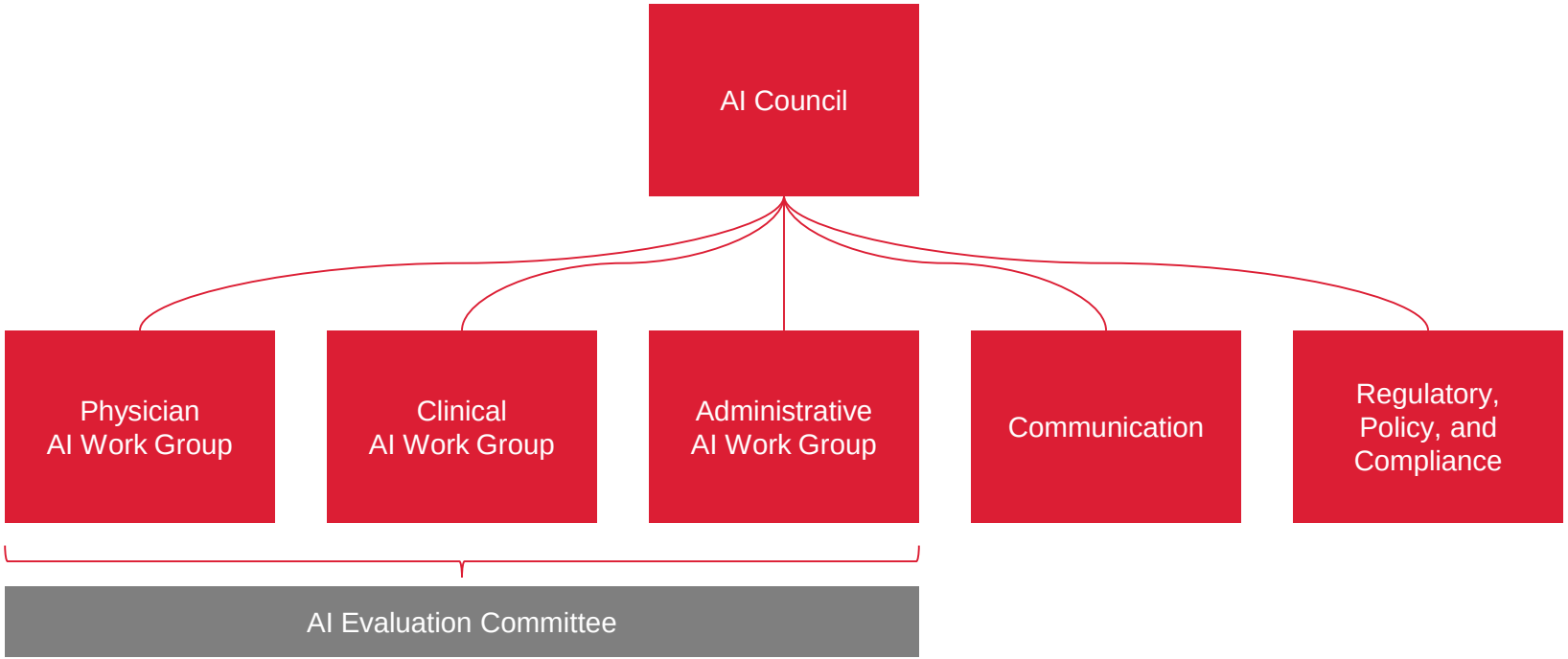
Proactive supply needs **planning** and vendor management

Monitoring Health through wearables and integrating into the Electronic Medical Record

Accelerate Research & Discovery

Drive Operational Efficiency

Governance


AI Council
Physician AI Work Group
Clinical AI Work Group
Administrative AI Work Group
Communication
Regulatory, Policy, and Compliance
AI Evaluation Committee

Review Process

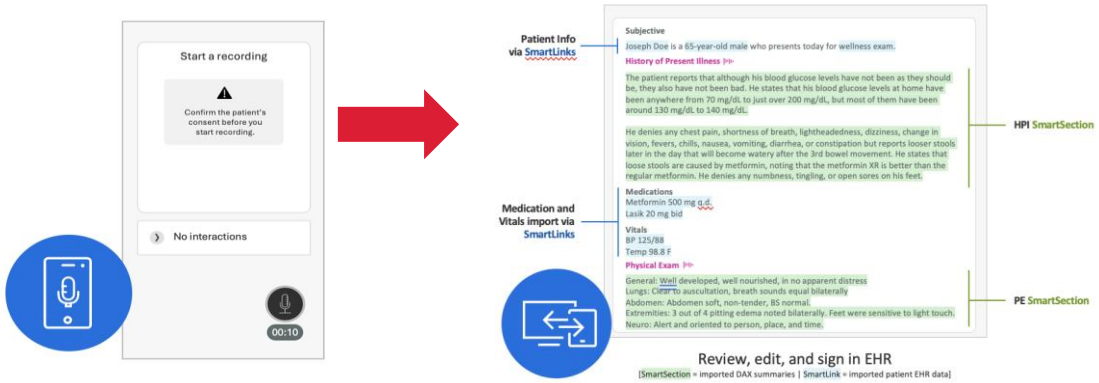
Performance	• Evaluate by metrics like sensitivity, specificity, and AUC. • Assess for accuracy, hallucination rate, user satisfaction.
Safety	• Examine risks from inaccurate, biased, or poorly implemented models. • Evaluate safeguards against model drift, lack of transparency, and inadequate validation.
Bias & Fairness	• Validate using Cedars-Sinai data. • Assess equity across race, ethnicity, gender, age, language. • Evaluate subgroup performance (e.g. chronic vs healthy populations).
Deployment & Monitoring	• Ensure alignment with AI policy: oversight, guardrails, and intended use. • Models must pass IT intake, have operational sponsorship, and a full implementation plan.

Ambient Assistant for Physicians

Clinical notes in seconds

Description and Use Cases

- Using generative AI-enabled voice solution to automatically create clinical notes.



Benefits

- Physician wellness and efficiency
  - Documentation burden
    - Less time spent typing / editing
  - Cognitive burden
    - Focus on patient rather note
  - Productivity

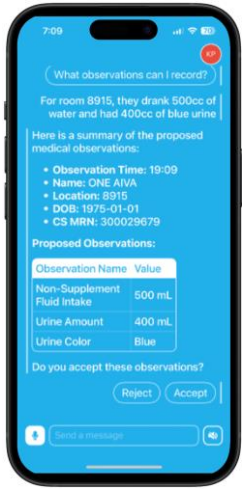
Impact

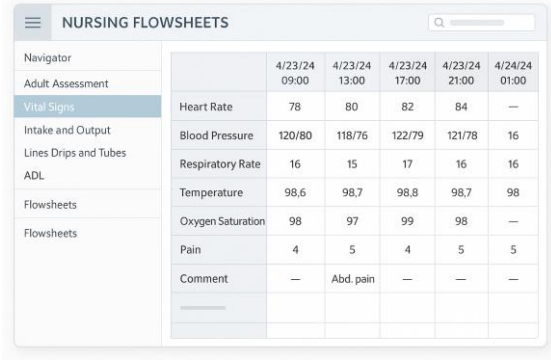
Ambient Assistant for Nurses

Clinical Parameter Documentation in seconds

Description and Use Cases

- Using generative AI-enabled voice solution to automatically document clinical measurements in the EHR.





Benefits

- Clinician wellness and efficiency
  - Documentation burden
    - Less time spent typing / editing
  - Cognitive burden
    - Focus on patient rather computer
  - Reduction in after shift documentation

Impact

Imaging

AI Analyzes Images to Reduce Time to Triage & Treatment

Description and Use Cases

- Image-based triage and quantification
- AI analyzes images and risk stratifies
- AI automatically alerts response team via phone notification

Benefits

- Identifies suspected findings and facilitates care coordination
- Streamlines workflows and prioritizes findings
- Automatic analysis of every scan by always-on AI
- Reduced time to intervention, and improved workflow triage assistance

Impact

- 40% reduction in time to mechanical thrombectomy
- 23% reduction in ICU length of stay
- 26% reduction in overall length of stay

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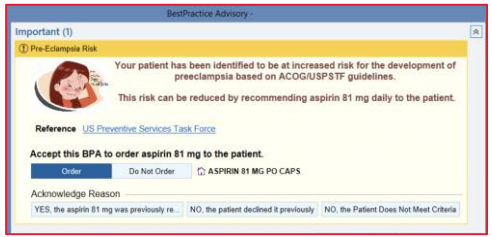
Maternal Health

Using AI to improve outcomes in Obstetrics

Description and Use Cases

EIS and the Obstetrics team have developed predictive models aimed at improving quality outcomes in all phases of a pregnancy.

- Early detection of preeclampsia risk
- Monitoring C-section likelihood during labor



Preeclampsia BPA

C-section likelihood prediction

Benefits

- Surfaces the information clinicians need to potentially intervene and prevent negative outcomes earlier
- ML and AI help combine disparate data into a single narrative to help augment clinical gestalt

Performance / Impact

- AI driven best practice alert has helped to eliminate a racial disparity in preeclampsia treatment
- Results presented at Society for Maternal Fetal Medicine conference and highlighted in both trade publications and scholarly journals

Final Thoughts

Photo Credit: Getty Images

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