certilytics

CORE® GPT Clinical Pathways

A GenAI approach to predict future clinical care pathways.

Certilytics has pushed the boundaries on how AI-driven approaches can create powerful analytics assets for healthcare organizations since Day 1.

We initially built our proprietary CORE® Clinical Episode Grouper to organize disparate data sets and create a comprehensive view of an individual's healthcare journey — from diagnostic to utilization and therapeutic history.

But, we didn't stop there.

Today, our **CORE® GPT Clinical Pathways** solutions uses GenAI techniques to predict the exact clinical pathway a patient will take based on their distinct health history and characteristics.

How Can You Use CORE® GPT Clinical Pathways?

▶ **Identification of Future Member Risk Predictions**

▶ **Care Pathway Predictions**

▶ **Payment Integrity**

▶ **Provider Profiling and Performance Evaluation**

An AI-driven Predictive Analytics Solution Built for Healthcare

How Does it Work?

▶ The CORE® GPT model predicts the next sequence of utilization for a member for a given CORE condition by prompting a language model with a member's condition and history and having it auto-complete the prompt with the next sequence of utilization

▶ Predictions are made at the procedure code level, with additional tokens for inpatient admission, surgery, and ER visits

▶ Models use the same generative pre-trained transformer architecture leveraged by the GPT LLMs

▶ Unlike other clinical episode groupers, CORE GPT® offers a quantitative alternative that operates at the level of procedure code sequence and takes member clinical context into consideration

Example Generative Care Pathway Model Output

	Orig tokens	Orig description	Pred tokens	Pred description
0	doc_start	Document start token.	doc_start	Document start token.
1	gendercd_2	Female	gendercd_2	Female
2	age_2_9	Member is between 2 to 9 years old	age_2_9	Member is between 2 to 9 years old
3	core_23c	Preventive Vaccines	core_23c	Preventive Vaccines
4	period_0	Begin period 0	period_0	Begin period 0
5	proc1_90460	IM ADM THRU 18YR ANY RTE 1ST/ONLY COMPT VAC/TOX	proc1_90460	IM ADM THRU 18YR ANY RTE 1ST/ONLY COMPT VAC/TOX
6	proc1_90686	IIV4 VACC PRESRV FREE 0.5 ML DOS FOR IM USE	proc1_90686	IIV4 VACC PRESRV FREE 0.5 ML DOS FOR IM USE
7	proc1_90471	IM ADM PRQ ID SUBQ/IM NJXS 1 VACCINE	proc1_90471	IM ADM PRQ ID SUBQ/IM NJXS 1 VACCINE
8	proc1_90686	IIV4 VACC PRESRV FREE 0.5 ML DOS FOR IM USE	proc1_90686	IIV4 VACC PRESRV FREE 0.5 ML DOS FOR IM USE
9	period_3	Begin period 3	period_3	Begin period 3
10	proc1_90471	IM ADM PRQ ID SUBQ/IM NJXS 1 VACCINE	proc1_90460	IM ADM THRU 18YR ANY RTE 1ST/ONLY COMPT VAC/TOX
11	proc1_90686	IIV4 VACC PRESRV FREE 0.5 ML DOS FOR IM USE	proc1_90461	IM ADM THRU 18YR ANY RTE ADDL VAC/TOX COMPT
12	period_4	Begin period 4	proc1_90696	DTAP-IPV VACCINE CHILD 4-6 YRS FOR IM USE
13	proc1_90460	IM ADM THRU 18YR ANY RTE 1ST/ONLY COMPT VAC/TOX	proc1_90710	MEASLES MUMPS RUBELLA VARICELLA VACC LIVE SUBQ
14	proc1_90461	IM ADM THRU 18YR ANY RTE ADDL VAC/TOX COMPT	period_4	Begin period 4
15	proc1_90696	DTAP-IPV VACCINE CHILD 4-6 YRS FOR IM USE	proc1_90471	IM ADM PRQ ID SUBQ/IM NJXS 1 VACCINE
16	proc1_90710	MEASLES MUMPS RUBELLA VARICELLA VACC LIVE SUBQ	proc1_90686	IIV4 VACC PRESRV FREE 0.5 ML DOS FOR IM USE
17	period_7	Begin period 7	period_8	Begin period 8
18	proc1_90471	IM ADM PRQ ID SUBQ/IM NJXS 1 VACCINE	proc1_90471	IM ADM PRQ ID SUBQ/IM NJXS 1 VACCINE
19	proc1_90686	IIV4 VACC PRESRV FREE 0.5 ML DOS FOR IM USE	proc1_90686	IIV4 VACC PRESRV FREE 0.5 ML DOS FOR IM USE
20	[EOS]	Document end token.	[EOS]	Document end token.

Actual Sequence

Input

Output

The model predicts the correct series of vaccines and attendant procedure codes.

Are you ready to use AI-driven approaches to predict future clinical pathways?

MEET WITH OUR TEAM TODAY!

Learn More

Explore how our AI-driven solutions are helping make healthcare more efficient and affordable at **certilytics.com**

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