Putting an AI through Medical School

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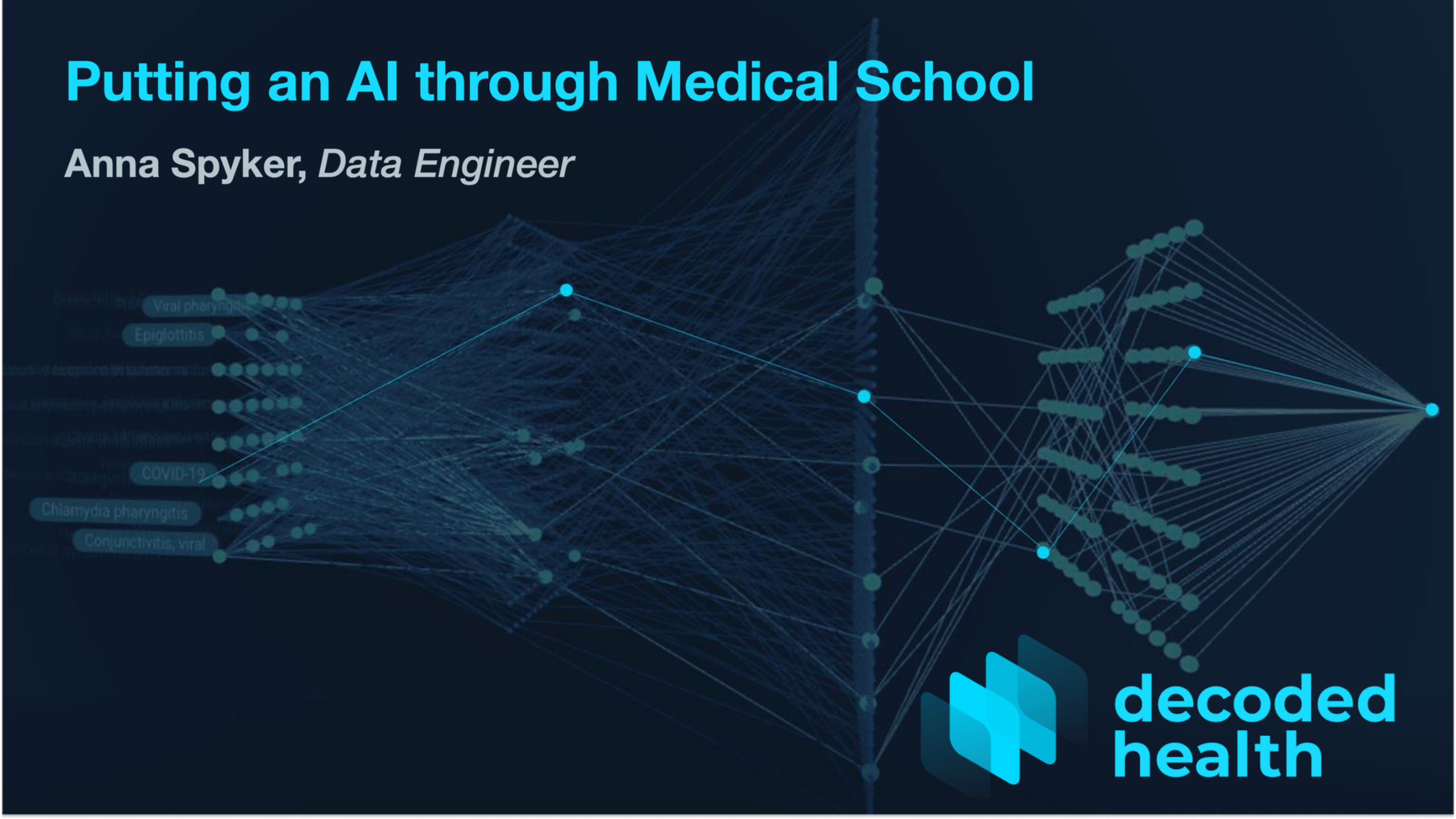

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Decoded Health

Cognitive Clinical Hyperautomation

Decoded Health	Demand for healthcare services far exceeds the current and future supply of qualified Doctors, and other healthcare providers.
Solution	Force multiply healthcare teams by leveraging Clinical AI to automate and augment human tasks that require medical knowledge and clinical expertise.
Vision	Autonomous, and clinically trained AI experts as an integrated part of clinical care teams to scale healthcare productivity by 10x

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Introducing Quinn

Resident Medical AI

How can we help you?

4:05 PM

In a few words, could you describe the problem you're having?

4:05 PM

I have been feeling like the room is spinning

4:05 PM

Are there any other symptoms you've been having you think are related?

4:05 PM

i also have a mild headache and i have

Type a message...

To train an AI... we need data!

Challenges

Electronic Health Record

Healthcare data is notoriously messy, attaining the right data from the EHR is difficult.

Public Sources

Limited range of publicly available data sources that fit our use case.

Multiple vocabularies

Quinn must learn both consumer and clinician vocabularies.

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Solutions

- Extensive data review of public sources, using relevant information to create a seed.
- Medical expert supervised information gathering via data pipelines.
- Capture real time events to feed back into the training pipeline.
- Test harness for evaluating Quinn’s performance and explainability.

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Graph Based Dialog Manager

Domain modules to best fit workflow

Powered by graph technology

State of the art Clinical NLP and NLU

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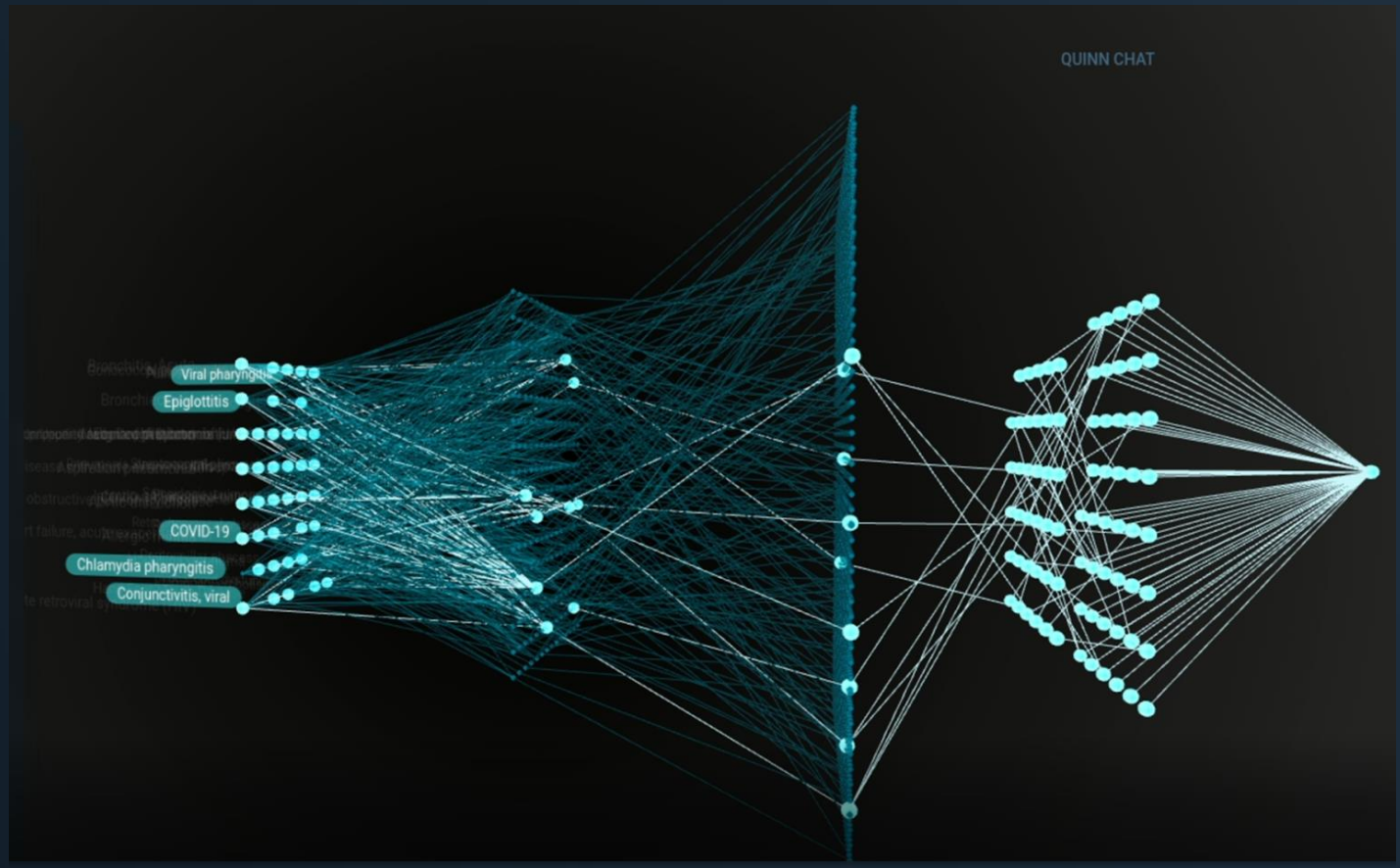
Clinical Inference

Three layer feed forward perceptron Neural Network

Unique feature space maps to Decoded Health Ontology

Max entropy algorithm for information gain



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Test Harness

>1M

Clinical concepts and relationships in the Decoded Health Vocabulary

90%

Knowledge base coverage of urgent care conditions

96%

Accuracy of Quinn vs doctor performance on gold standard test cases

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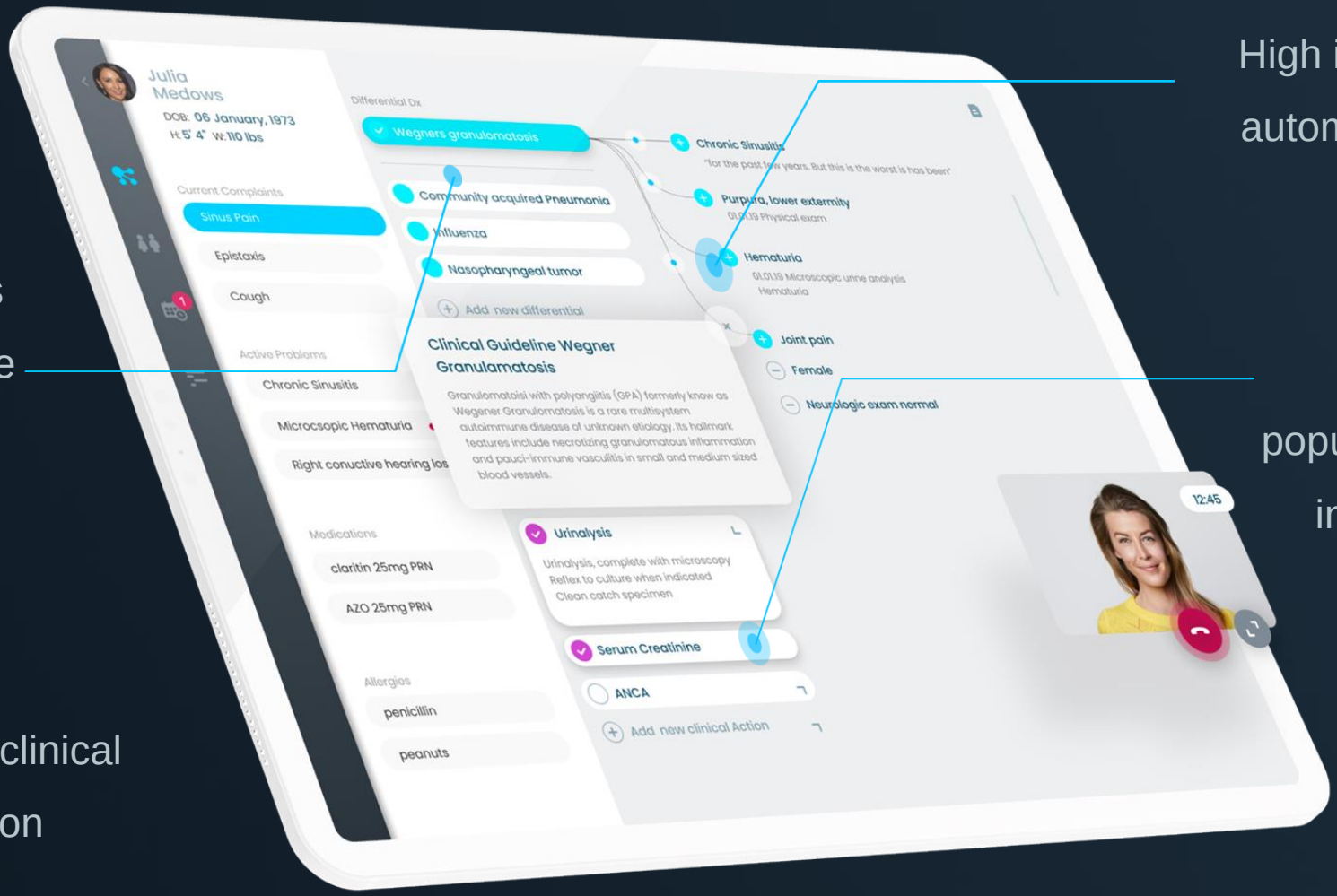
Clinical Graph Interface

Observations, findings populated based on the predicted differential diagnosis

Fully automated clinical documentation



High impact, relevant data is automatically extracted from the EHR

Orders dynamically populated based on patients individual presentation

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Where to next?

Hospital deployment expansion

Scaling our install base

Clinical Graph Interface

Continuing innovation in data science and research

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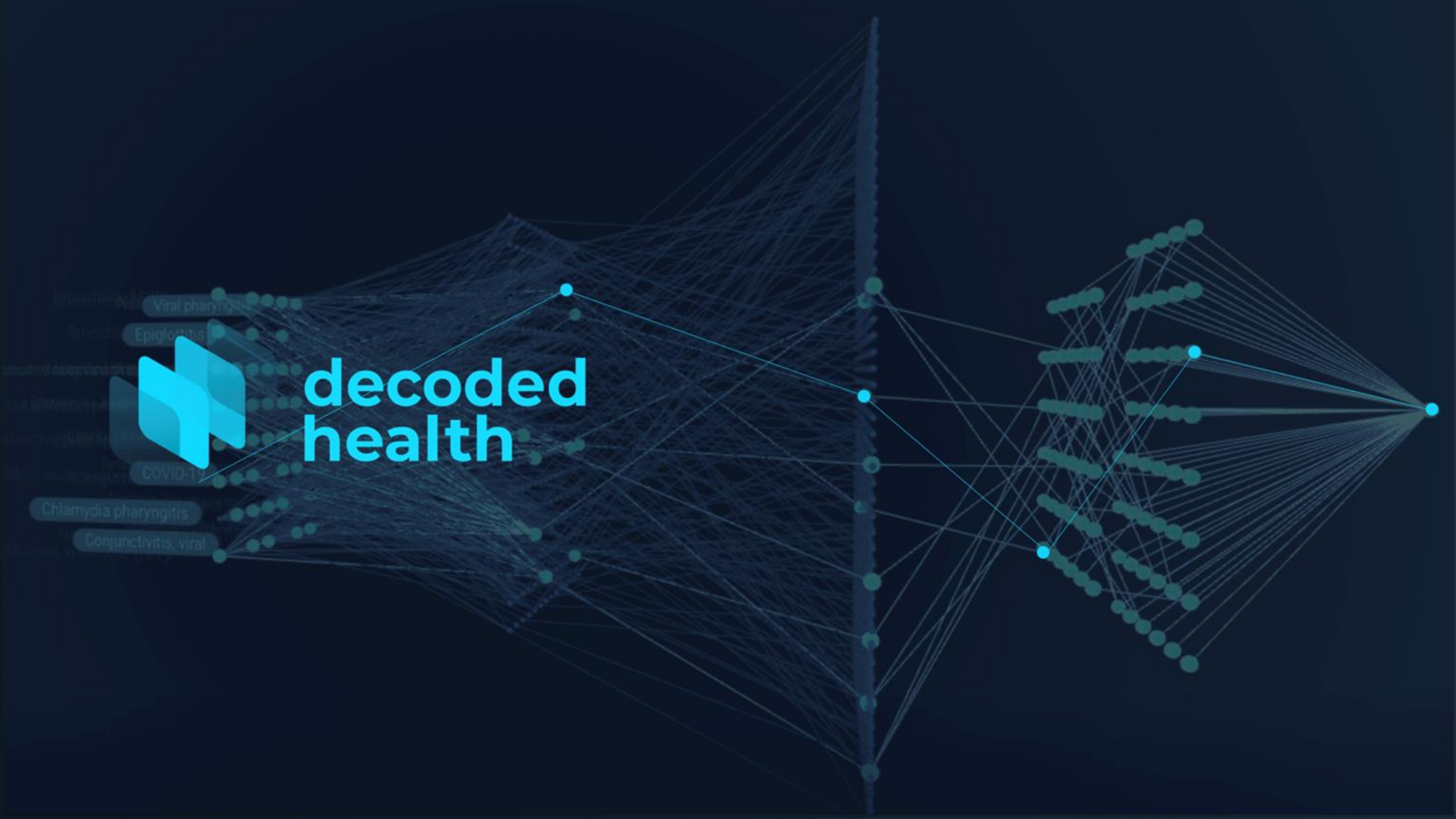
Viral pharyngitis
Epiglottitis
COVID-19
Chlamydia pharyngitis
Conjunctivitis, viral
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health