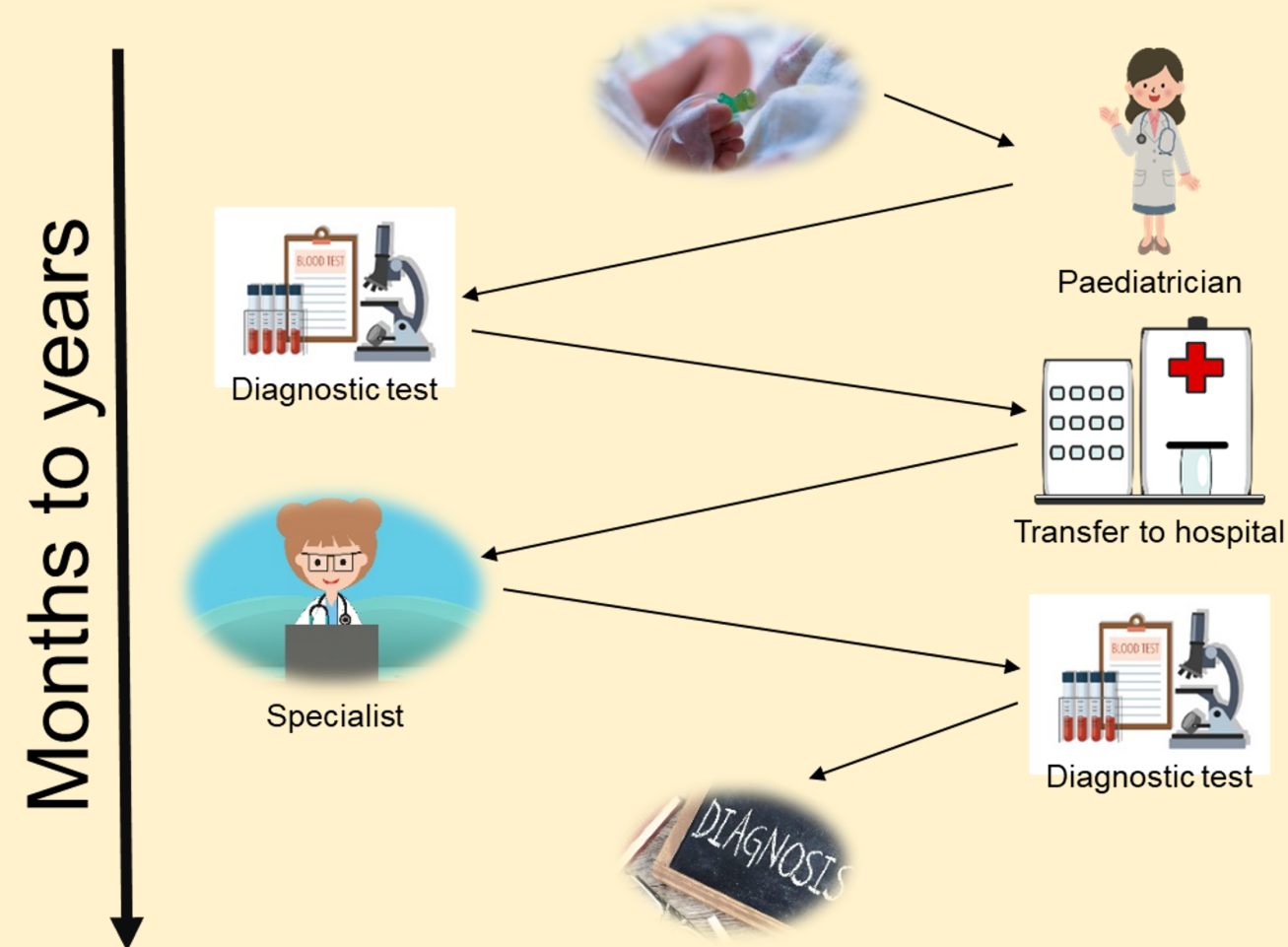# HPO Code Extraction from Clinical Free Text

Background

Leveraging Artificial Intelligence (AI) within the rare disease diagnostic odyssey to automate costly manual tasks such as extraction of HPO codes from clinical free text can help facilitate decreasing diagnostic times and increasing diagnostic rates.

Months to years

Paediatrician

Diagnostic test

Transfer to hospital

Specialist

Diagnostic test

DIAGNOSIS

Manual workflow

Phenotypes

Global Developmental Delay
Hypotonia
Cryptorchidism
Seizures

HPO Website

human phenotype ontology

All ▾ Search for phenotypes, diseases or genes...

e.g. Arachnodactyly | Marfan syndrome | FBN1

HPO Codes

HP:0001263 Global Developmental Delay
HP:0001290 Generalized Hypotonia
HP:0000028 Cryptorchidism
HP:0001250 Seizures

10-20 minutes

AI workflow

Web App

> Leverages PhenoBERT and PhenoTagger models

HPO Codes

HP:0001263 Global Developmental Delay
HP:0001290 Generalized Hypotonia
HP:0000028 Cryptorchidism
HP:0001250 Seizures

Human-in-the-loop

Parse, Select, Verify

< 5 minutes