PHAROS platform will support a prompt response during pandemics and peacetime by integrating clinical information to OMOP-CDM

INTRO
- It is difficult to collect comprehensive clinical characteristics of infected patients as in the current infectious disease reporting system.
- We initiate a new project for developing an integrated infectious disease data managing system based on OMOP-CDM in Republic of Korea, named “PHAROS”.

METHODS
1. Infectious disease CDM network

2. Information Management System
   - The PHAROS system can access infectious disease patient data in two different ways in peacetime and pandemic.

RESULTS
- Awarded EUR €2.1 million contract for 3 years from the Ministry of Health & Welfare, Republic of Korea
- Fifty researchers are participating and developing our platform for this project

FUNDINGS
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PRESENTER: Chungsoo Kim

PHAROS - Integrated infectious disease clinical information management system
Platform for Harmonizing and Accessing data in Real-time On infectious disease Surveillance

PHAROS - Platform for Harmonizing and Accessing Data in Real-time on Infectious Disease Surveillance Based on OMOP-CDM in Korea

Portable Real-time ETL technology (Daily)

Sign and symptoms, Diagnosis, Medication, Procedure, Observation

Lab tests specialized to the infectious disease

OMOP-CDM

PHAROS platform

Data-driven infectious disease response system

Near Real-time ETL technology (Daily)

Data integration

Patient consent or applicable law

Establishment of CDM specialized for infectious diseases

Infectious disease management using real-time clinical data

"No requirement of individual data input and curation"

"Sufficient patient information for practical use"

"Support fast decision-making with reliable data"

Promotion Strategy
- Expert advisory group
- Steering committee
- Promotion and seminar
- Expanding of institutions

Using the current DRB platforms for infectious disease surveillance and research

4. Collaborative opportunities
- We are open to collaborating with anyone who is interested in the data standardization and utilization of infectious diseases
- Please contact us via rwpark99@gmail.com (Prof. Rae Woong Park)

PHAROS - Integrated infectious disease clinical information management system

Four Tertiary Hospitals in South Korea

In Pandemic

In Usual

Data standardization (vocabulary mapping / data modeling)

- Change in infection symptoms
- Legal communicable diseases
- Precision monitoring using NLP

3. Applications

A. Geographic Information

B. Time-series analytics

C. Data profiling

D. Named Entity Recognition

E. Predictive modeling

4. Collaborative opportunities
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PHAROS
Platform for Harmonizing and Accessing Data in Real-time on Infectious Disease Surveillance Based on OMOP-CDM in Korea

Scan QR to download the full paper or link to github repository etc.