

# FHIR Standardization

& centralizing information extracted from medical forms  
completed in clinics/hospitals



# SUMMARY

1

## NECESSITY

Why do we need the MedisFHIR application?

2

## BENEFITS of MedisFHIR

What advantages does the MedisFHIR application bring?

3

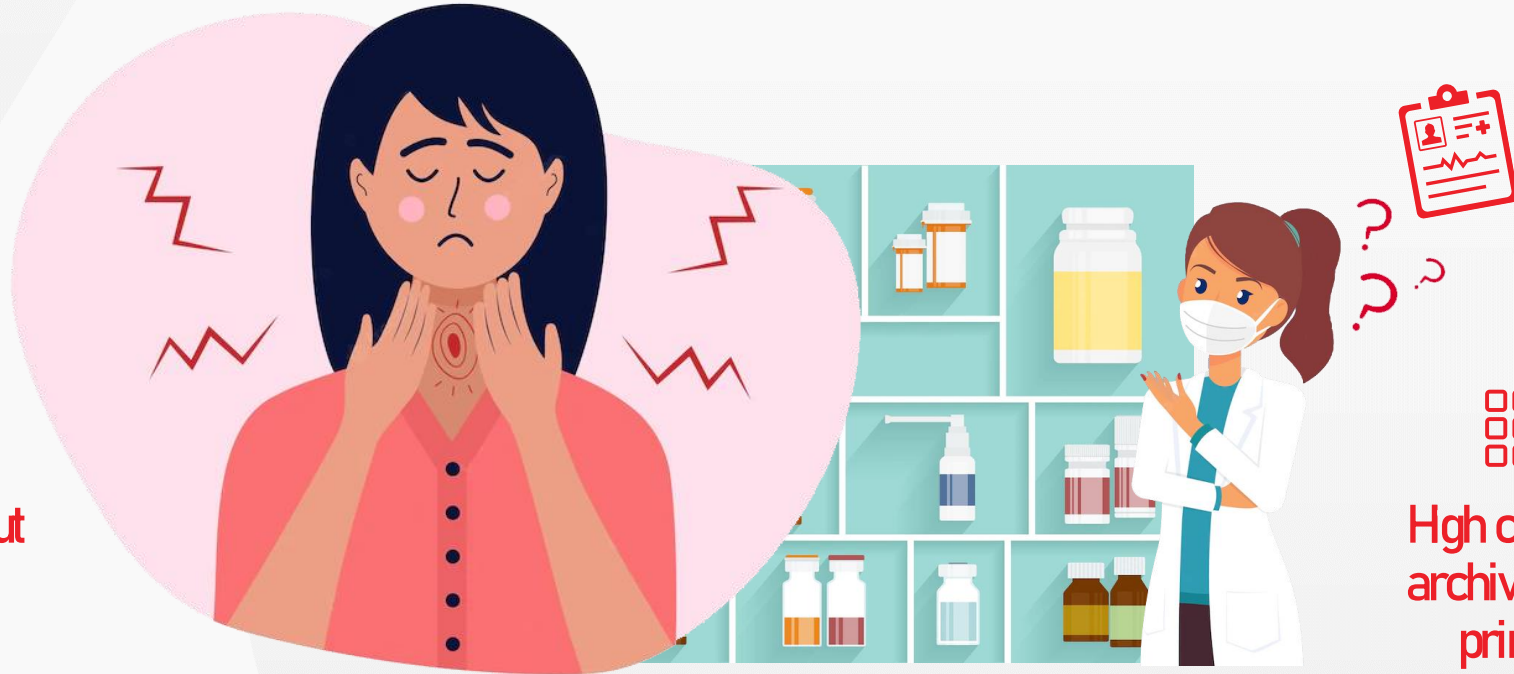
## CONCLUSIONS

Digitalization of the medical system.

1

# NECESSITY

The need is to have structured data. *But why?*



Wasted time by filling out forms



High costs for archiving and printing



Non-digitized medical records



No data analysis

# 2

# BENEFITS OF MEDIS



Centralized information



Data analysis



Diagnosis & prevention



Quick and easy filling



Cost reduction



Eco-friendly



FHIR Standard



Access data anywhere, anytime



User-friendly

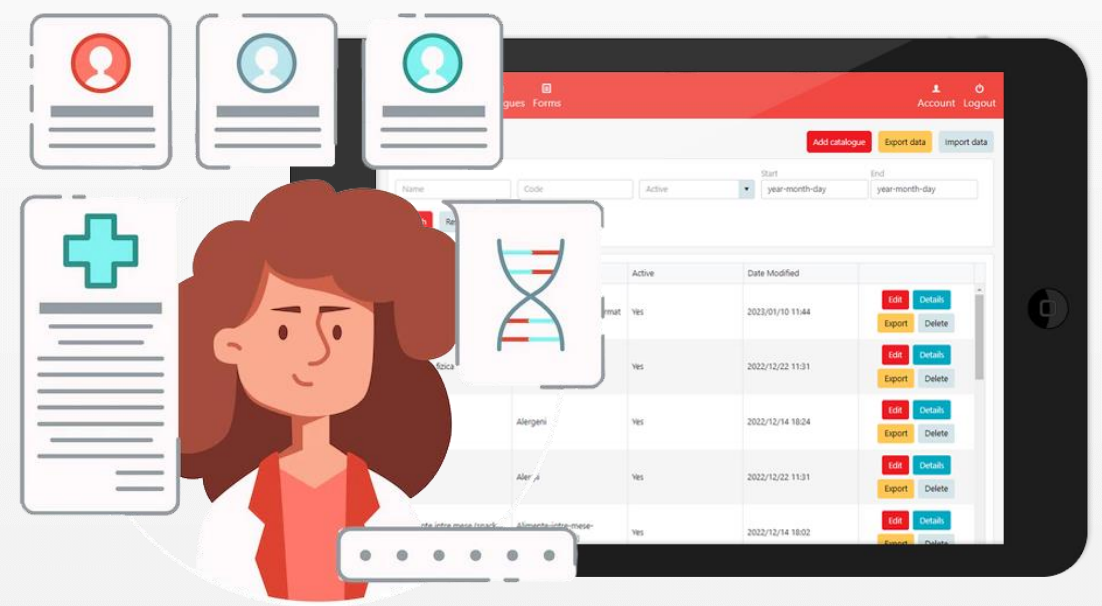


# CENTRALIZED INFORMATION



Actual forms

VS



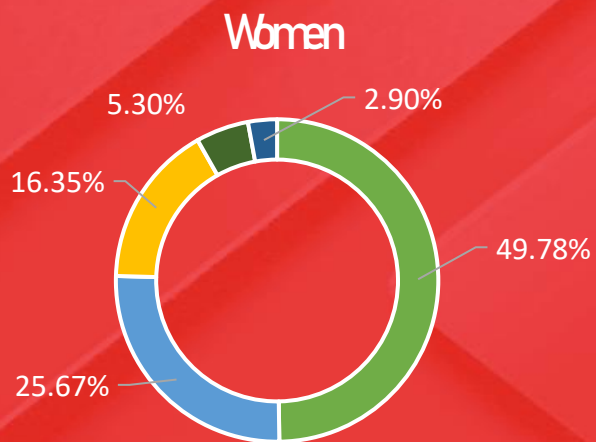
Centralized forms



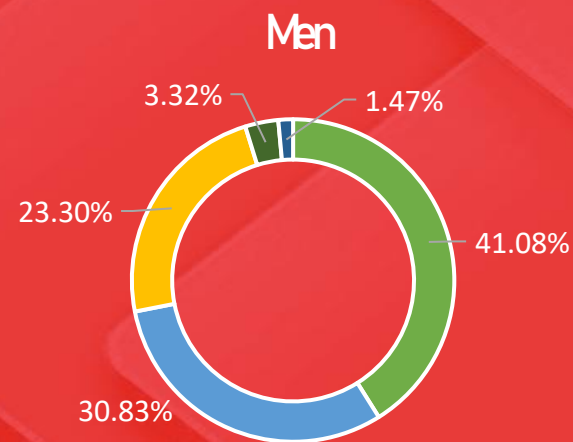


# DATA ANALYSIS

## Body mass index (BMI)



■ Normal weight ■ Overweight ■ Obesity class I  
■ Underweight ■ Obesity class II



■ Normal weight ■ Overweight ■ Obesity class I  
■ Underweight ■ Obesity class II

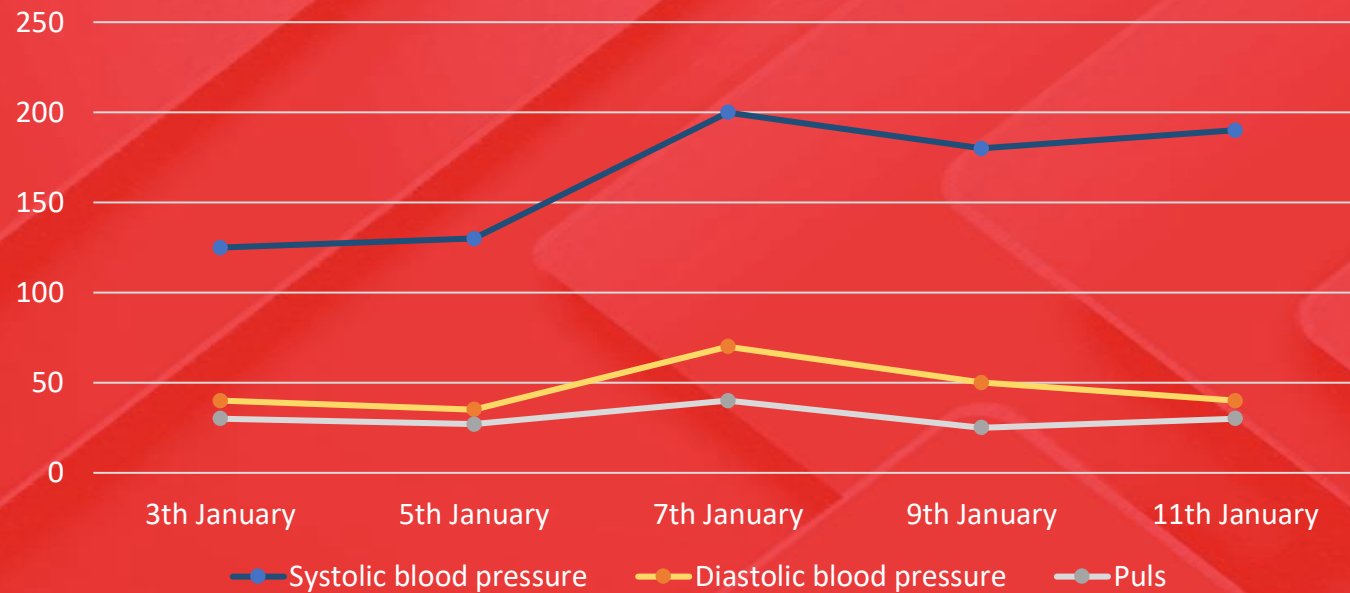
\*The displayed information is only as an example



# DATA ANALYSIS



Systolic & diastolic blood pressure and Pulse



First trimester 1 – 2023  
(medium values)

- Systolic blood pressure- 170
- Diastolic blood pressure- 80
- Pulse - 68

\*The displayed information is only as an example





# DIAGNOSIS AND PREVENTION

BASED ON STATISTICS

Complete  
medical data



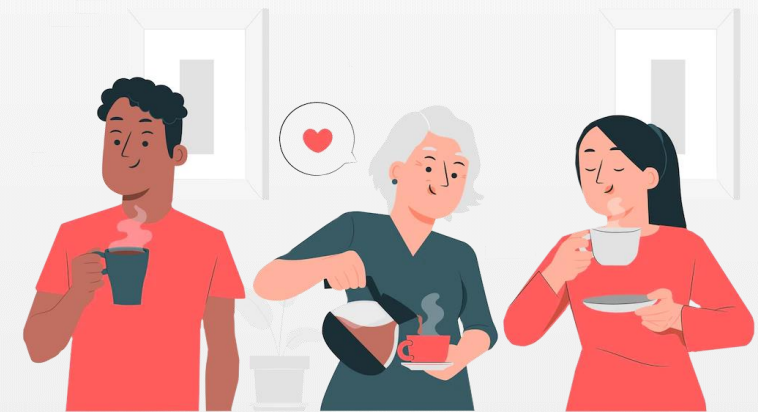
Analysis &  
medical  
information

Statistics & Complete medical information



Access to a computer system with  
complete patient data

Help in  
diagnosis



Help in making medical decisions based on  
structured medical data for each patient





# QUICK FILLING

AND EASY FOR THE PATIENT

Medis FHR offers the possibility for the patient to fill the necessary forms from home, and, for the forms that require the doctor's presence, the patient will be able to fill them in directly from the clinic.

10  
MIN

Completing  
forms



15  
MIN

Consultation

10 minutes for completing forms

+15 min average time/consultation

VS



15  
MIN

Consultation

ONLY

15 min average time/consultation



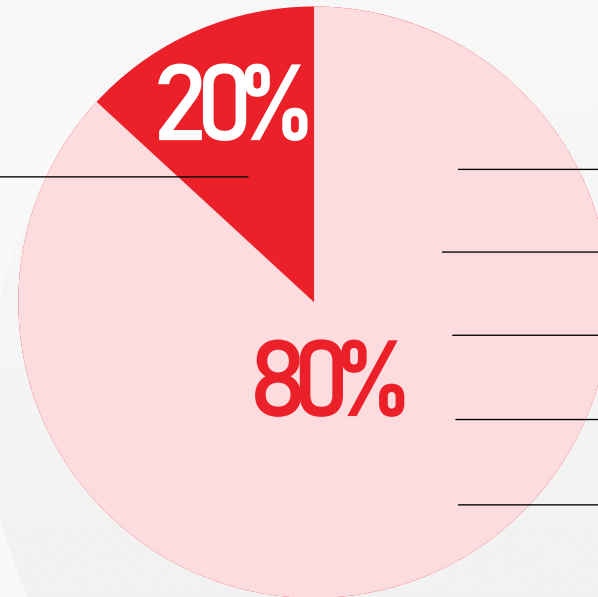
# COST REDUCTION

WITH FILE ARCHIVING AND TIME

In the USA, hospitals consume 1.2 billion papers per day, so just the archiving costs for them reach values between \$24-36 million.

## COST OF PRINTING

Printing cost  
(paper & printing  
supplies)



## OTHER COSTS

Employees' time

Preparation and verification of documents

Technical issues & Maintenance

Inventory & Storage

Wrong and unused documents

With MedisFHR application all of these costs are eliminated.



# ECO-FRIENDLY

WITH THE ENVIRONMENT

FICAT		
LOB HEPATIC STANG		
Diametrul crano-caudal	cm	
Diametrul antero-posterior	cm	
LOB CAUDAT		
Diametrul crano-caudal	cm	
Diametrul antero-posterior	cm	
COLECISTICAI BILIARE		
Ax lung	cm	
Ax scut	cm	
Diametrul transvers	cm	
Pereti	Continut	
CBIH		
Cale biliara principala		
Observati		
SPLINA		
Diametrul longitudinal	cm	
Diametrul transversal	cm	
Vena splenica	cm	
Ecostructura		
Contur		
INIMA		
Aorta abdominala prebifurcate	calibru	mm
Vena cava inferioara	dimensiune lumen	mm
Observati		
PANCREAS		
Diametrul cefalic	cm	
Diametrul corporeal	cm	
Diametrul caudal	cm	
Forma si contur		
Ecostructura		
Ecogenitate		
Duct Wirsung		
Loja pancreatica		
Observati		
RINICHI STANG		
Diametrul longitudinal	cm	
Diametrul transversal	cm	

FICAT		
LOB HEPATIC STANG		
Diametrul crano-caudal	cm	
LOB HEPATIC DREPT		
Al rezultat sa va mentineti peste 1 an?	cm	
Diametrul antero-posterior	cm	
Diametrul antero-superior	cm	
LOB CAUDAT		
Diametrul crano-caudal	cm	
Diametrul antero-posterior	cm	
COLECISTICAI BILIARE		
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A patient receives at least one paper document after a consultation, but a medical report could span to 10 paper documents.



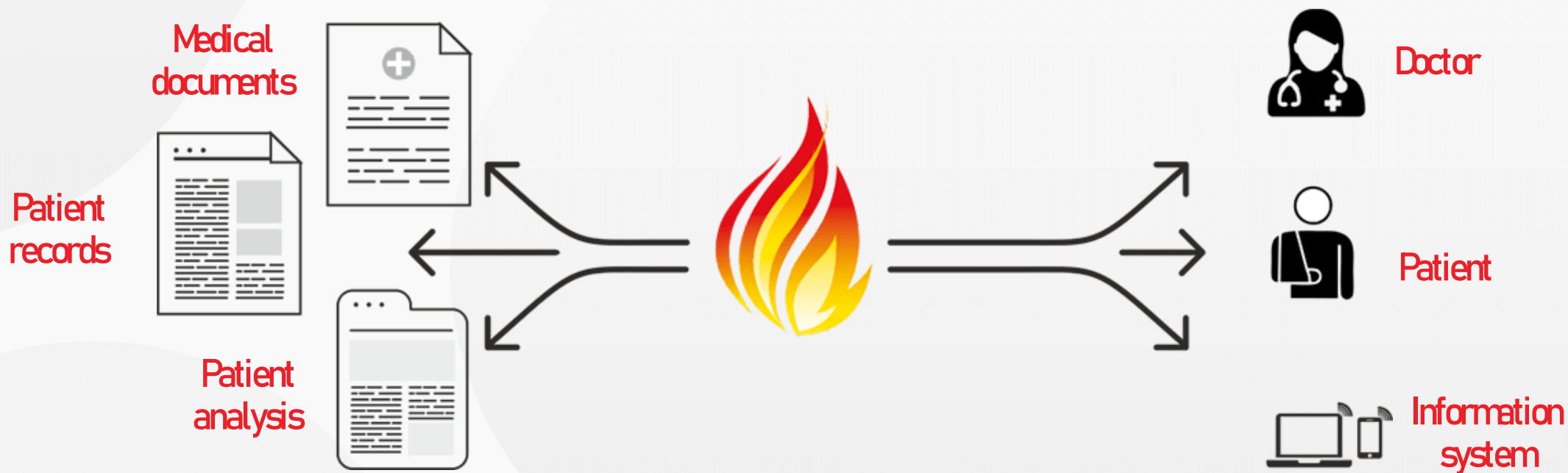
Saving medical forms electronically could significantly reduce paper consumption and help protect the environment.



# FHIR STANDARD

Interoperability in the medical system.

H7 FHIR provides access to the patient's complete medical history and medical researchers can provide effective treatments through this standard.





# ACCES DATA

ANYTIME & ANYWHERE



- ✓ Data transfer between hospitals worldwide regardless of language.
- ✓ Instant access to information from anywhere, anytime
- ✓ Information is updated instantly in the system





# Medis FHIR

Medis FHIR is user-friendly and can be integrated with any medical application. The forms are in HTML format and their fields are mapped to catalogues previously created by the application administrator.



## CLIENT

- ✓ React
- ✓ Kendo react (framework Telerik)



## SERVER

- ✓ RESTful API
- ✓ .Net core 6.0
- ✓ Entity Framework Core



## DATABASE

- ✓ SQL Server
- ✓ Azure FHIR Cloud



## SECURITY

- ✓ Stateless session with JSON web token (JWT)



## ARCHITECTURE

- ✓ On prem
- ✓ Azure Cloud

Fișă pentru investigația imagistică CT

Nume și prenume: \_\_\_\_\_  
CNP: \_\_\_\_\_

Numărul de legătură al pacientului: \_\_\_\_\_  
Nume și prenume: \_\_\_\_\_  
CNP: \_\_\_\_\_  
Cămin: \_\_\_\_\_

Tipul de investigație:  Drenaj  Sîngă

INFORMAȚII PRIVIND EFECTUAREA INVESTIGAȚIILOR MEDICINE CT

Investigația computerizată (CT) este o investigație imagistică care folosește raze X, cu ajutorul cărora se obțin imagini transmise pe calculator și sunt prelucrate cu ajutorul unui calculator. CT-ul este recomandat atunci când medicul diagnostichează o anumită boală sau trebuie să stabilească starea diagnostică. Aparatul de CT are forma unui cerc, cu o masă în mijloc. În timpul investigației, masa se deplasează prin centrul acestui cerc și sunt preluate imagini precise de la nivelul corpului dumneavoastră.

Este vital să răspundeți cât mai corect posibil întrebărilor de siguranță ce vă vor fi adresate la trusa acestei fișe de informații. Pacienților nu le este permisă intrarea în camera CT până când nu au răspuns la o serie de întrebări de siguranță.

Este important să prezentați personalului medical două surse de informații:

EXAMINAREA ESTE CONTRAINDICATĂ ÎN SARCOINĂ.

PRECAUȚII LEGATE DE ADMINISTRAREA SUBSTANȚEI DE CONTRAST

În funcție de tipul examenului și de zona scanată, este posibil să fie necesară administrarea unei substanțe de contrast. Aceasta este o substanță care ajută la obținerea unor imagini mai clare și mai precise.

# 3

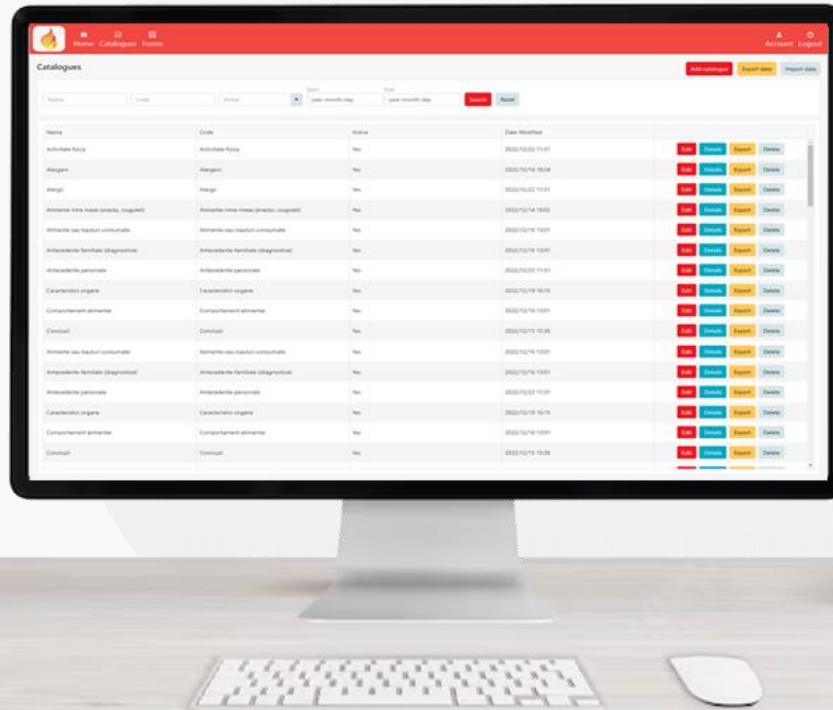
# CONCLUSIONS

- ✓ Medis FHR provides a solid foundation for digitizing the medical history of patients around the world
- ✓ Medis FHR can help in getting diagnosis and preventing other diseases
- ✓ Medis FHR can help in finding a more effective therapeutic treatment based on the statistics made in clinics, according to the results of the treatment schemes administrated to the patients.
- ✓ Medis FHR reduces the costs of medical institutions, reduces the time spent by patients/doctors filling in forms and has a positive impact on the environment.

# FHIR MEDIS

& extracting data from medical forms

powered by 



*All devices available*

