GHCON – ORTHANC CON 2023

Leibniz University, Hannover, Sep 30th

Luis Falcon, MD

GNUHealth EMBEDDED

MyGNUHealth

GNUHealth LABORATORY / LIMS

GNUHealth BIOINFORMATICS

GNUHealth FEDERATION

About me

Luis Falcón

President, GNU Solidario

Author of GNU Health

falcon@gnuhealth.org

Education

- Computer Scientist
- Physician
- Genomics & Medical Genetics

Activism

- Social Medicine
- Animal Rights

GNU Solidario

- Non-for-profit organization
- Works globally
- Focused on Social Medicine
- Fights for the right of human and nonhuman animals
- NPO behind GNU Health

From GNU Solidario

GNUSolidario
ADVANCING SOCIAL MEDICINE

Group pic from **GNUHealthCon 2018** in Canary Islands

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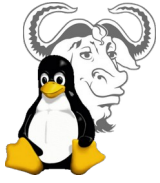
Official GNU Package

Official GNU Package

Open Documentation

Relies on free/libre technology

Friendly community



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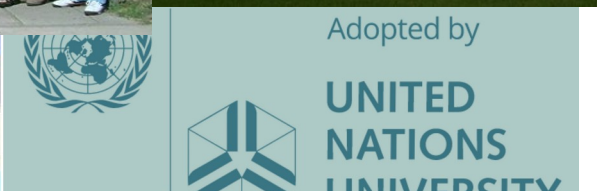
GNU Health around the world



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United Nations IIGH

Adopted by
UNITED NATIONS UNIVERSITY

International Institute for Global Health

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World Health Organization - WHO

Malaria, TB and HIV modules

List of Essential Medic

Tropical diseases

ICD-10 ICPM

Immunization schedules

Pediatric growth chart

Training session to WHO officials from western Africa

GNU Health implementation with WHO at Bafia general hospital

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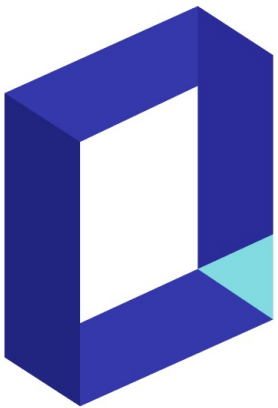
GNU Health declared Digital Public Good



Digital Public Goods Alliance

Federal Ministry for Economic Cooperation and Development

ISPIRT

Norad

UNDP

unicef

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GNUHealth ecosystem components

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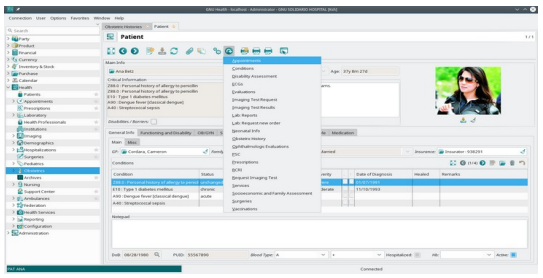
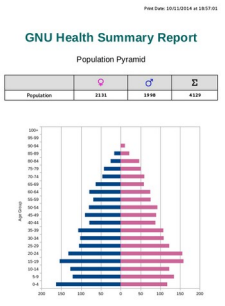
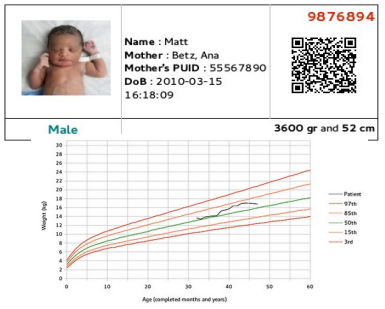
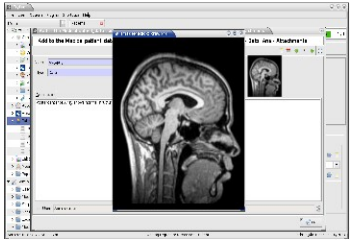
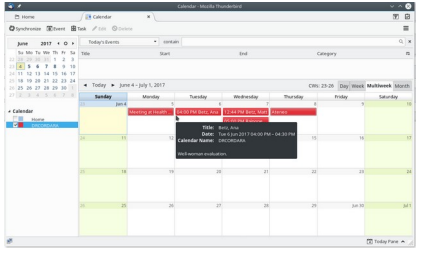
GNUHealth HMIS component

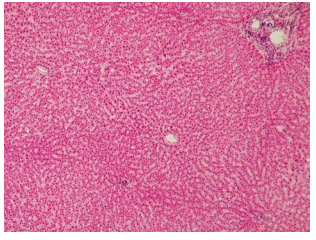


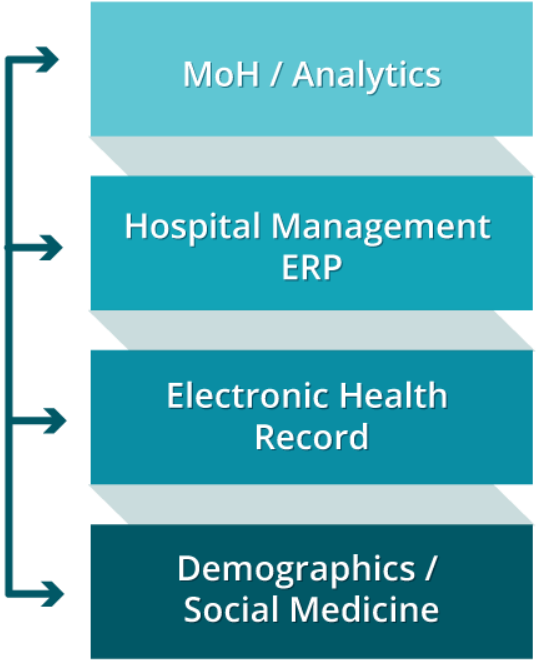












GNUHealth

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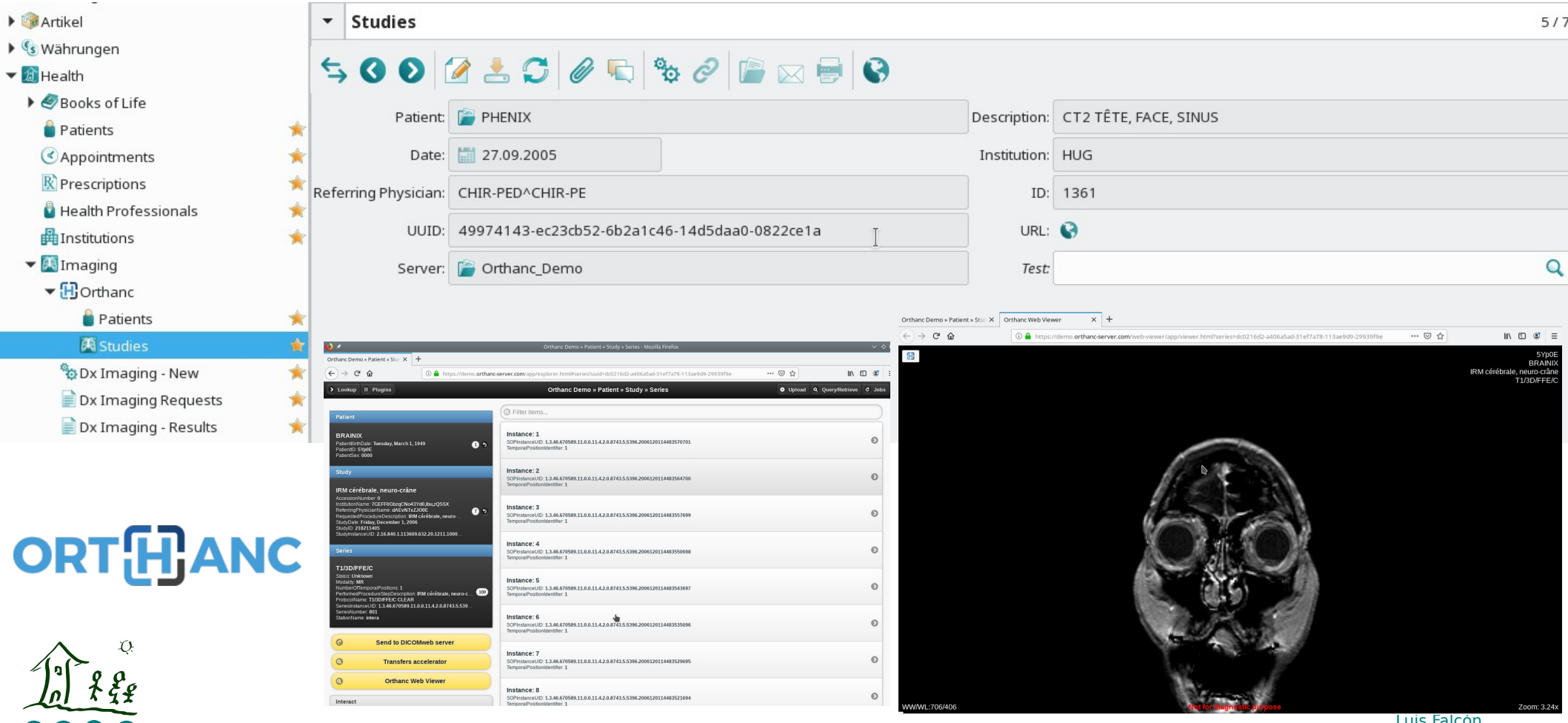
Dx Imaging: GNU Health + Orthanc PACS Server



ORTHANC

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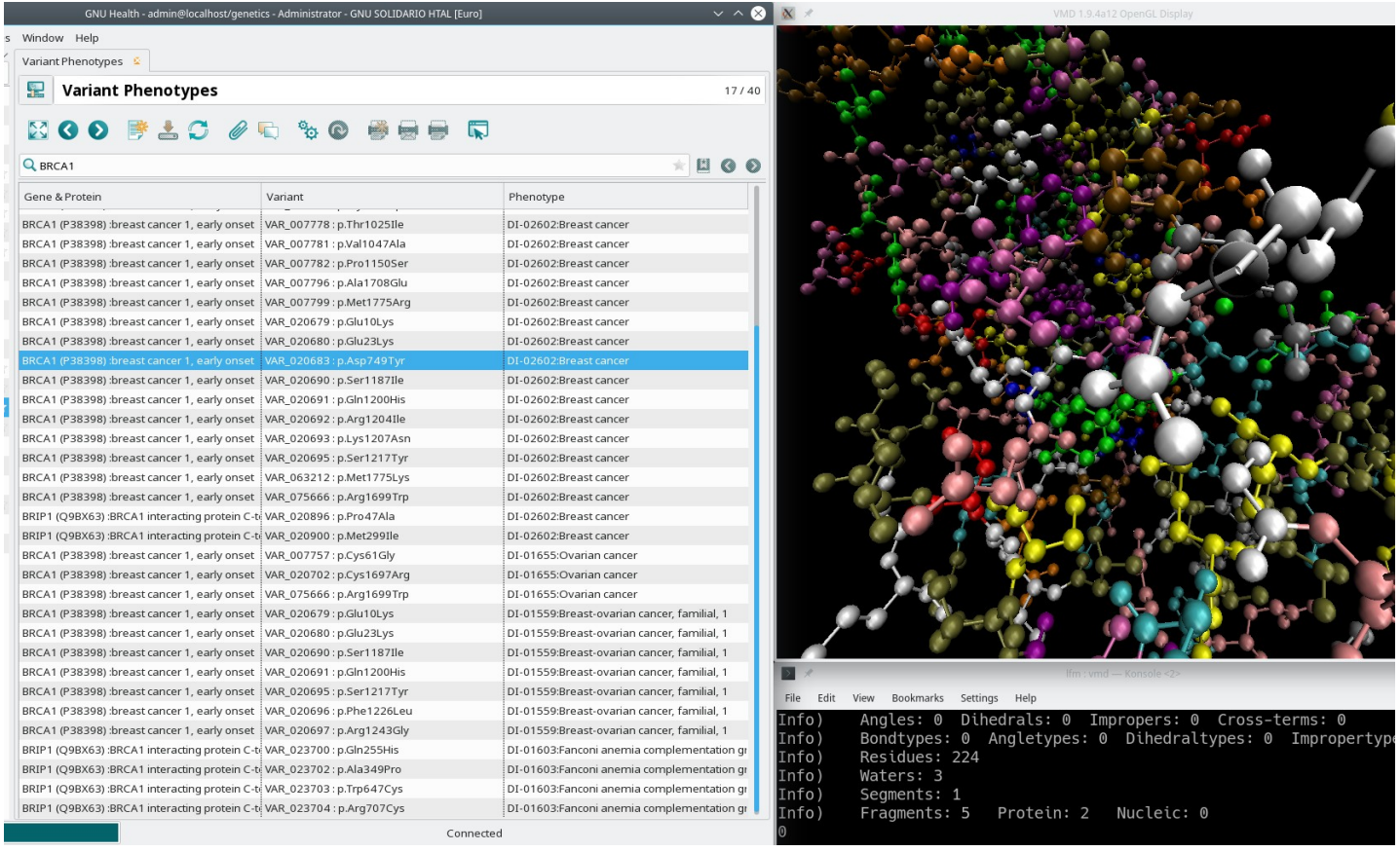
Cancer and Neurodegenerative diseases Research



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MyGNUHealth: The Libre Personal Health Record

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MyGNUHealth: The Libre Personal Health Record

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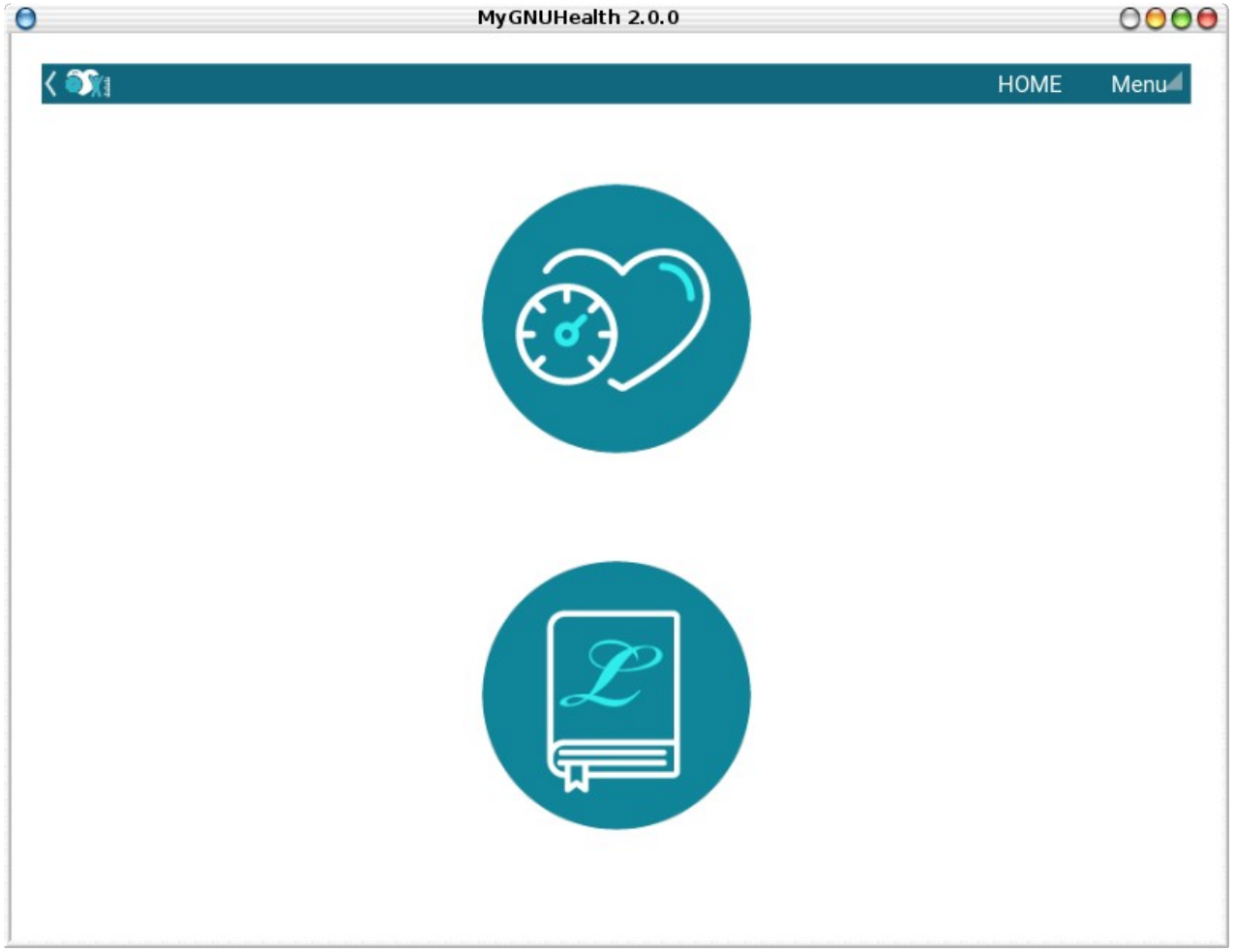
MyGNUHealth - Components



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MyGNUHealth - Domains

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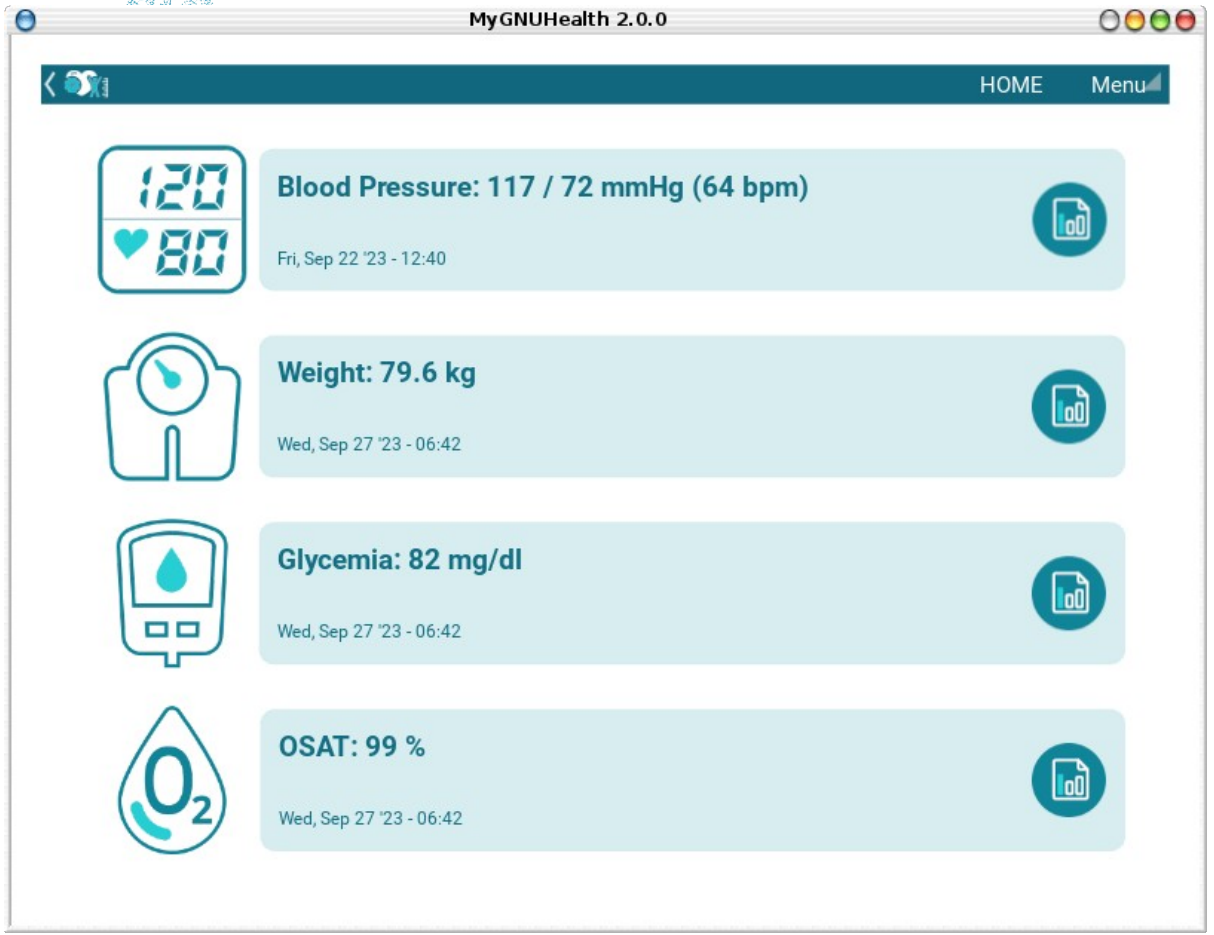
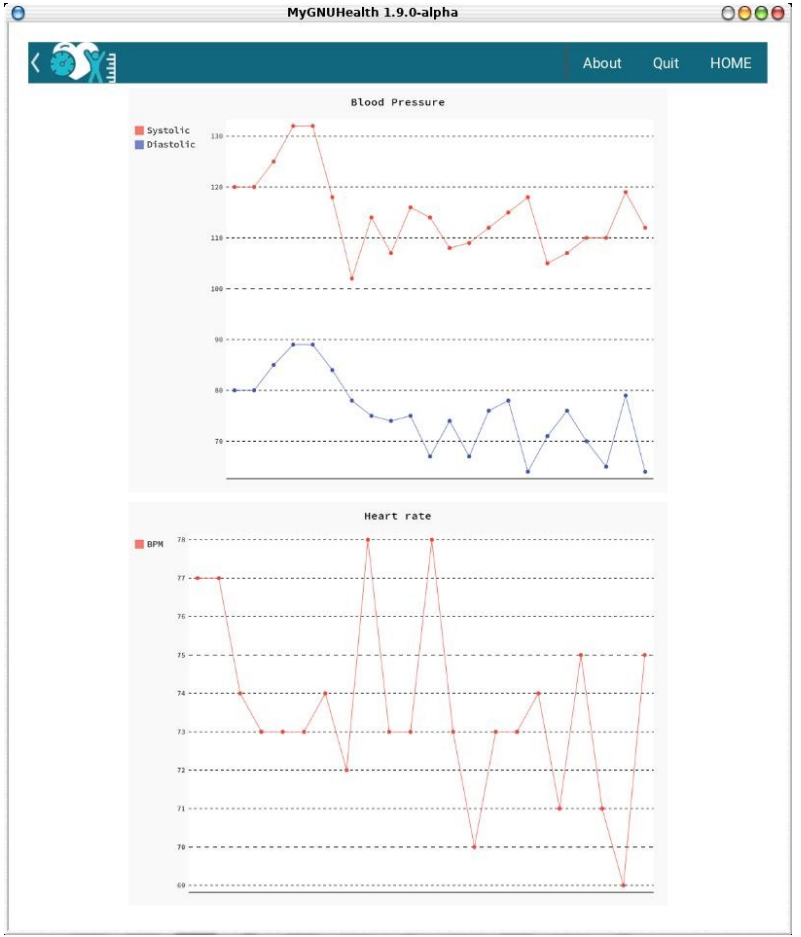
MyGNUHealth - Bio





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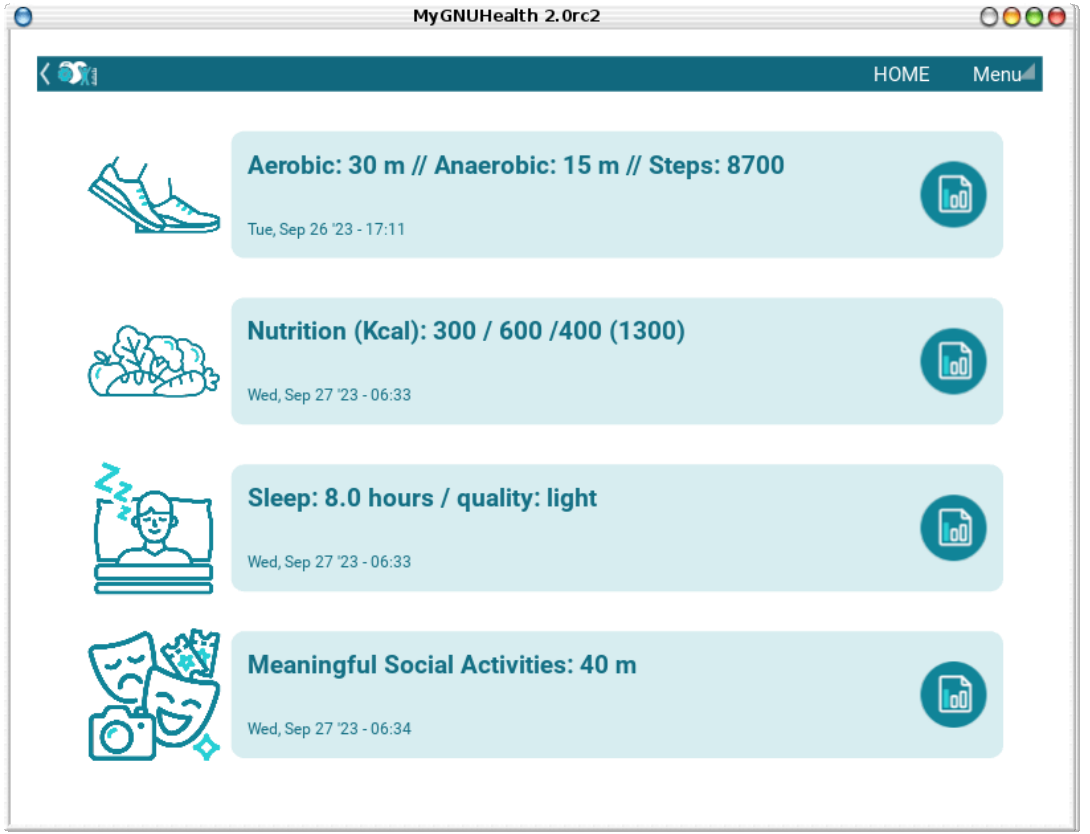
MyGNUHealth - Lifestyle



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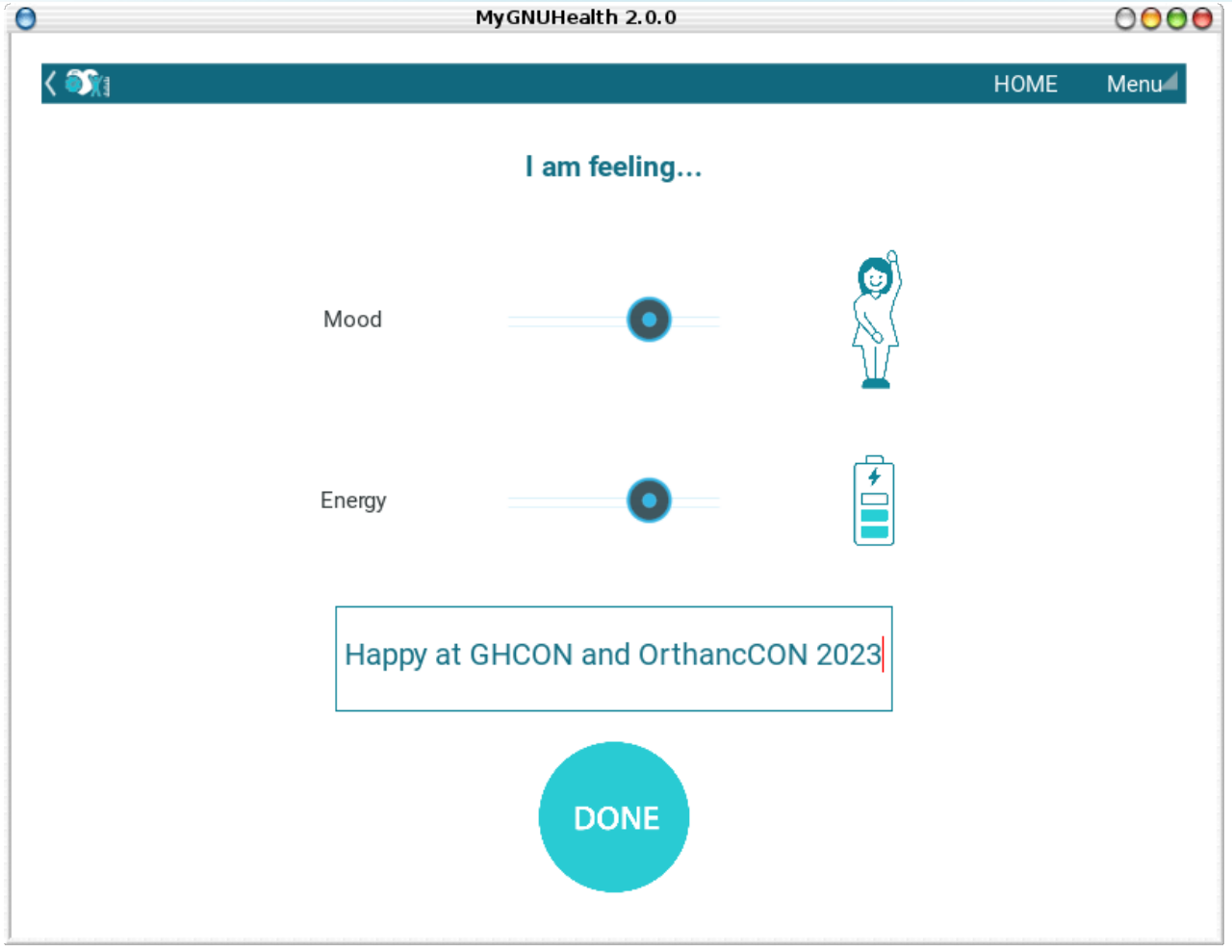
“Quick Psychological” assessment



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MyGNUHealth on Linux Phones

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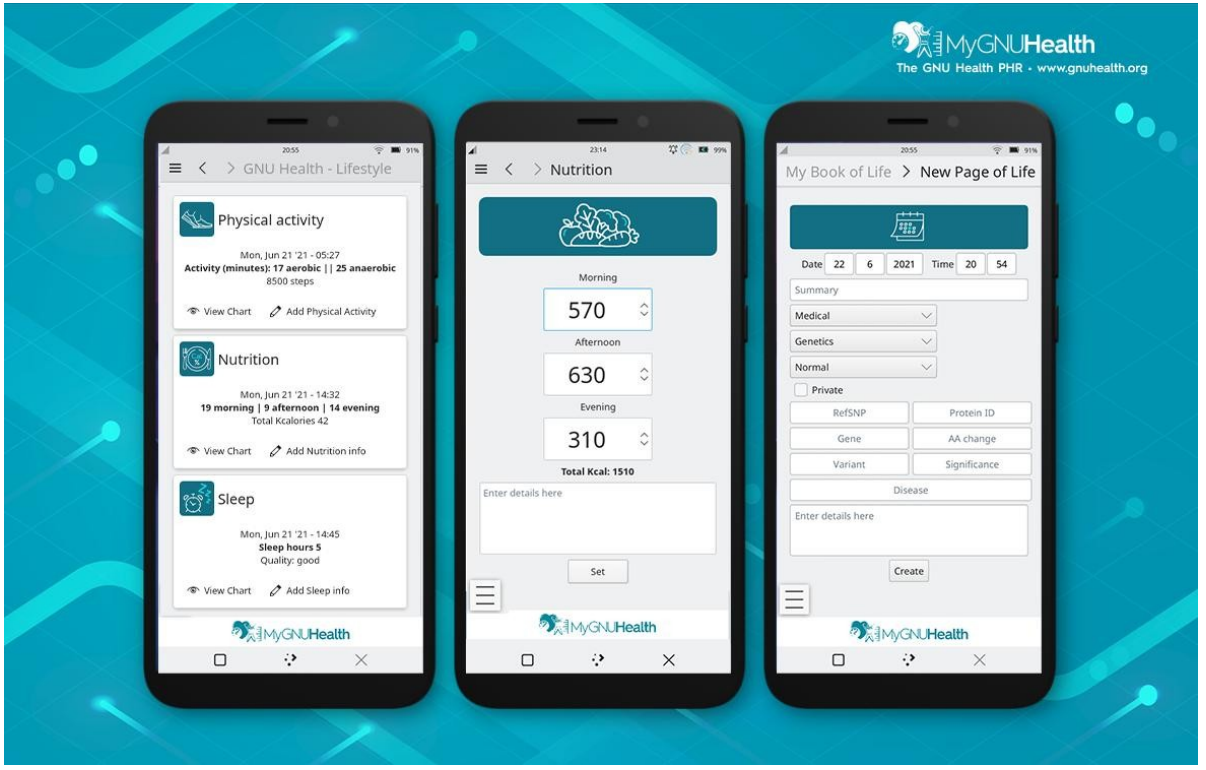
MyGNUHealth



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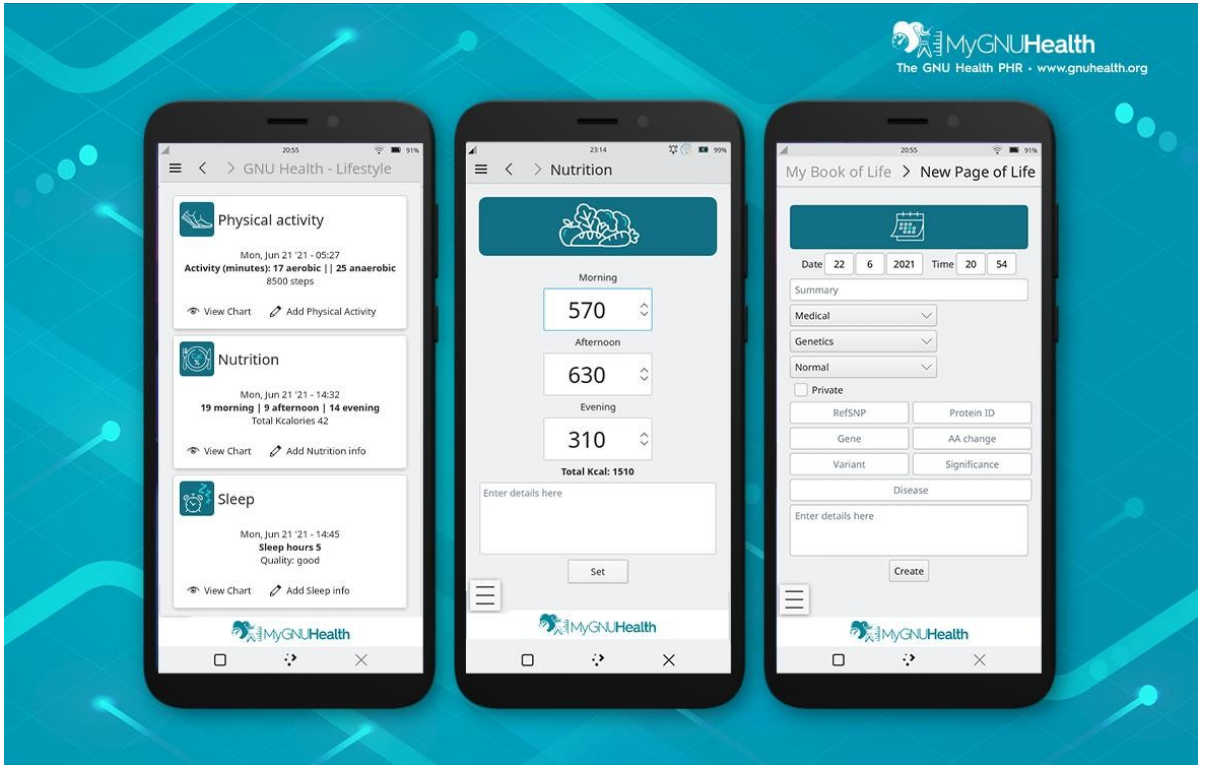
MyGNUHealth



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MyGH 2.0: Kivy framework

Kivy:
The Open Source Python App Development Framework.

Build and distribute beautiful Python cross-platform GUI apps with ease.

Kivy runs on Android, iOS, Linux, macOS and Windows.

MIT License ★ 14.8K Stars

Get started!

Kivy has been built to be easy to use, cross-platform and fast.

With a single codebase, you will be able to deploy apps on Windows, Linux, macOS, iOS and Android.

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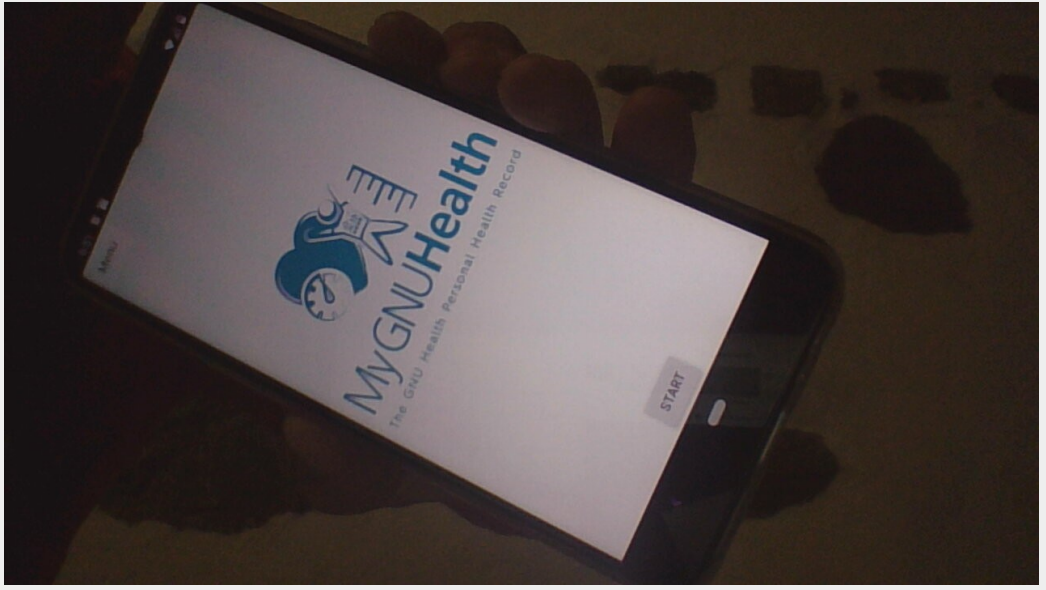
MyGNUHealth on Android AOSP (dev)



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MyGNUHealth on Volla Android AOSP (dev)

Unify development

GNU/Linux Desktops

Linux phones (openSUSE, etc..)

AOSP / VollaOS

Same User Interface and experience

Libre / community oriented project

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MyGNUHealth on Volla Android AOSP (dev)

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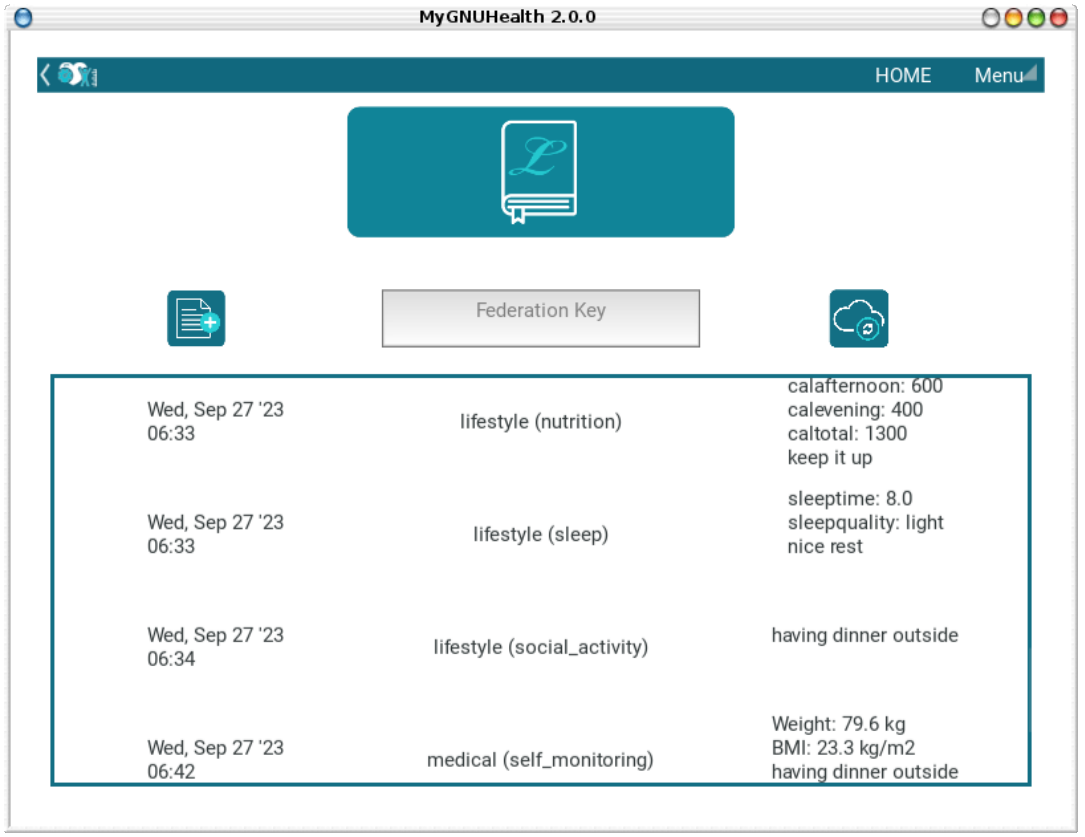
GH Book of Life



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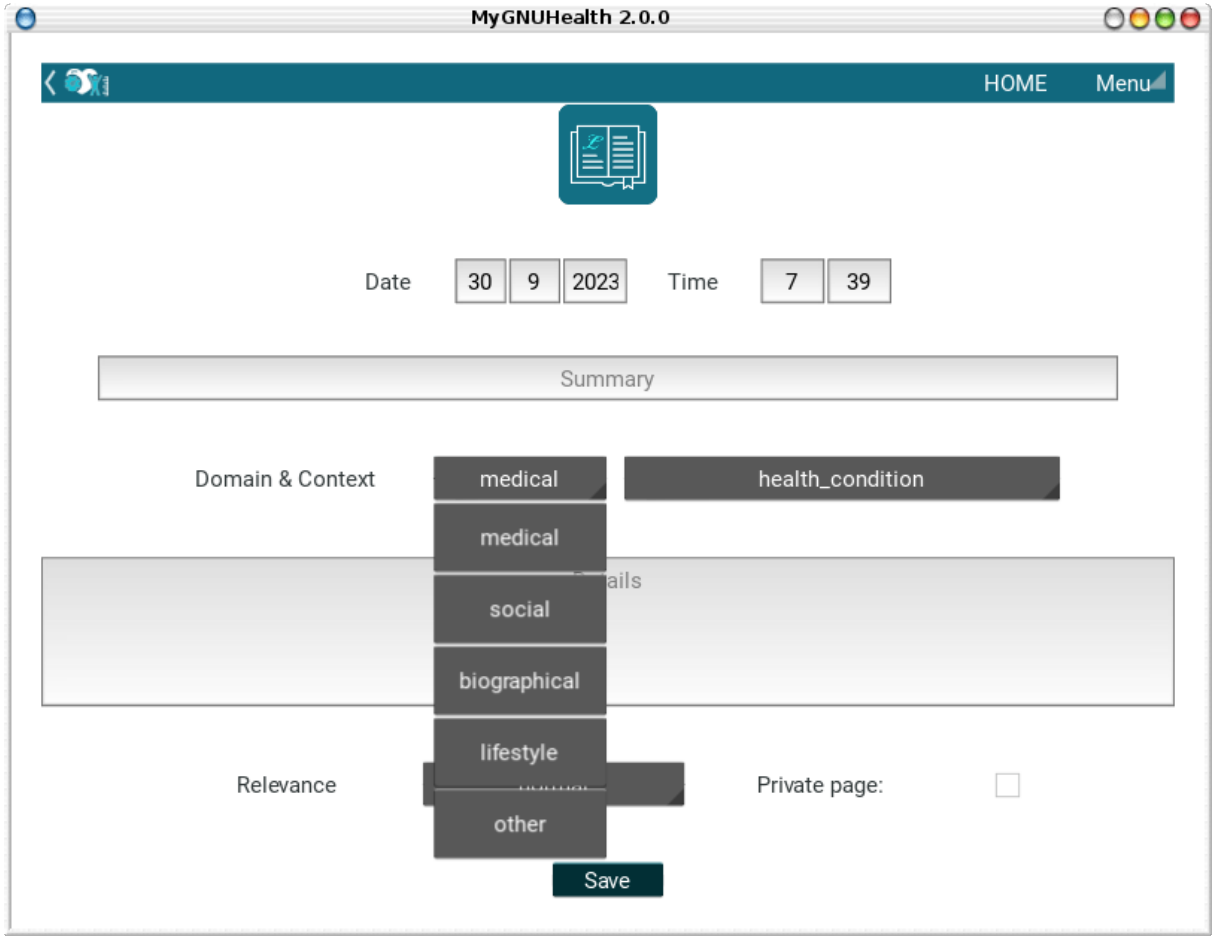
GH Book of Life



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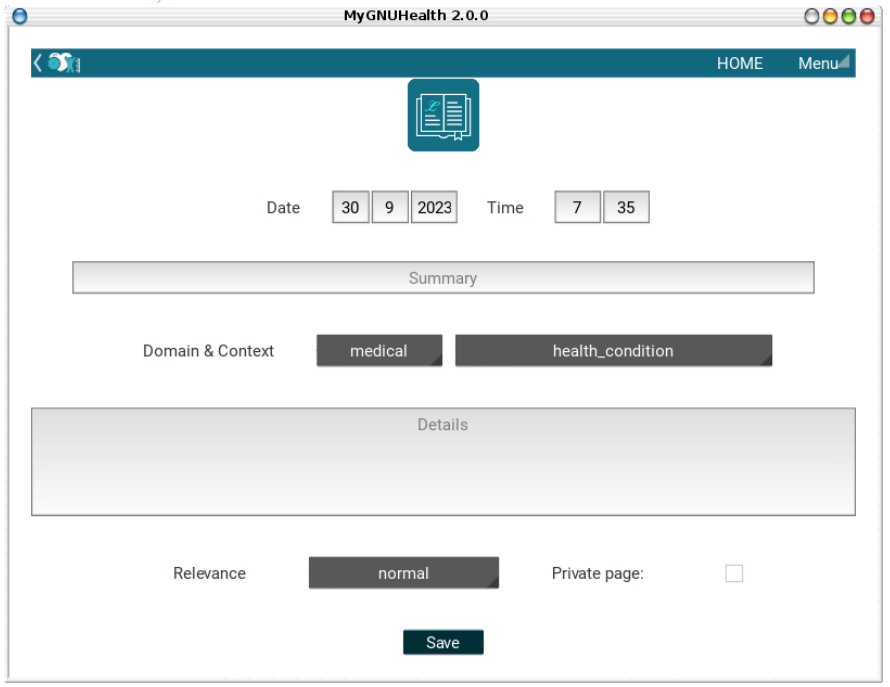
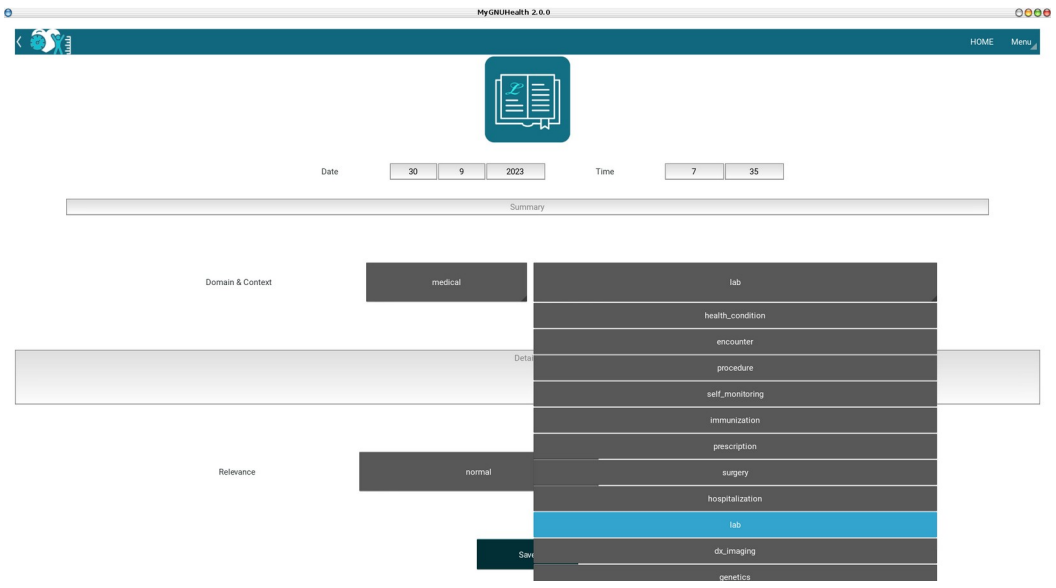
BoL Pages





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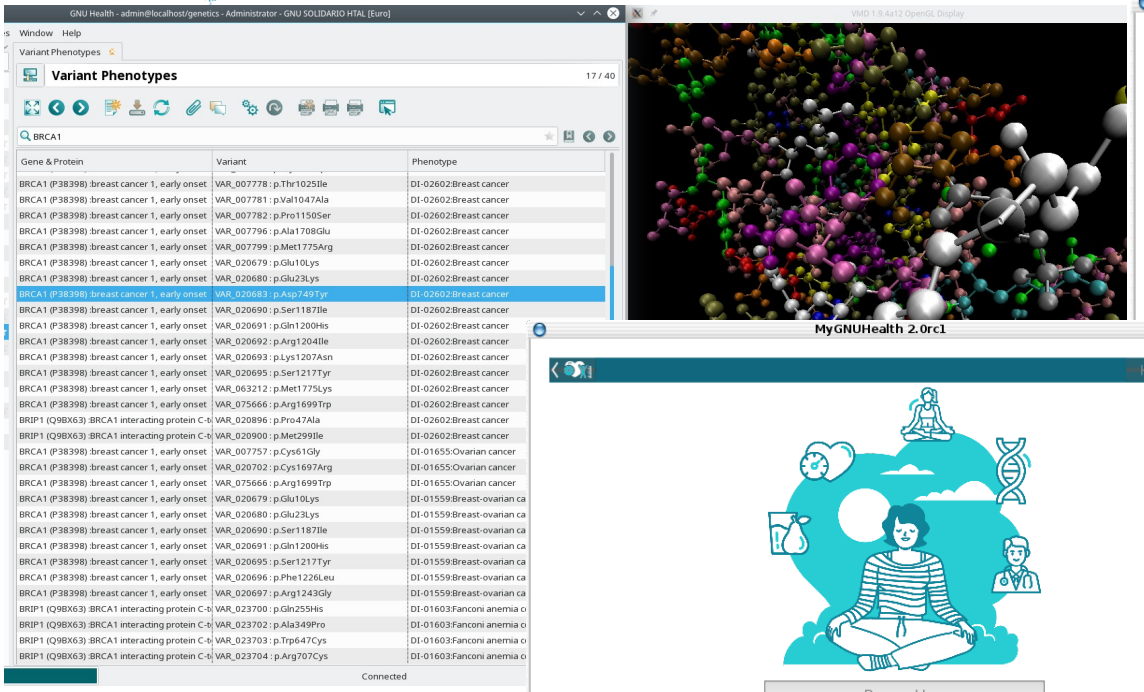
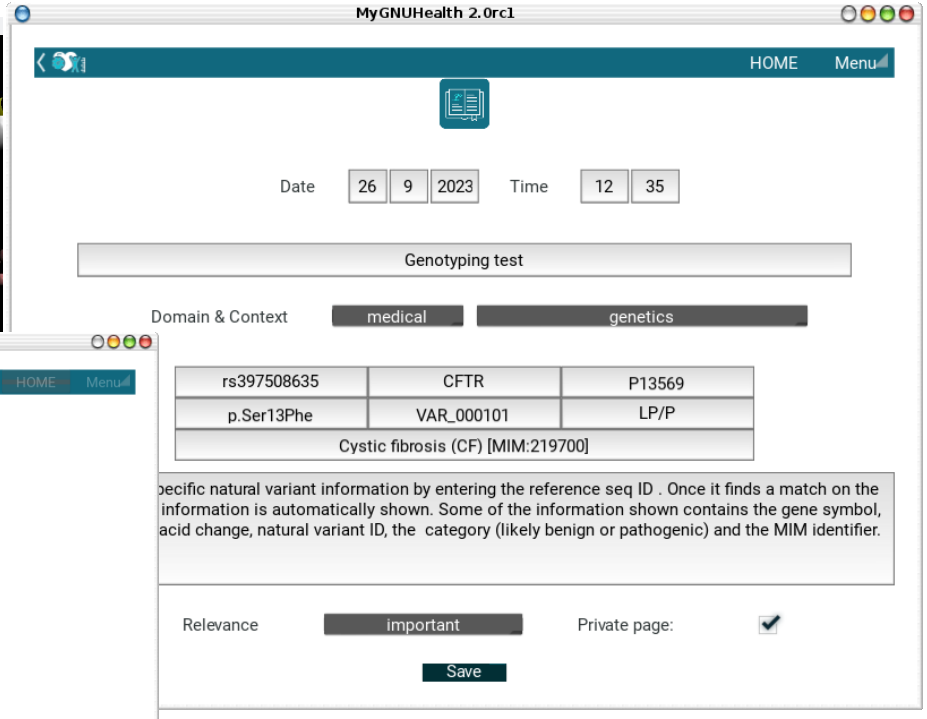
Integrating MyGNUHealth into GH Federation





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Syncing pages to GH Federation via Thalamus

```
[DEBUG   ] [https          ]//federation.gnuhealth.org:8443 "POST /pols/ESPGNU777ORG/4d745869-9748-417c-9391-898fe18337c1 HTTP/1.1" 200 5
Page successfully sent to the GH Federation 200
Setting fsynced to True on page...  4d745869-9748-417c-9391-898fe18337c1
```

Nodes | Message Server | Information System

Mozilla Firefox

federation.gnuhealth.org:84 × thalamus.rst ×

https://federation.gnuhealth.org:8443/pols/ESPGNU777OR 133%

JSON Raw Data Headers

Save Copy Collapse All Expand All Filter JSON


```
node:                 "mygnuhealth"
page:                 "f53bf492-b04f-4aeb-889f-97921eeae502"
page_date:            "2023-09-27T06:42:52.078358"
privacy:              null
relevance:            null
summary:              null
▼ 76:
  ▼ 0:
    age:              null
    author:           "ESPGNU777ORG"
    author_acct:      "ESPGNU777ORG"
    book:             "ESPGNU777ORG"
    context:          "self_monitoring"
    ▼ creation_info:
      node:           "mygnuhealth"
      timestamp:      "2023-09-30T08:10:14.035066"
      user:           "ESPGNU777ORG"
    domain:           "medical"
    fsynced:          true
    genetic_info:     null
    id:               "4d745869-9748-417c-9391-898fe18337c1"
    info:             "Happy at GHCON and OrthancCON 2023"
    ▼ measurements:
      ▼ 0:
        ▼ mood_energy:
            energy:   2
```


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Syncing pages to GH Federation via Thalamus

```
[DEBUG  ] [https          ]//federation.gnuhealth.org:8443 "POST /pols/ESPGNU777ORG/4d745869-9748-417c-9391-898fe18337c1 HTTP/1.1" 200 5
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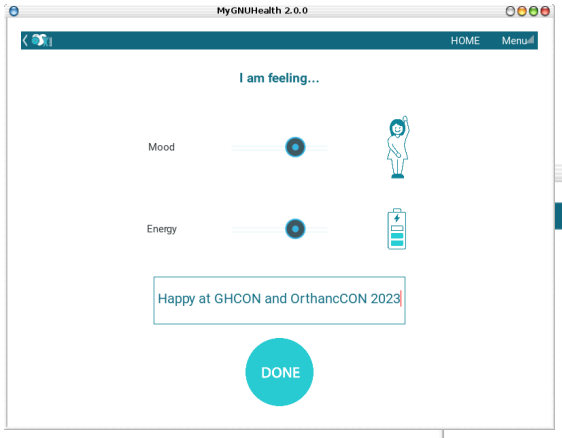

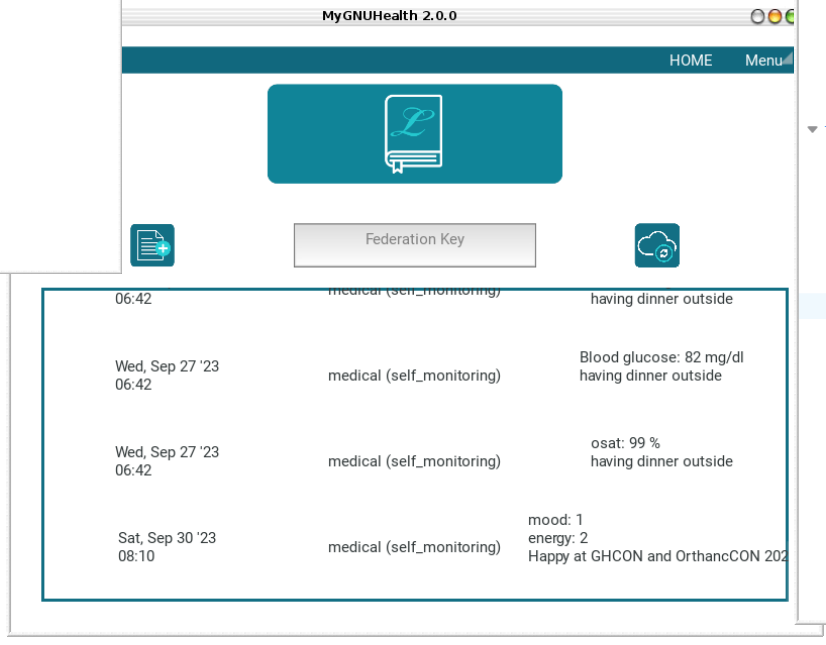

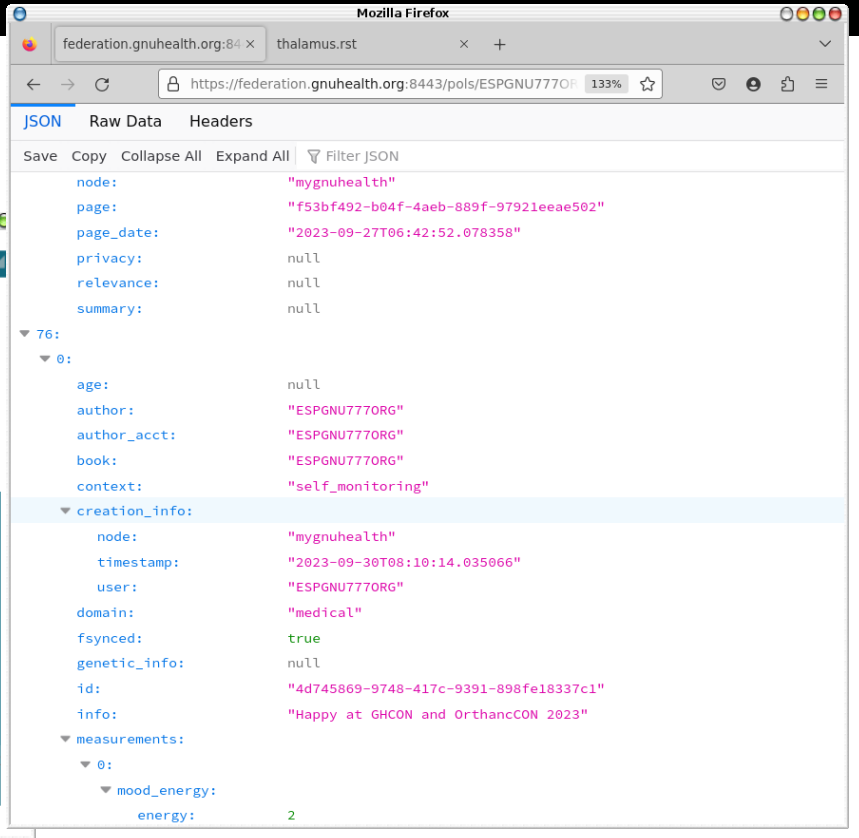

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MyGNUHealth nodes in the GH Federation

Highlights

Every person is a node

Realtime update with her health professional

Person is in control of what to share

Decrease the burden in the public health system

The person is now an active member in the public health system

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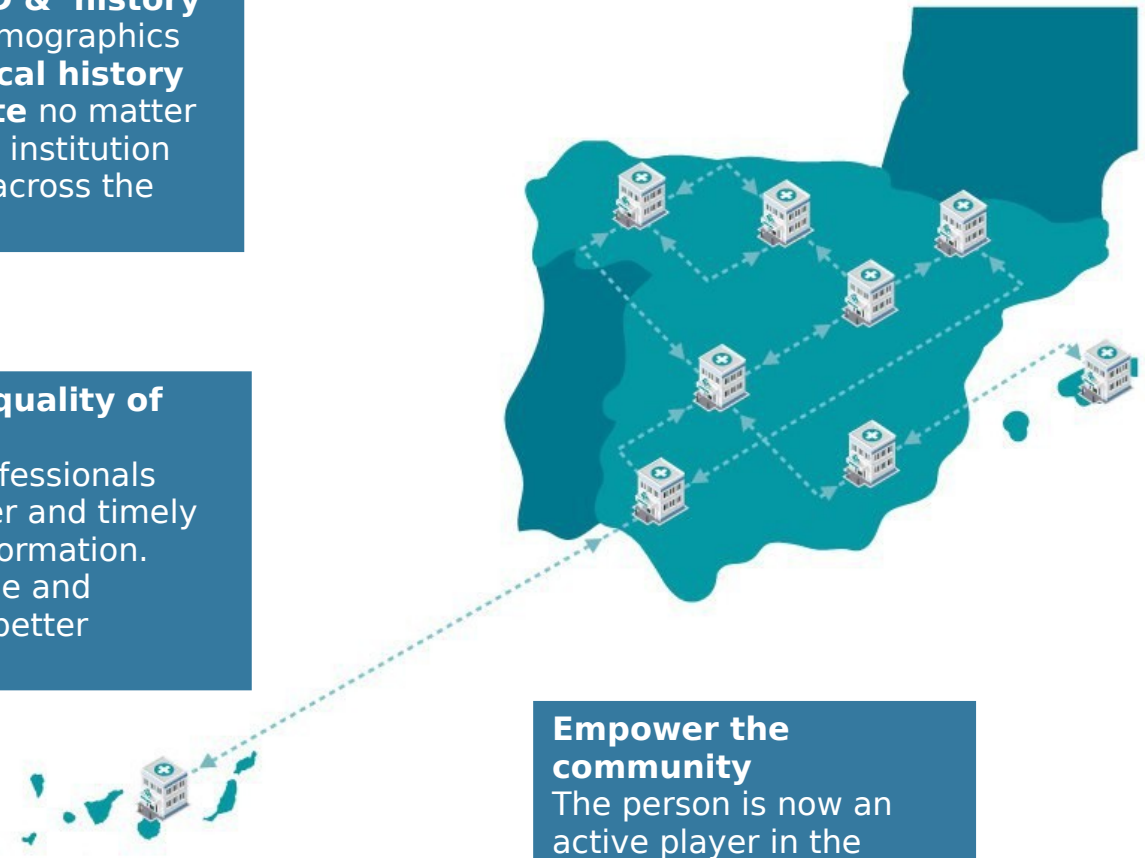
Benefits of a Libre Public Health Network

Unique ID & history
Person demographics and **medical history up-to-date** no matter the health institution she goes across the country

Improve quality of care
Health professionals have better and timely patient information. Saving time and providing better healthcare



Empower the community
The person is now an active player in the system of health

Libre Software: No hidden code, no blackboxes in healthcare.

The health software will be a **public good.**

Save millions of euros in licenses that can go to improve the public health system.

Real-time observatory and reporting

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https://www.gnuhealth.org/join

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Happy Hacking!

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