

# An Estonian example – Digital Health in Estonia

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**Tallinn, Estonia**

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# Estonia is an e-country



## e-governance

Did you know that 99% of public services are available to citizens as e-services?

- Government Cloud
- i-Voting
- State e-Services Portal
- e-Cabinet



## mobility services

Did you know that self-driven vehicles have been allowed to drive on public roads in Estonia since 2017?

- Intelligent Transportation Systems
- Mobile Parking
- Border Queue Management



## business and finance

Did you know that you can establish a company in Estonia just in 18 minutes?

- e-Tax
- e-Banking
- e-Business Register
- Industry 4.0

**3700 IT companies in Estonia**

**7% GDP in IT sector**

**SKYPE Development Centre in Tallinn**

**NATO Cyber Defence Centre in Tallinn**

# Innovative e-solutions in Estonian healthcare

- 99% of health data digitized
- 99% of prescriptions are digital
- e-referral, e-consultation
- 100% electronic billing in healthcare

## Patient Portal

The Patient Portal allows you to view your medical data, submit statements of intention, appoint representative(s) for yourself, and act on behalf of the persons who have appointed you as their representative.  
Please refer all questions, technical issues and proposals for further developments to the **help desk of Health and Welfare Information Systems Centre** by phone at +372 794 3943 (7:00-22:00) or e-mail at [abi@tehik.ee](mailto:abi@tehik.ee)

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### Health information system

The health information system includes medical data the health care service

### Security

Data security is extremely important. Each activity leaves a mark.

### Important topics

Web pages where you can find systemic information related to health and health care management.

### Legal aspects

The Health Information System and the My Health portal base their activities on the legislation of the Republic of Estonia and the European Union.



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# Estonia Offers 100,000 Residents Free Genetic Testing



**Estonia has started a program to recruit and genotype 100,000 new biobank participants as part of its National Personalized Medicine programme. Effort aims to develop personalized medicine in national healthcare.**

The government wants to develop its healthcare system by offering all its residents genome-wide genotyping that will be translated into personalized reports for use in everyday medical practice through the national e-health portal. The country has many encrypted digital solutions incorporated into government functions that link the nation's various databases through end-to-end encrypted pathways.



*"Today we have enough knowledge about both the genetic risk of complex diseases and the interindividual variability of the effects of medicines in order to start using*

## Gene donors storming the Genome Center

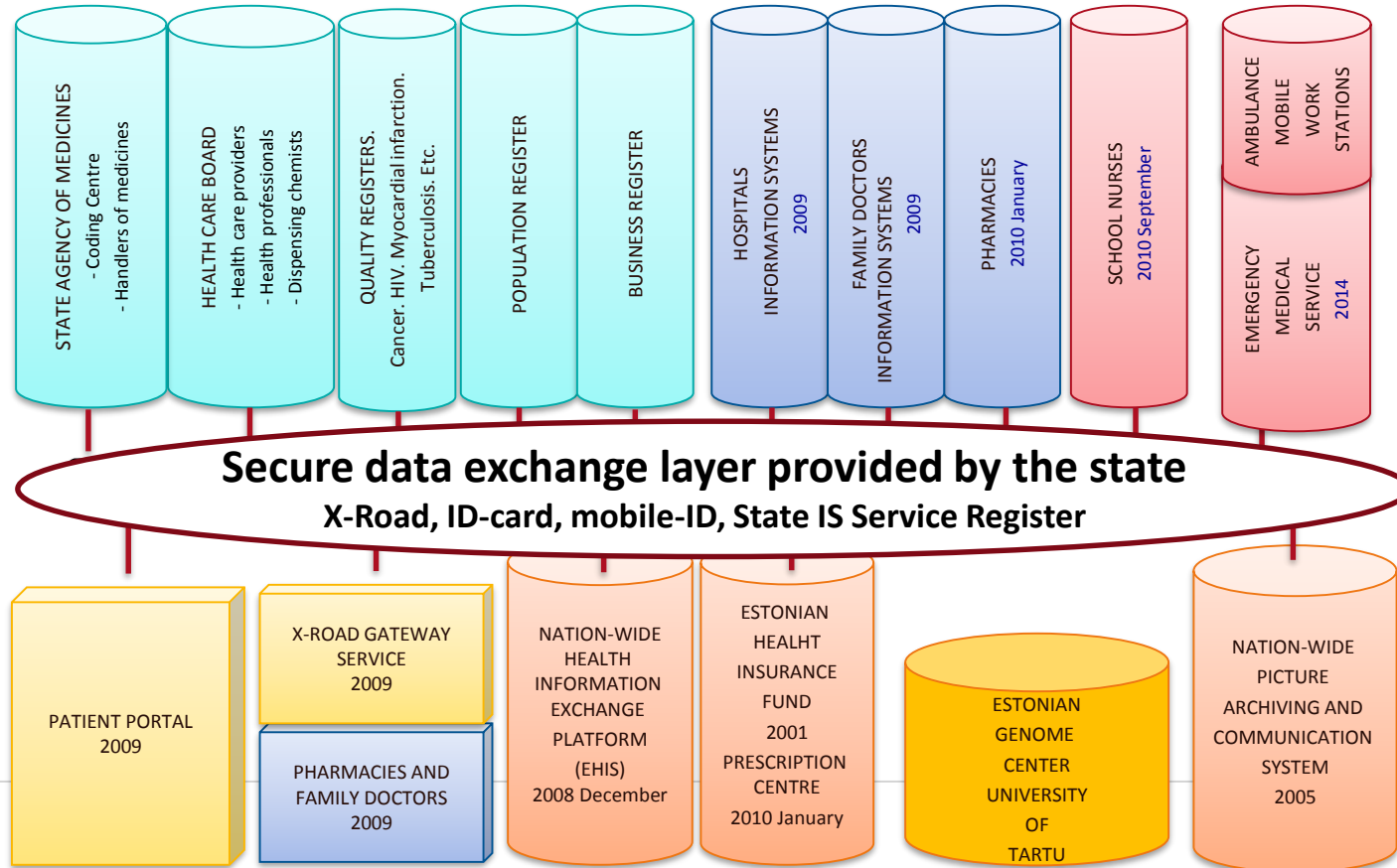
 **Tiina Kaukvere**  
reporter



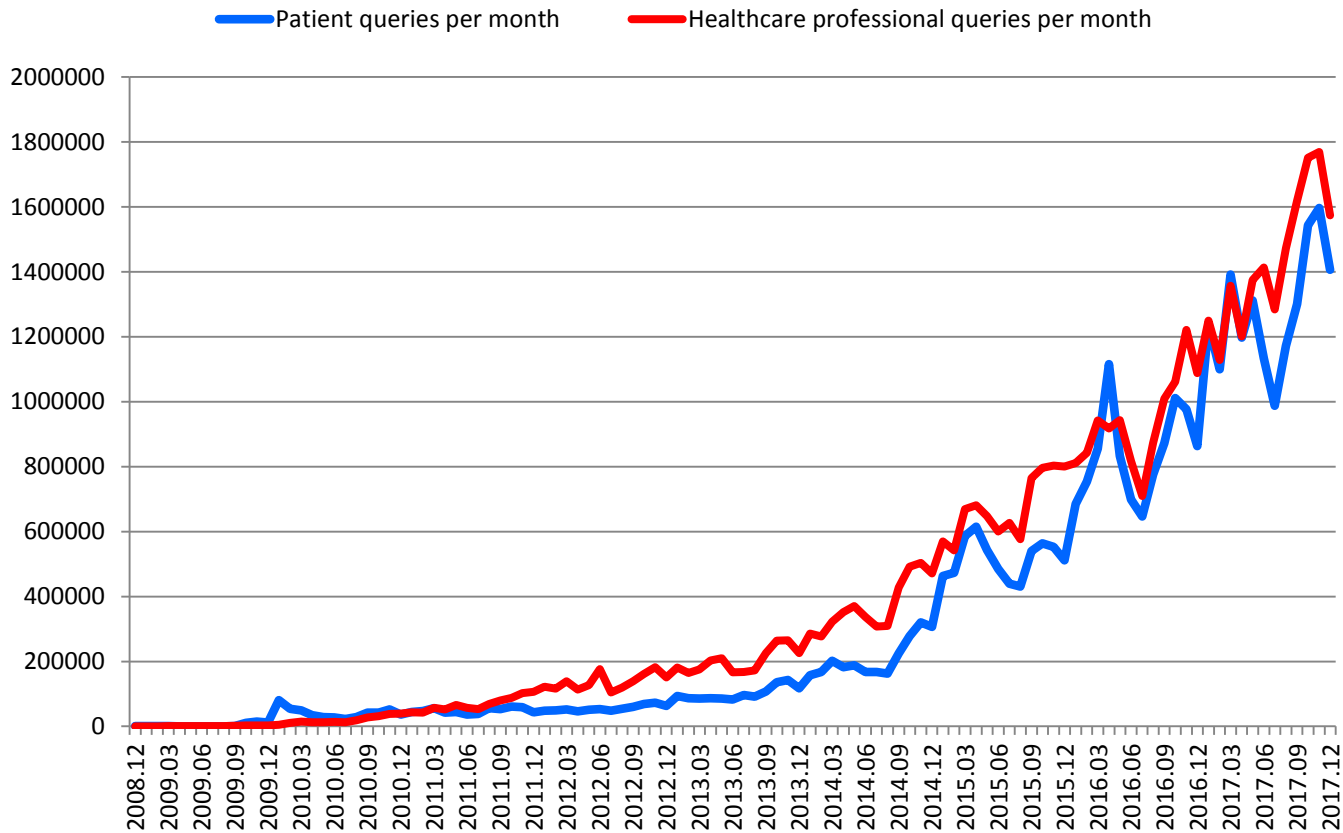
22. March 2018, 4:24 PM



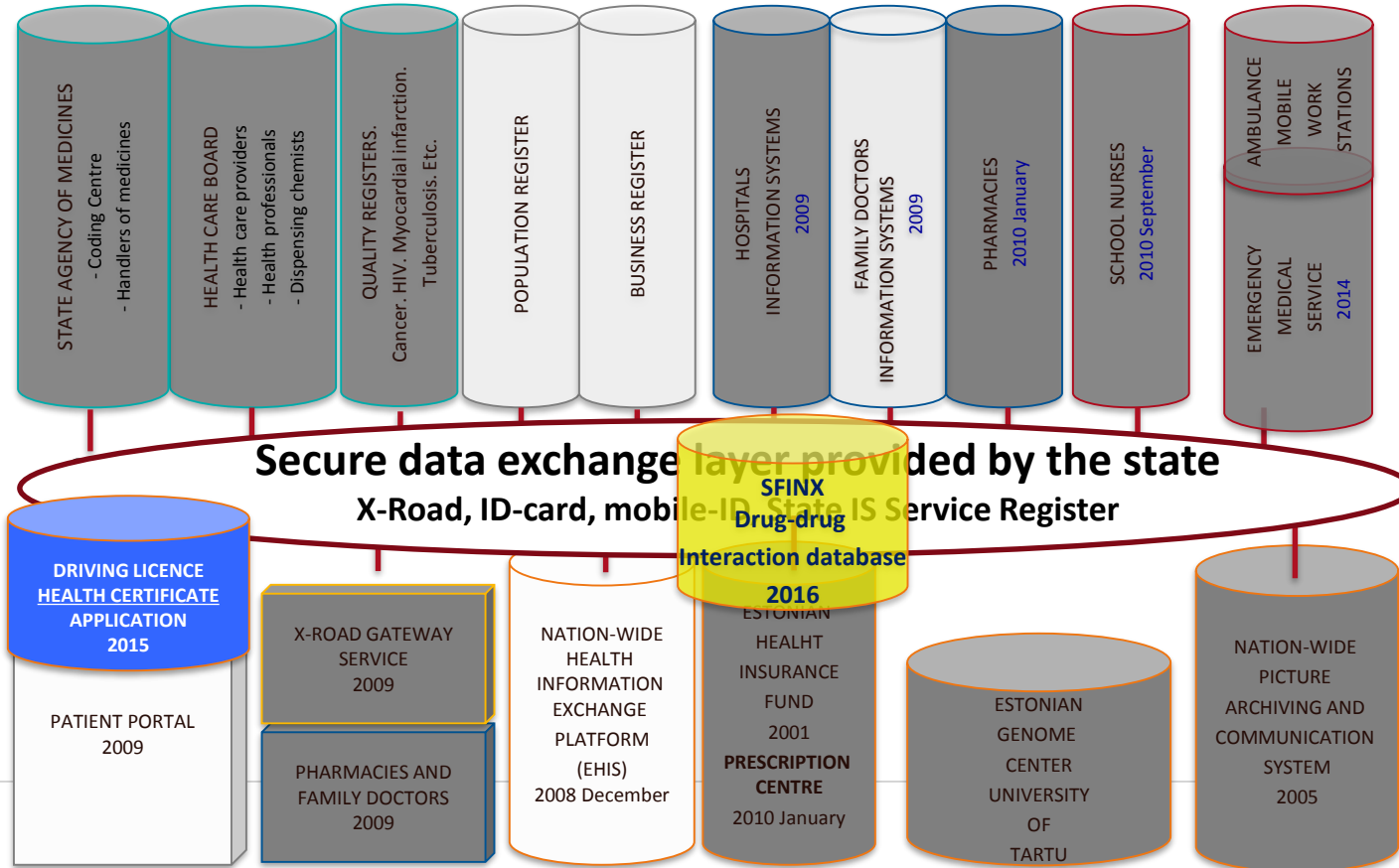
# Architecture of Estonian nation-wide Health Information System (since 2008)



# Use of digital data in Estonia



# e-services crossing institutional borders





# EU launch of a cross-border drug prescription on 21.01.2019



REPUBLIC OF ESTONIA  
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Home > News > Finns can buy medicines with a digital prescriptio...

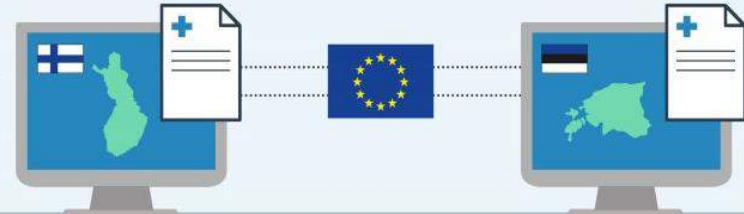
## Finns can buy medicines with a digital prescription in Estonia



"Estonia and Finland, as the first countries, will launch a service that allows buying prescription drugs in another country," said **Riina Sikkut**, Minister of Health and Labour. "Agreements between member states lead to real solutions that will enable health data to move along with the person and thereby enable to provide better medical care to millions of European people who travel, study or work in another European country. This is what Estonia stood for also during the Estonian EU Presidency."

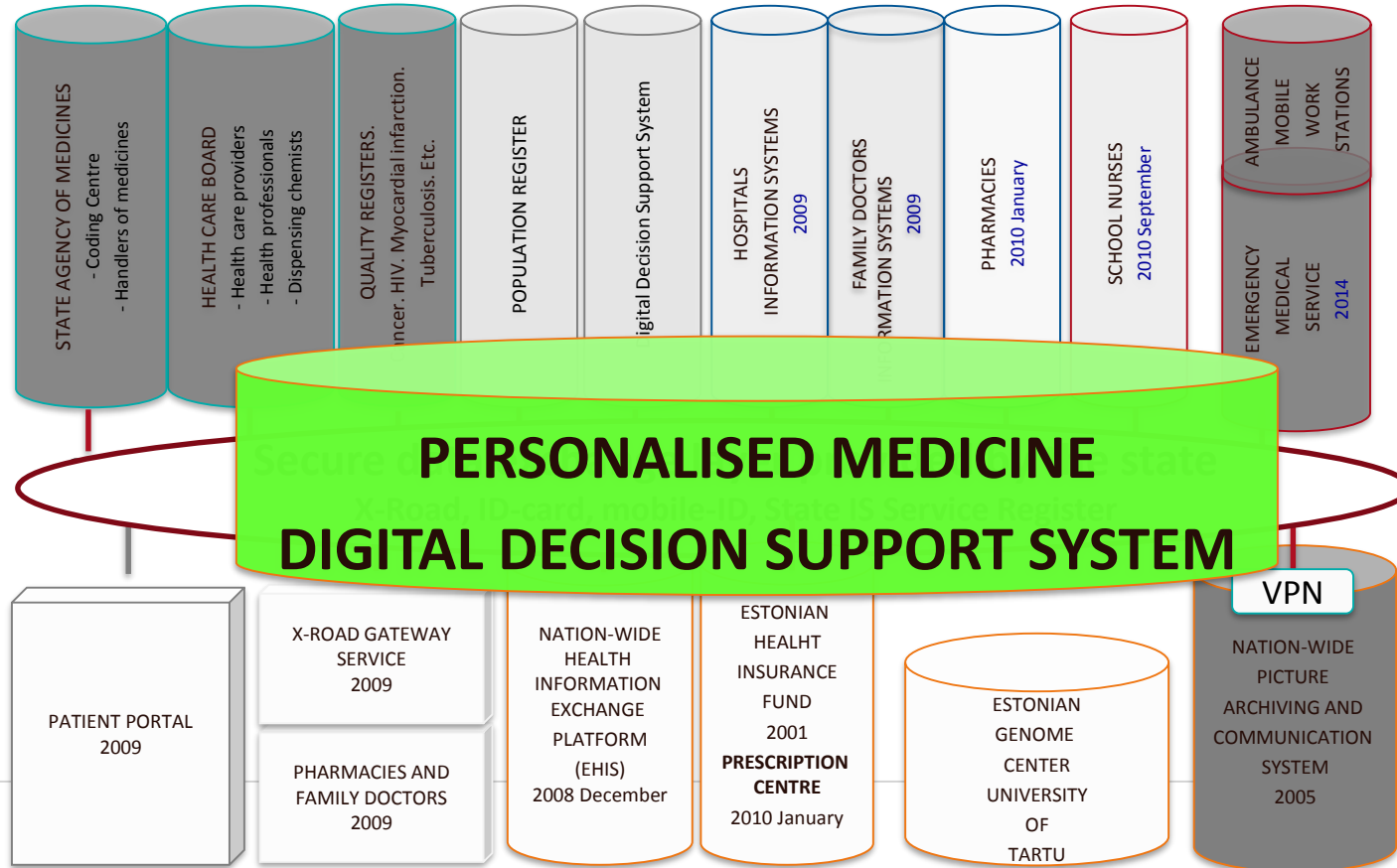
According to Riina Sikkut, the launch of a cross-border prescription is a historic milestone, but still only a first step on this long road. "In the next few years, we would also like to enable the transmission of other health data so that, in case of a health problem in a foreign country, the physician would also have access to a summary of the medical history for the provision of better

### ESIMENE DIGIRETSEPTIDE VAHETUS SOOME JA EESTI VAHEL





# Digital Decision Support System



# Digital Cardiology in Estonia

**Haiguslugu**

Patsient:

Vanus R.J alguses: 86

<b>KMI</b>	<b>Üldine med.info</b>	<b>Isikuandmed</b>
<b>EKG</b>	<b>Uuringute arhiiv</b>	<b>Eriandmed</b>
<b>INM</b>	<b>Anamnees</b>	<b>Invkardio</b>
<b>Ravimi kõrvaltoime/ Ravimallergia</b>		

Haiguslood:

Alguskuup	Lõppkuup	Nr.	Diagnoos	Liik	Tunnus
27.02.2019	27.02.2019		I20.8 - Stenokardia muud vormid	A	
22.09.2010	20.10.2010		D23.3 + Näo muude ja Täpsustamata osade	A	

**Haigusloo sissekanded:**

Kirjeldus	Diagnoos	Uuring	Protseduur	Ravim	Visiit	Kompleks	Retsept	eGFR
Raviplaan	An. areng	Epikriis	Teatised	Tüsistus	Ravim			
Liik	Algus	Alguskuup.	Nimetus	Tüüp	Teostaja	Lõpp	Lõppkuup.	Üksus
Diagnoos	11:21	27.02.2019	I25.2 Varasem müokardiinfarkt	Kaasuv	VIIGIMAA, MARG			Südametervise ka
Diagnoos	11:21	27.02.2019	I11.9 Südamekahjustusega hüp	Kaasuv	VIIGIMAA, MARG			Südametervise ka
Diagnoos	11:21	27.02.2019	I20.8 Stenokardia muud vormid	Lõplik kliin. p	VIIGIMAA, MARG			Südametervise ka
Diagnoos	11:21	27.02.2019	J45.8 Segatüüpi astma	Kaasuv	VIIGIMAA, MARG			Südametervise ka
Visiidid	11:16	27.02.2019	Üe osalemine visiidil		MAKSIMENKO, A	11:16	27.02.2019	Kardioloogi vastu
<b>Kirjeldus</b>	<b>11:13</b>	<b>27.02.2019</b>	<b>Ambulatoorne epikriis</b>		<b>VIIGIMAA, MARG</b>			<b>Südametervise</b>
Uuring	10:41	27.02.2019	EKG		VIIGIMAA, MARG			EKG kab (kardiok
Dokument	10:27	27.02.2019	Omaosalusarve		MAKSIMENKO, A	10:27	27.02.2019	P - Poliklinik Mus
Dokument		27.02.2019	Raviarve		VIIGIMAA, MARG		27.02.2019	Südametervise ka
Visiidid	10:40	27.02.2019	Eriarsti esmane vastuvõtt		VIIGIMAA, MARG			Südametervise ka
Raviarst	10:27	27.02.2019	Raviarsti määramine		VIIGIMAA, MARG		27.02.2019	Südametervise ka

**Täpsemalt** **NCSP koodid**



ZDF heute Prof. Margus Viigimaa  
in europa Kardiologe

# EU Digital health innovation conference Tallinn 2017

## Over 100 European organisations address digital innovation in healthcare



Today, 17 October, at a high-level e-health conference in Tallinn, a joint declaration of e-health organisations was announced to accelerate digital innovation in healthcare. The declaration of over 100 European organisations' calls for concrete steps to develop e-health in Europe and all stakeholders interested in the future of e-health are expected to co-endorse it and to join the taskforces working on concrete actions and solutions.

European Commissioner for Health and Food Safety **Vytenis Andriukaitis**, who attended the eHealth Conference in Tallinn, has also been at the forefront of e-health development in Europe. "I welcome that the Estonian Presidency has made EU cooperation to support digital health innovation a priority. At the informal Council meeting in July, health ministers articulated their willingness to be more ambitious on digital health and to collaborate more effectively on issues such as data security, cybersecurity and new software products for data sharing," Andriukaitis said. "It seems that the momentum to converge our efforts has finally arrived. Let us all work together with governments, health professionals, businesses, and researchers, but above all with the patients to make digital health in Europe a reality."



*Today, 17 October, at a high-level e-health conference in Tallinn, a joint declaration of e-health organisations was announced to accelerate digital innovation in healthcare. (foto: Aron Urb / EU2017EE)*

# Welcome to the ESC Digital Summit!

## Tallinn, October 5-6, 2019

The ESC

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### ESC Digital Summit

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## About the ESC Digital Summit

"Digital Health is disrupting the usual way the patients and healthcare professionals interact" Prof. Martin Cowie, FESC, Digital Health Committee chair



**Digital Health** is now the third largest industry in the European health sector, after pharmaceuticals and medical devices. But where do the experts stand on Digital Health today and what are the opportunities and the hurdles that lie ahead?

With this first Summit on Digital Health, the ESC is positioning itself at the forefront of this new domain in Cardiovascular Medicine. We aim to provide a structured scientific and educational programme, as well as a platform for exchange and interaction to support the development of Digital Health across the ESC and its constituent bodies.



# THANK YOU VERY MUCH!



eHealth screen