



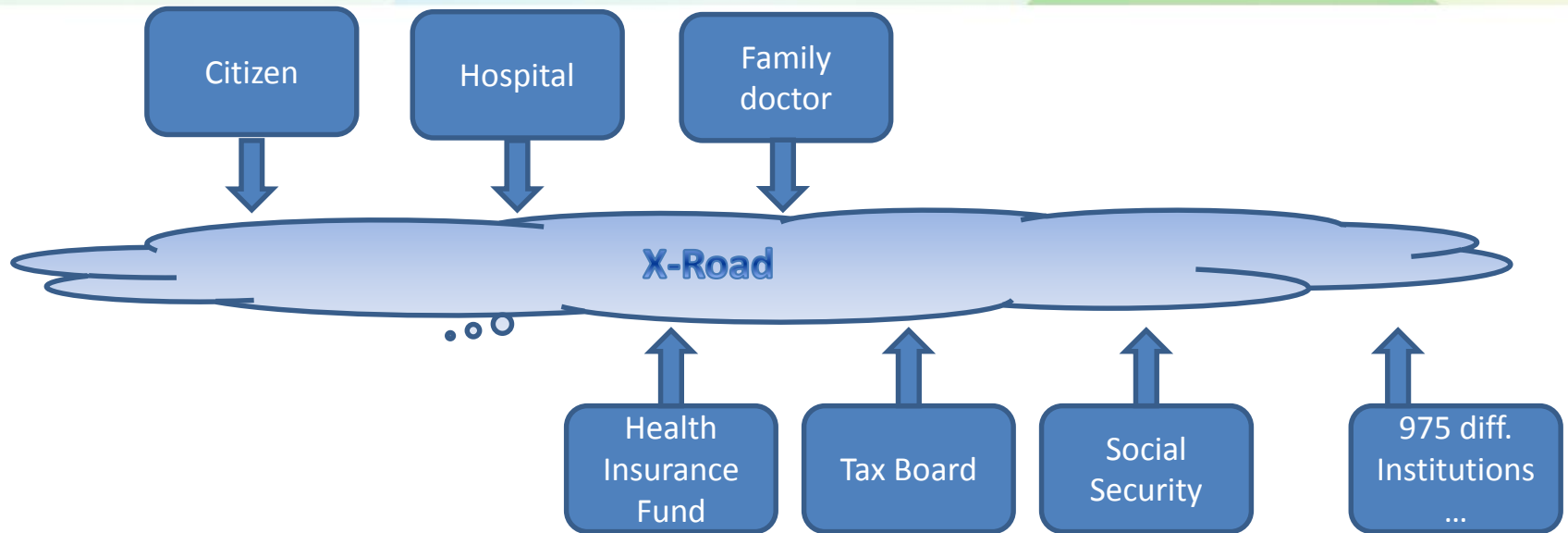
**Estonian
Health Insurance
Fund**



e-Prescription in Estonia

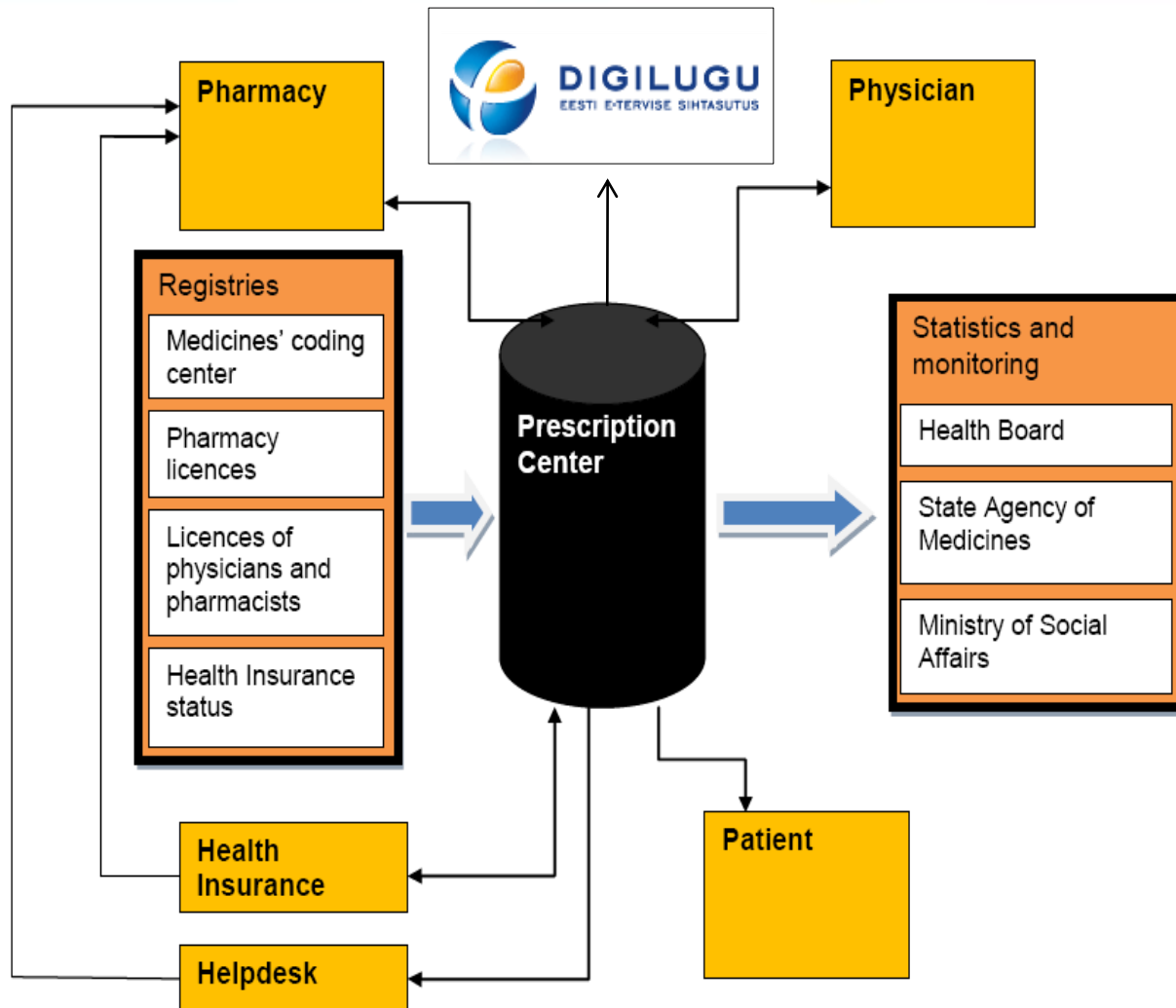
Erki Laidmäe
Head of Pharmaceuticals Unit
June 1st 2017
Riga

e-Services in public sector



- e-Prescription
- Electronic Health Record
- E-ambulance
- Digital Imaging
- ...

Landscape of e-Prescription

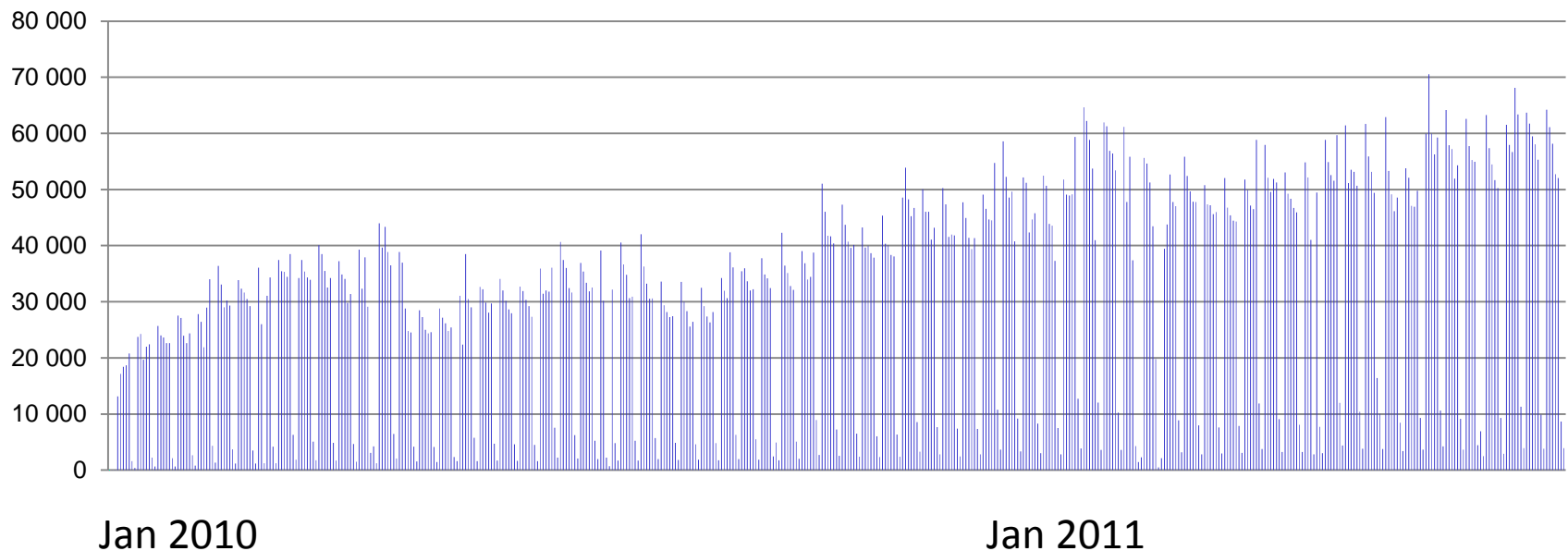


e-Prescription's „organization“

- **Managed by and responsibility of Estonian Health Insurance Fund**
 - Governmental decree
- **Approximate headcount**
 - 1 Project manager
 - 1 FTE Helpdesk operator
 - 1 FTE IT developer + 1 FTE IT admin
- **Approximate annual expenses**
 - 120,000€ IT development + 500,000€ hosting+infra

Launch of the e-Prescription

- 73% of Prescriptions were issued digitally by the end of 1st year (vs 45% assumption)
 - Currently 99% are e-prescriptions
- 95% of patients satisfaction by the end of 2nd year (vs 75% assumed)



Success factors

- **High public demand**
- **Political decision and support**
- **Technical factors**
 - Existing secure data exchange environment (X-Road)
 - Highly computerised HC
- **Registries with quality data**
 - Standards -> structured data
- **In-house IT competence**



How it's used?

Doctor's services

- **Prescribing a medicine**
 - Inputs data about patient, diagnosis and medicine
 - Retrieval of reimbursement level from E-Rx
 - Checking the drug-drug interactions
 - Finalising the process
- **Medicines history**
 - Prescribed by any doctor
 - Can see actual purchase data
 - Can see drug-drug interactions
- **Cancellation of prescriptions**

Doctor's benefits

- **Right level of reimbursement**
- **Prescription prolongation without phys. visit**
- **Possibility to assess adherence to therapy**
- **Detection of medicines over- or misuse, interactions**
- **Access full medicines history**
- **Assessment of drug-drug interactions**

Pharmacist's services

- **Filling a prescription**
 - Identification of a person (patient and buyer)
 - Retrieval of prescriptions
 - Entering sales data
- **Invoicing Health Insurance**
 - Selecting the right period and ordering draft invoice
 - Sending invoice

Pharmacist's benefits

- **Less data to enter into system**
- **Easier invoicing**
- **Less illegible paper prescriptions**

Patient's benefits

- **Maximum level of reimbursement**
- **Consultation and prolongation of prescription by phone**
- **Enhanced quality of care**
- **Log data available for every prescription**

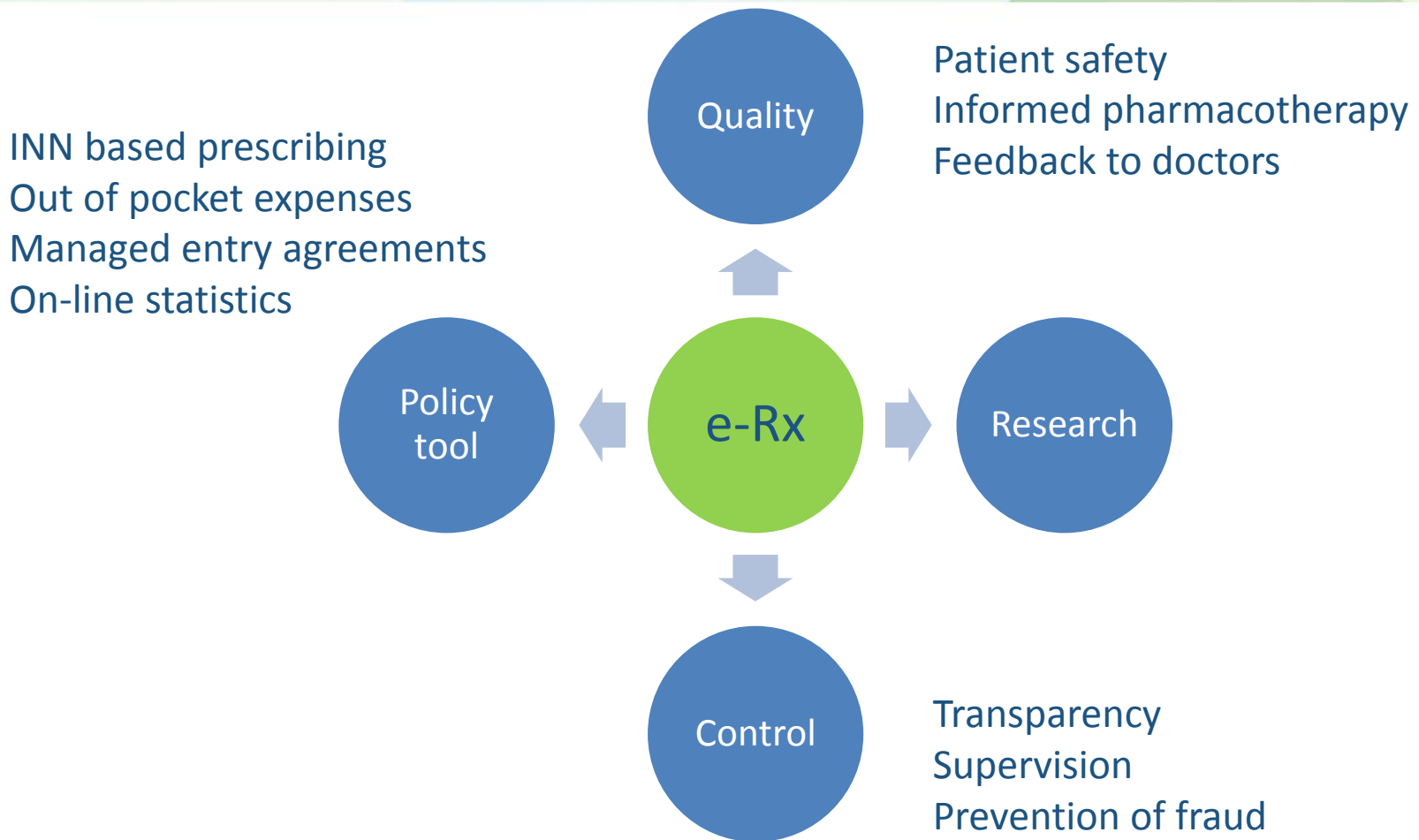
State's view

- **Good statistics**
- **Improved surveillance options**
 - State Agency of Medicines, Health Board etc
- **Efficient tool for policy changes**
 - INN prescribing
 - Feedback for doctors (also pharmacists in future)
 - Quality of pharmaceutical care



**Apart from prescribing and buying
a medicine, what else can you do?**

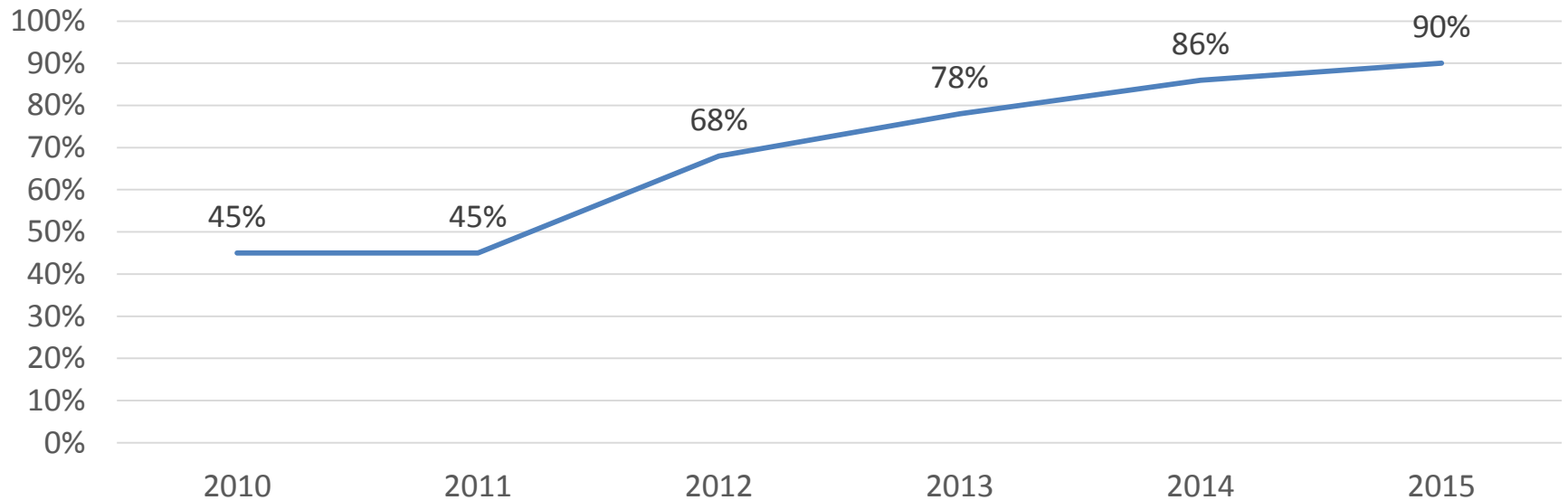
Applications of e-Prescriptions



Policy tool

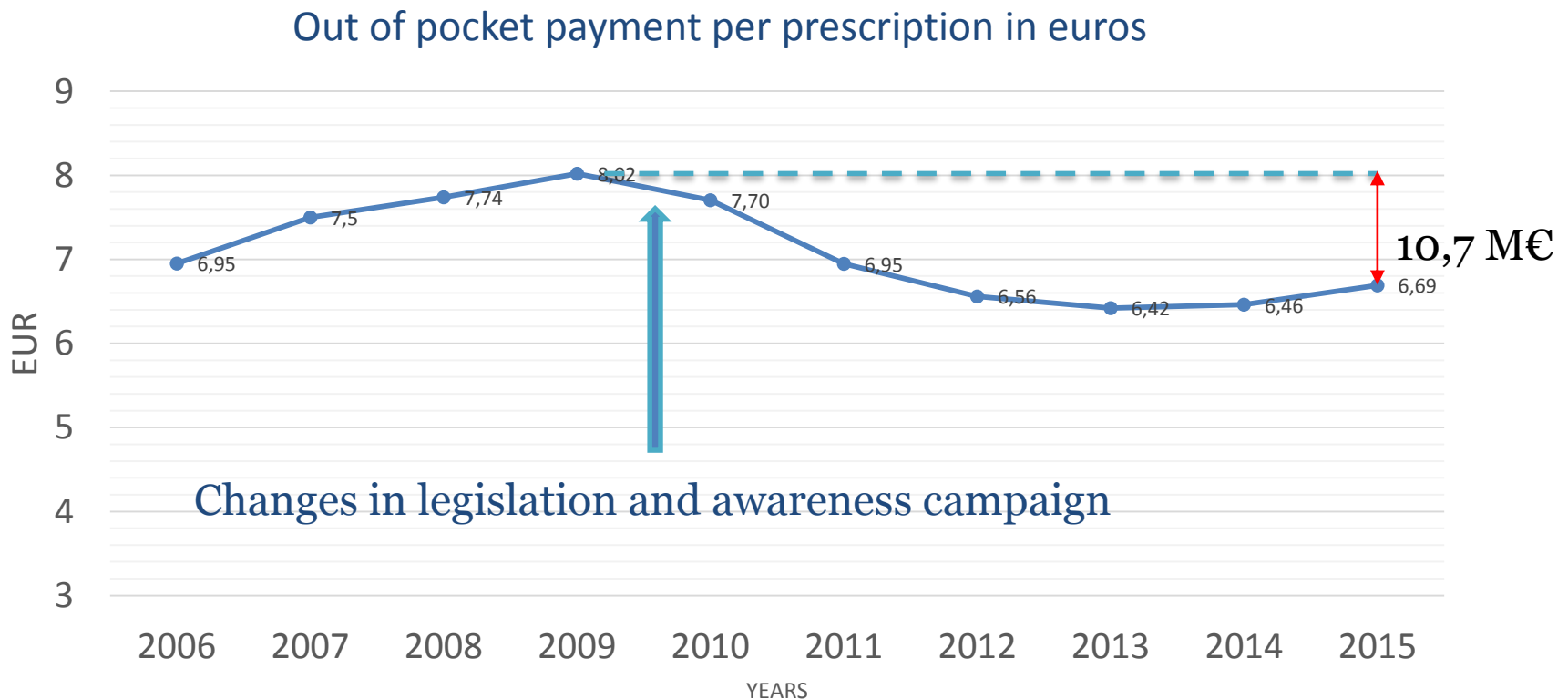
- INN based prescribing increased from 45% to 90%
 - Allows patients to choose a medicine with affordable price

Percentage of active ingredient based prescriptions



Policy tool

- Together with other measures helps to control out of pocket expenses



Patients view in state portal

www.eesti.ee

Detailed info

Prescription No 1018469806 has been purchased			
Data from the doctor		Data from the pharmacist	
Validity	22.09.2014 - 19.11.2014	Date of purchase	03.11.2014
ID, name and number of packaging	Toimeainepõhine	ID, name and number of packaging	1104680, ELIDEL, 3.00 tk
Notation concerning non-substitution ?		Additional comments	
Description of prepared medicine ?		Price of one packaging	27 EUR
Instructions for use	asfsdfasdfsadfasdf	Reference price of packaging	17.95 EUR
Discount rate	50%	Discount rate	50%
Reason of annulment		Total price of prescription	81.00 EUR
		Price paid by EHIF	25.33 EUR
		Price paid by patient ?	55.67 EUR
		Avoidable cost sharing ?	27.15 EUR

[Back to the list of prescriptions](#)

[Who has monitored the prescription?](#)

Improving the quality of pharmaceutical care

- **Assessing patients adherence to treatment**
- **Detecting misuse or overuse of medicines**
- **Detecting interactions and adverse effects**

- **Decision support in the future**

Retsepti koostamine

* Koostamise vorm: e-retsept Paberretsept

Retsepti üldandmed

* Retsepti tüüp:

Riikliku pensioni liik: -

* Diaagnoos:

Retsepti sisu

Toimeainepõhine (lubatud asendada)

Preparaadipõhine (ei ole lubatud asendada)

Ekstemporaalne ravim

* Ravim/toimeaine: ATC

Võimalik soodustus:

ATC kood: B01AA03

* Ravimi koguhulk:

* Ravimivorm:

* Toimeaine: /

⚠ NB! Esineb 4 ravimite koostoimet!

D4 VARFARIIN+IBUPROFEEN

D

Kliiniliselt oluline koostoime, mida tuleks vältida

4

Andmed on saadud asjakohase patsiendirühma seas läbiviidud kontrollitud uuringutest

Koostoime kliiniline tagajärg

Samaaegne mittesteroidsete põletikuvastaste ravimite (NSAIDid) ja varfariini kasutamise võib põhjustada tugevat veritsust. Seedetrakti ülaoasa verejooksu oht suureneb 2-3 korda võrreldes varfariini monoterapiaga.

Soovitus

Varfariinravitel patsientidel tuleb üldiselt hoiduda mittesteroidsete põletikuvastaste ravimite (MSPVR, NSAID) kasutamisest. INRI väärtuse jälgimine ei ole piisav veritsusriski hindamiseks, kuna NSAIDid mõjutavad ka trombotsüütide funktsiooni. Kui samaaegset kasutamist ei saa vältida, kaalu mao kaitseks prootonpumba inhibiitorite (nt lansoprasool, omeprasool või pantoprasool) kasutamist.

[Loe lähemalt](#)

D4 VARFARIIN+ATSETÜÜLSALITSÜÜLHAPE

C3 VARFARIIN+KLOPIDOGREEL

C0 IBUPROFEEN+KLOPIDOGREEL

* Koostoimega nõustumine: Jah, olen teadlik C- ja D-taseme koostoimest

Selgitus/märkus:

Interacting pair of medicines

Level of evidence and clinical importance

Clinical consequence

Suggestions/guidelines

Annustamise ja kasutamise juhend

* Ühekordne annus:

* Annustamise sagedus: kord(a)

* Ravikuuri tüüp: Fikseeritud Pidev

* Annustamise aeg: hommik lõuna õhtu öö

* Kasutuskestus:

Annustamine: vajadusel

Juhend/lisakirjeldus:

Improving the quality of pharmaceutical care (2)

- **Feedback to doctors**
 - Statistics about doctors' prescribing pattern
 - Prescribing pattern comparison with other doctors/hospitals
- **Indicators in Quality Bonus System**
 - % of MI, T2D, hypertensive patients with prescribed drugs
- **Decision making tool for doctors in the future**
 - E-prescribing combined with treatment guidelines

Comprehensive medicines overview for doctors, pharmacists and patients

Timeline Vaata retseptide loetelu [+ Lisa uus retsept](#) [Prindi](#)

Täna

Ravim	Veebruar 2016	Märts 2016	Aprill 2016	Aprill 2016	Mai 2016	Juuni 2016	Retsepti nr	Tegevused		
amlodipiin 5 mg 30TK tablett	<div style="border: 1px solid orange; padding: 5px;"> Ravimil on koostoime diklofenakiga! SFINX detailsem info. </div>						! 1018470608	! 1018470608	! 1018470608	<input type="button" value="Pikenda"/> <input type="button" value="Annulleeri"/>
							✖ 1018470608	✔ 1018470608	✔ 1018470608	<input type="button" value="Pikenda"/> <input type="button" value="Annulleeri"/>
							✔ 1018470608	✔ 1018470608	! 1018470608	<input type="button" value="Pikenda"/> <input type="button" value="Annulleeri"/>
alprasolaam 1 mg 10TK tablett	1 tablett 1x päevas						! 1018470608	! 1018470608	! 1018470608	<input type="button" value="Pikenda"/> <input type="button" value="Annulleeri"/>
	Annulleeritud 1 tablett 1x päevas						- 1018470608	- 1018470608		<input type="button" value="Pikenda"/> <input type="button" value="Annulleeri"/>
diklofenak 5% geel	Aegunud Määrida kreemi lööbele 2x päevas						✖ 1018470608			<input type="button" value="Pikenda"/>

Interactions

Cancel, prolong

List of all medicines in scheme

Prescriptions' status

Enhancing prescribing culture

- Transparency
- Access granted to watchdog organisations

- ▶ National defence
- ▶ Consumer Protection
- ▶ **Health protection**
- ▶ Benefits and Social Assistance
- ▶ Work and Business
- ▶ Legal aid
- ▶ Population register
- ▶ E-valijakaart
- ▶ Police e-services
- ▶ Official forms

For an entrepreneur

For an official

Services A-Z

Who has monitored the prescription?

Institution ?	ID of the person	Date	Time
cnkodanik	EE47	05.01.2015	13:07:20
cnkodanik	EE47	03.03.2015	9:58:07
90009016	EE38	03.11.2014	11:08:51
cnkodanik	EE47	05.01.2015	14:47:38
90009016	EE47	31.10.2014	12:59:48
cnkodanik	EE47	03.03.2015	9:58:11
90009016	EE38	31.10.2014	13:49:58
90009016	EE38	03.11.2014	11:08:56
90009016	EE47	25.09.2014	11:22:12



**Estonian
Health Insurance
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Thank you!

erki.laidmae@haigekassa.ee

Video about e-prescription

<http://www.youtube.com/watch?v=m9rTzM2kj78>