# Immunization though integrated PHC Estonia Case Study

**Tiina Unukainen**

Famiy Medicine Association

Health Insurance Fund

27 July, Tbilisi

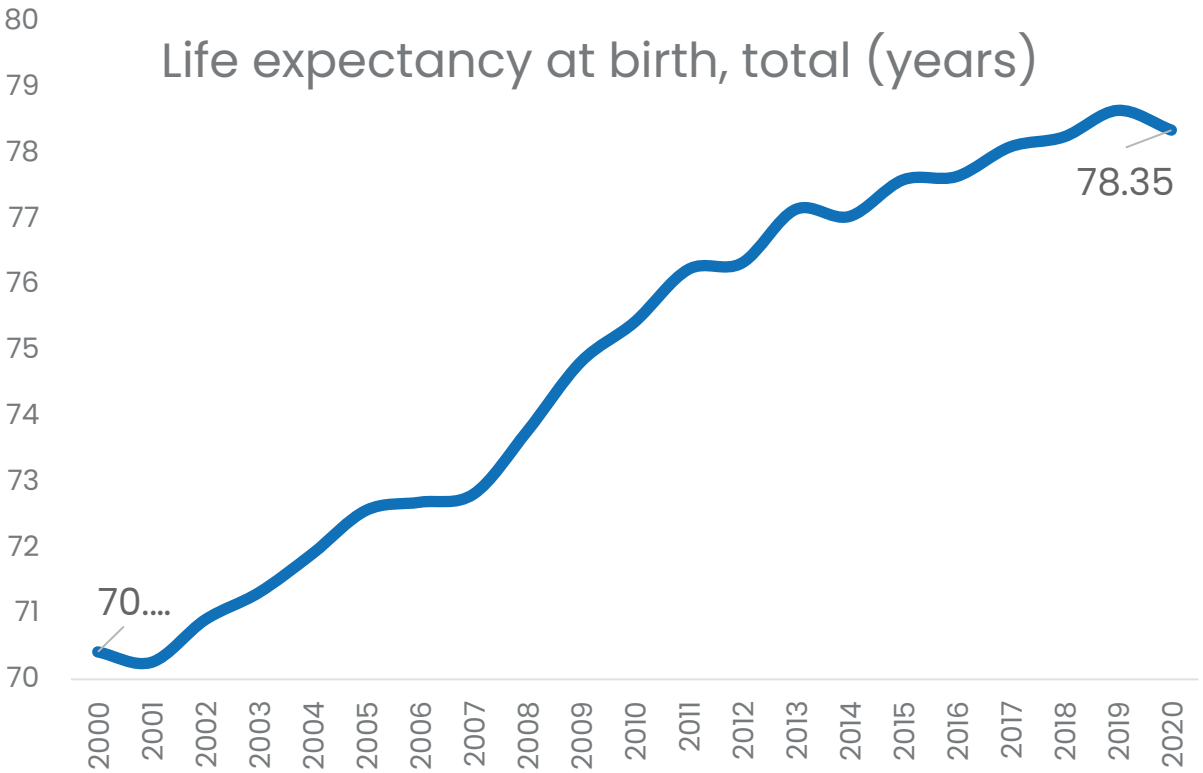
Linked Immunisation Action Network

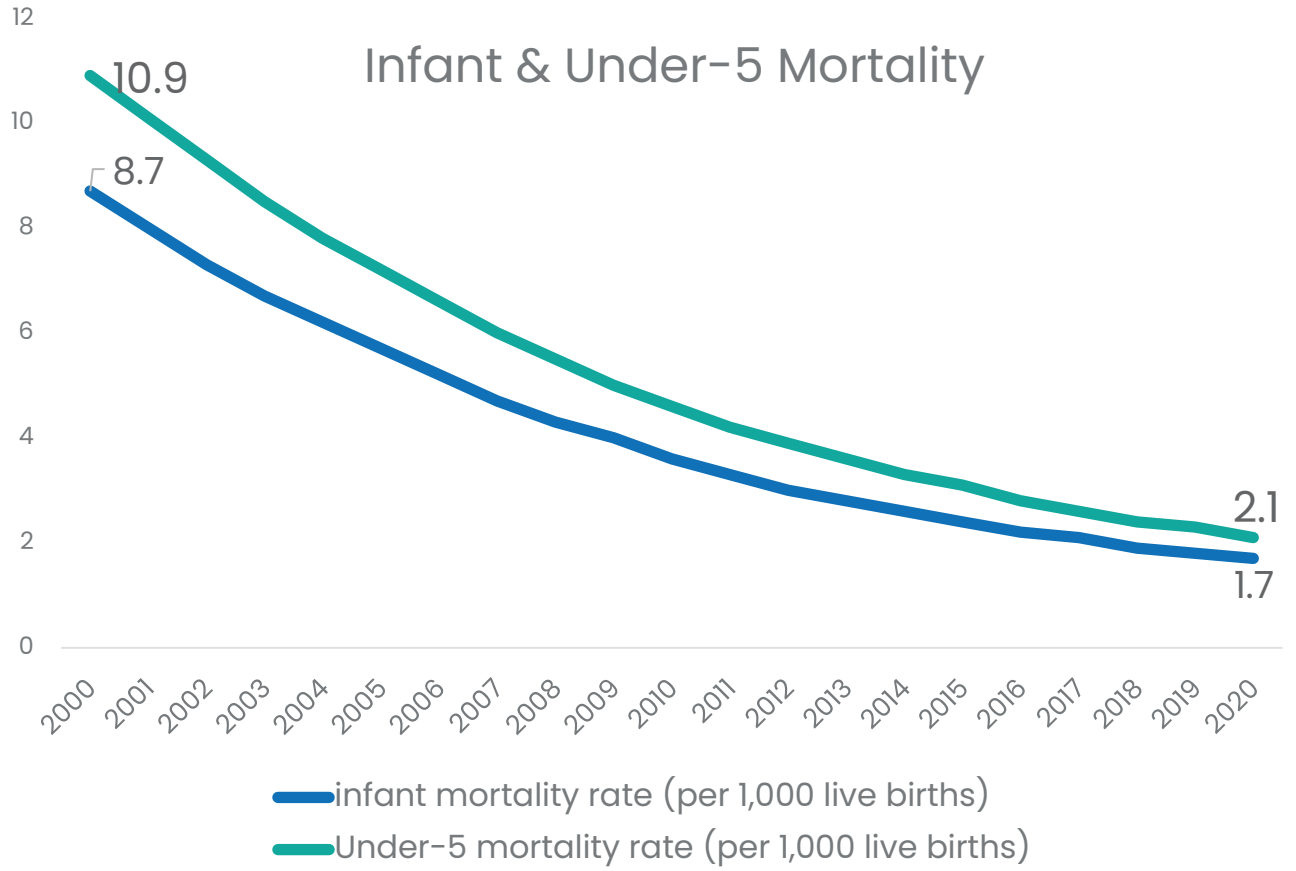
# Facts about Estonia

- Population – 1.312 mln
- Fertility rate, total (births per woman) - 1.6
- Distribution of population (% rural/urban) – 67%
- GDP average annual growth rate – 4.1% (2019)
- EU member since 2004
- Administratively – 15 counties with pop from 9,300 to 58,000.


Linked Immunisation Action Network

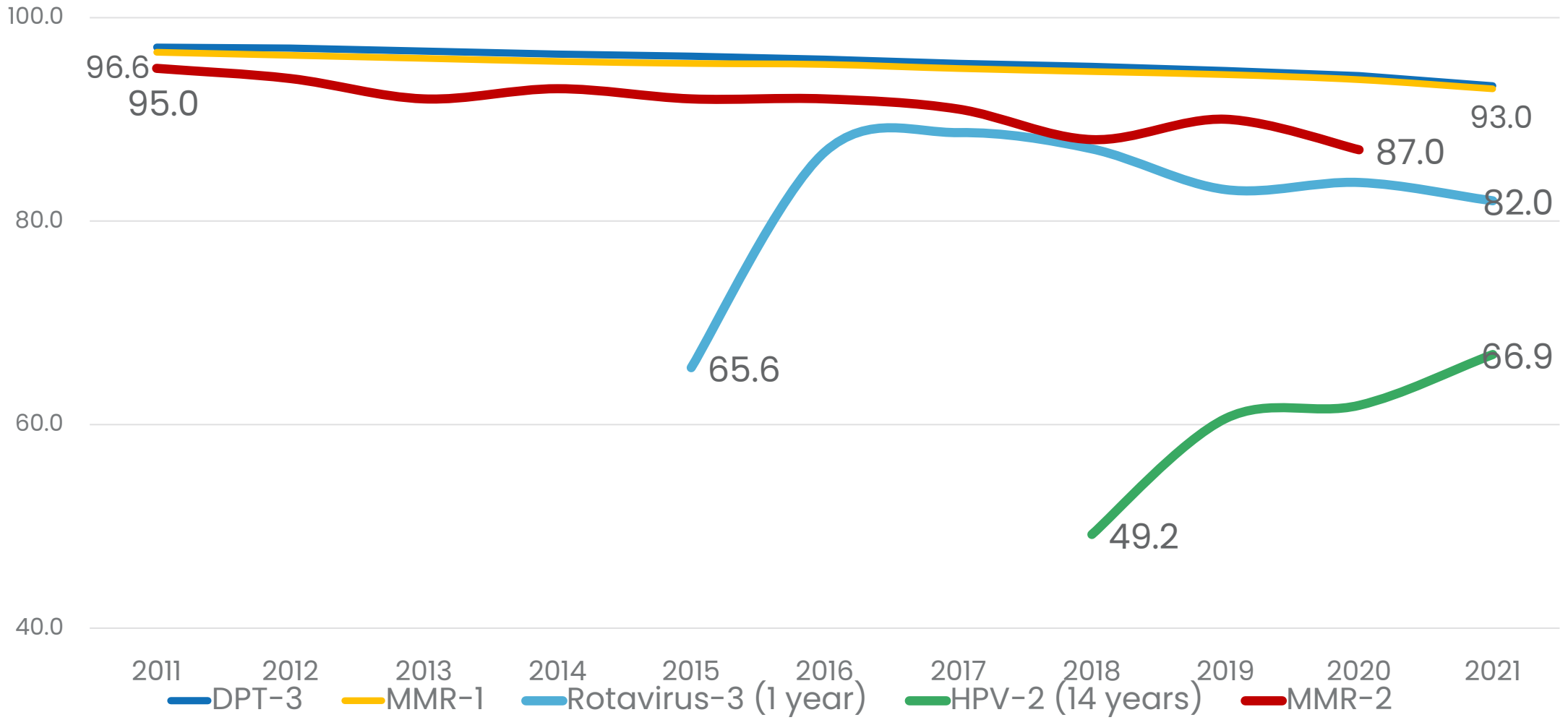
# Health Indicators



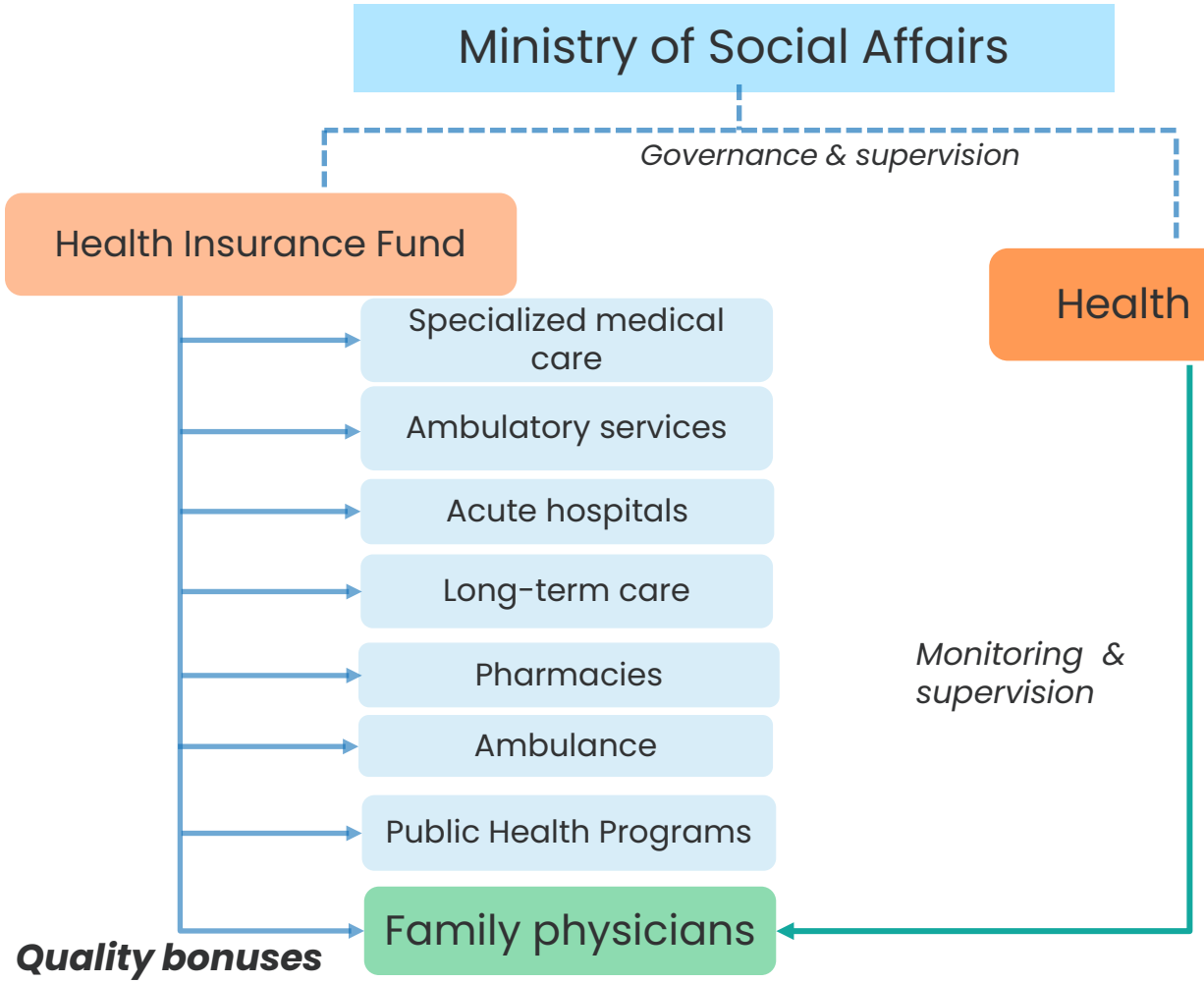

Linked Immunisation Action Network

# Immunisation Indicators




Linked Immunisation Action Network

# Organizational structure of the Estonian Health care system

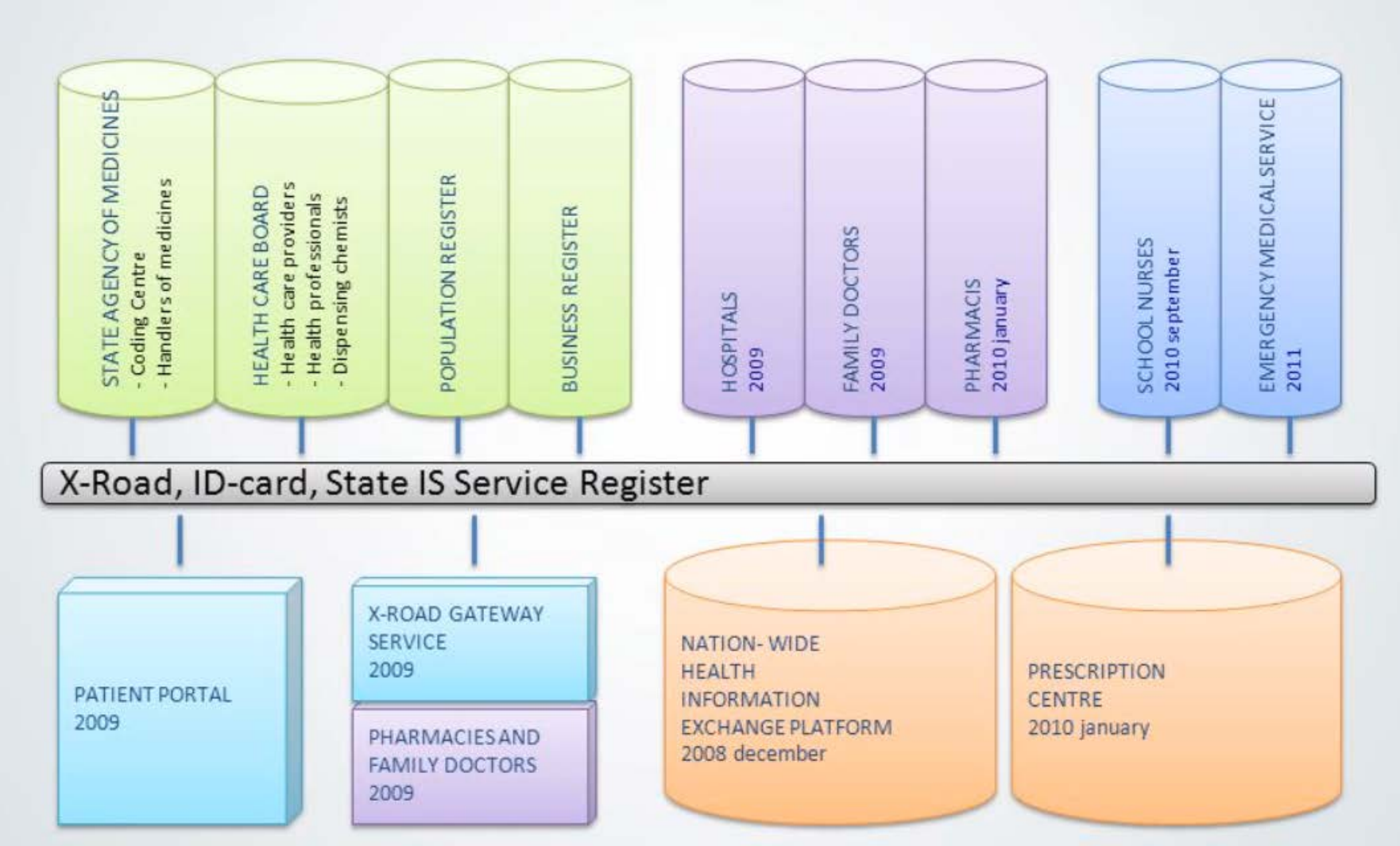



**The Estonian Health Insurance Fund (EHIF)**

- operates the national, **mandatory health insurance scheme** and performs some quality assurance activities.
- The national health insurance scheme covers approximately **95% of the population** with a broad range of curative and preventive services as well as some monetary benefits.

Linked Immunisation Action Network

# Estonia E-Health




- ID-card-based infrastructure allows secure access and digital signatures for all citizens.
- The backbone is the X-Road
- Video about X-Road:

[X-Road introduction (longer version) - YouTube]

# Estonia Primary care

- Family doctors are private owners
- Each family doctor has a practice list (coverage population)
- There are 800 GP`s with lists
- Patients have right to change family doctor at any time
- All newborns are automaticly registered on the same list where the mother is enrolled at the time of delivery

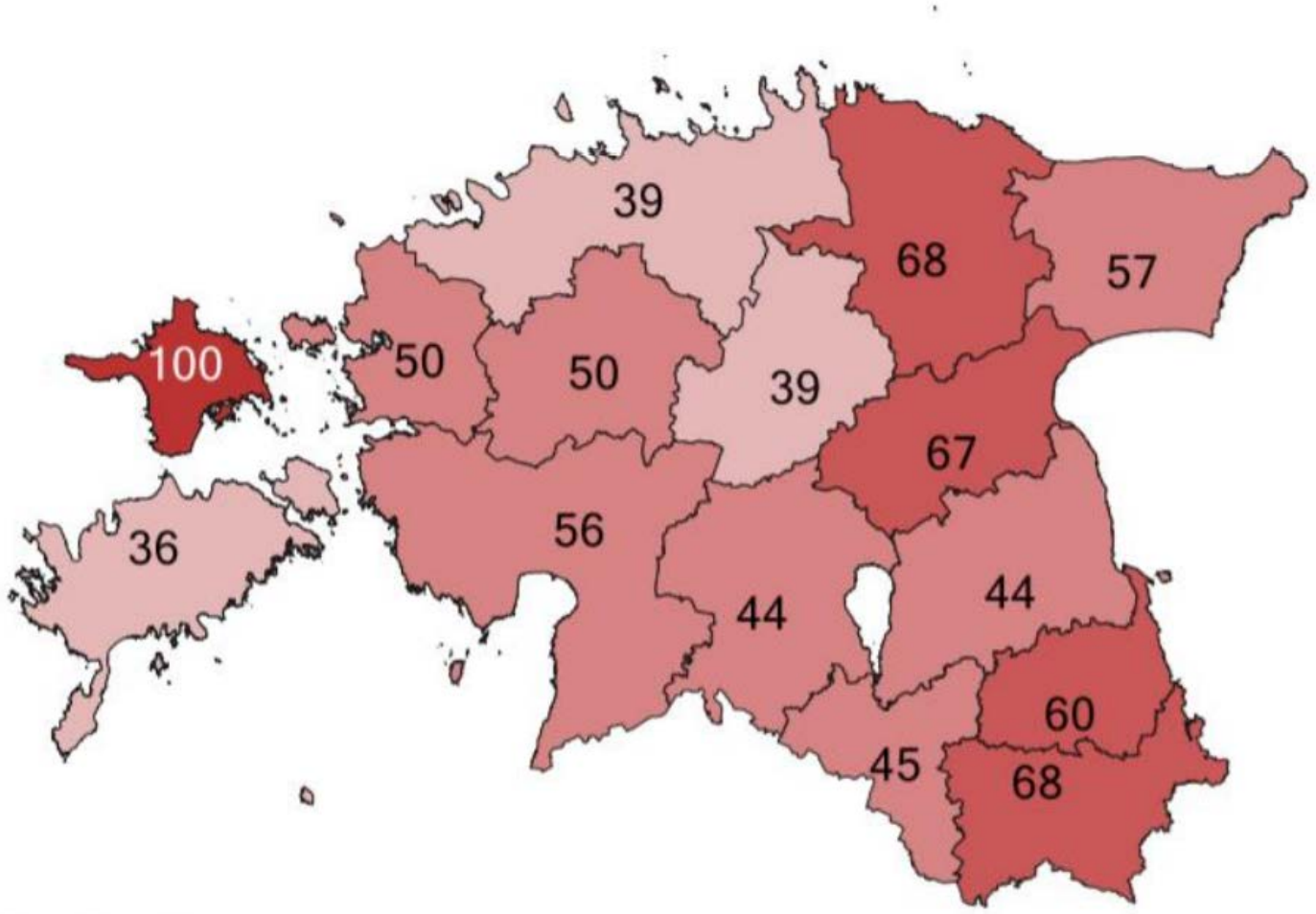
| List size | Number of lists |
|---|---|
| ≤ 1200 | 78 |
| 1201-2000 | 569 |
| 2001-2400 | 126 |
| Over 2400 | 13 |

Linked Immunisation Action Network

# Challenges of the system

- Aging Family Doctors
- Deficit of nurses

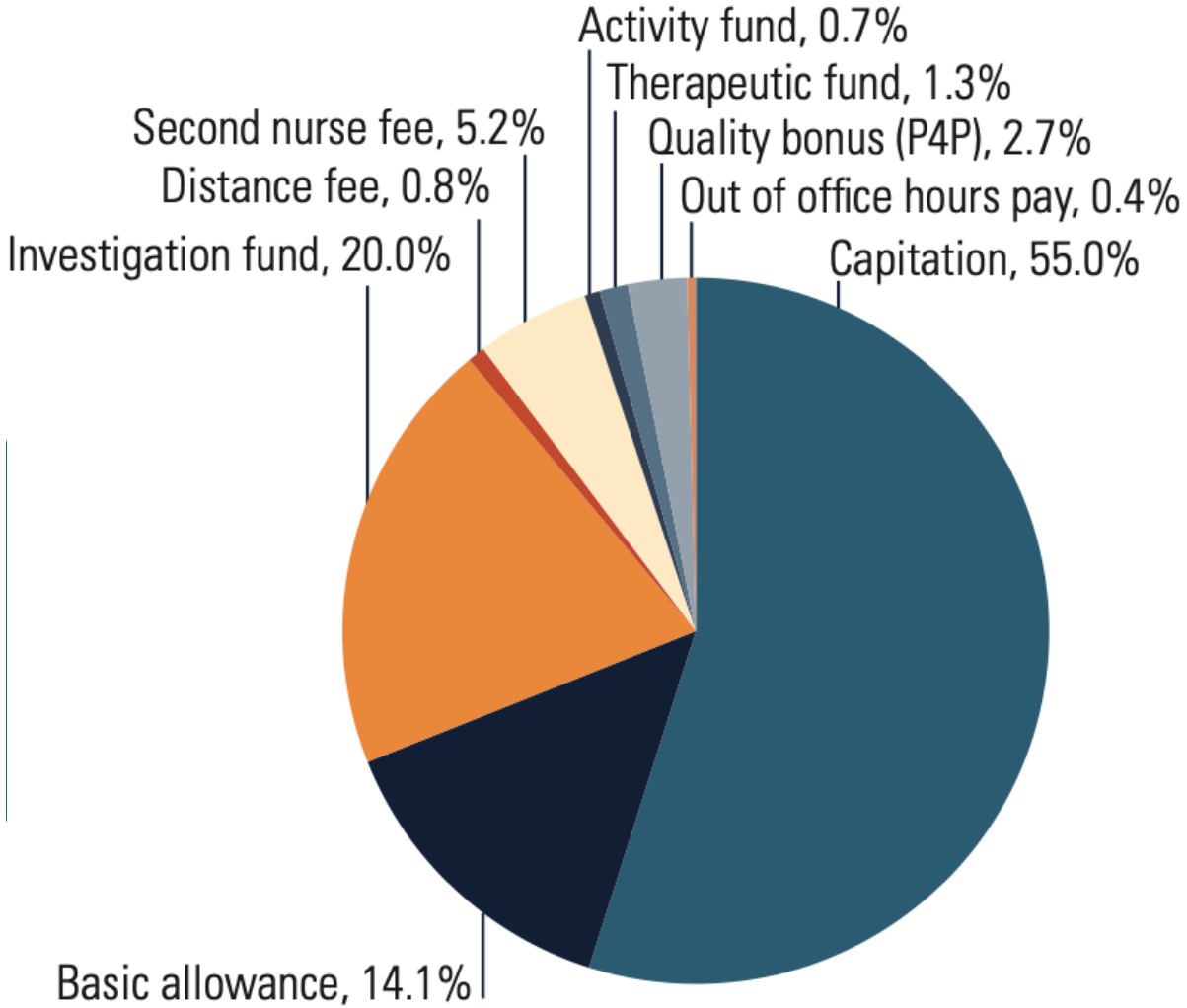
60 years and older GP`s in counties, %, 2020




Linked Immunisation Action Network

# Primary care financing models

- Capitation (age adjusted)
- Basic allowance (monthly fixed payment)
- FFS based additional diagnostics fund to cover the agreed list of sevices
- Additional payment for second nurse
- Additional payments for FPs in remote areas and to cover cost of out of office hours
- **Performance payment** (Quality Bonus System) and **Quality management system implementation**




Linked Immunisation Action Network

# Quality Bonus Scheme

Linked Immunisation Action Network

# Quality Bonus Scheme (QBS)

- Implemented since 2006
- development of the system was lead by family doctors (clinical side) and EHIF (technical and implementation)
- **participation was voluntary until 2015**
- Performance pay to family physicians (FP) is to acknowledge
  - effective work in preventing illnesses
  - monitoring chronically ill patients
  - additional professional competence

Linked Immunisation Action Network

# QBS Objectives

- to encourage family physicians to actively engage in the prevention of illnesses to avoid subsequent high costs in relation to the treatment of those illnesses or people's premature incapacitation for work, invalidity or death
- prevention of the spread of infectious diseases in case of which it is important to achieve and maintain a certain level of vaccination
- in case of chronic illnesses, assure more effective monitoring of the illnesses to prevent the development of complications
- incentivize family physicians to provide insured persons with a more broad-based health service.

# QBS Indicators

**1st part: Prevention**

- **Children's' vaccination (Full vaccination by age of 3 years**
- Examinations of children aged 1-, 3-, 12-months, 2-y and 3 y.
- Pre-school examination (children aged 6–8 years)
- School examination (11y-12y)

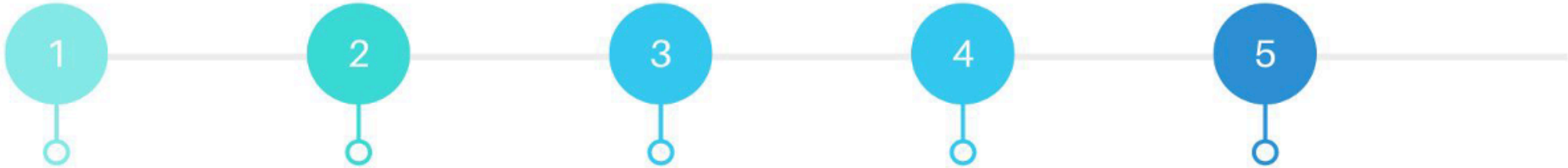
| age | Vaccine |
|---|---|
| 2 months old | RV 1 |
| 3 months old | DTaP-IPV-Hib-HepB 1 + RV 2 |
| 4,5 months old | DTaP-IPV-Hib-HepB 2 + RV 3 |
| 6 months old | DTaP-IPV-Hib-HepB 3 |
| 1 year old | MMR 1 |
| 2 year old | DTaP-IPV-Hib-HepB 4 |

**2nd part: Monitoring chronically ill patients**

- Target groups are patients with
  - Diabetes
  - Hypertension
  - MI
  - Atrial fibrillation (following up indicator)
- Activities monitored (depending on target group)
  - Glycosylated haemoglobin, Creatinine values, Cholesterol values, Counselling, ECG
- Medication prescribed (depending on the target group
- HIV testing rate in patients with HIV indicator diseases (since 2019, following-up indicator)
- GP to the e-consultation referral rate from referrals (following-up indicator)

# Data exchange in QBS

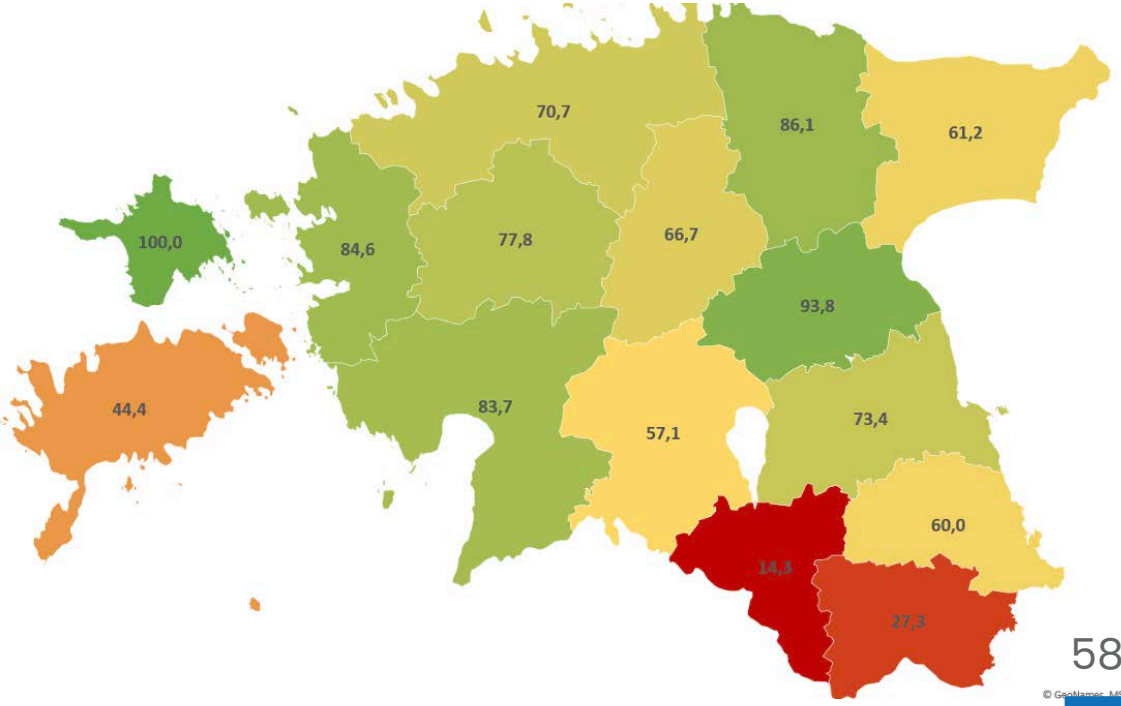
## Coordination is ensured through data sharing

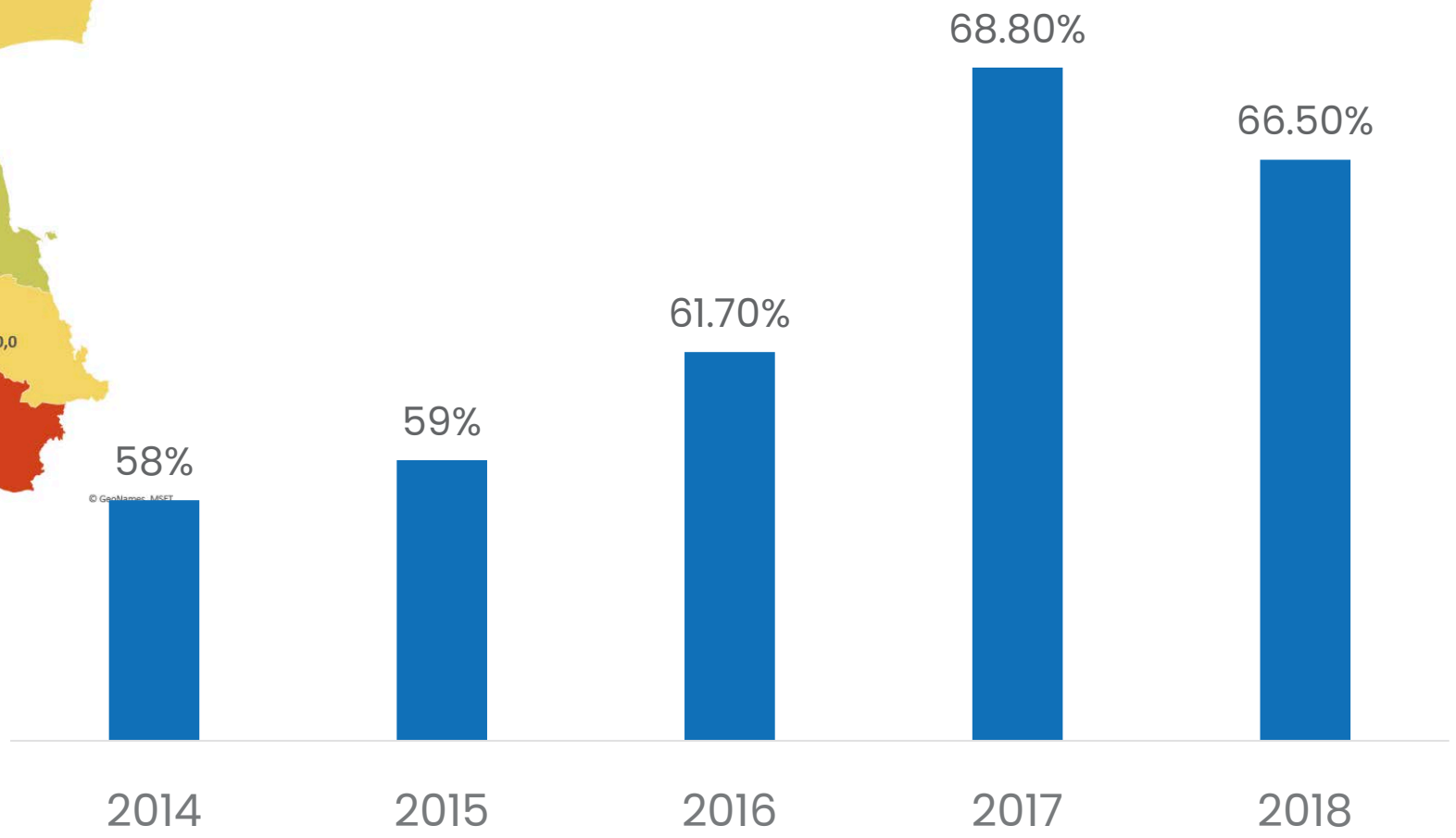



| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Regular data exchange about persons in GP`list | Regular data exchange about new borns | Regular data exchange about target groups (once a day) | Regular data exchange about provided sevices (once a day) | Final results will be published in June on a homepage |

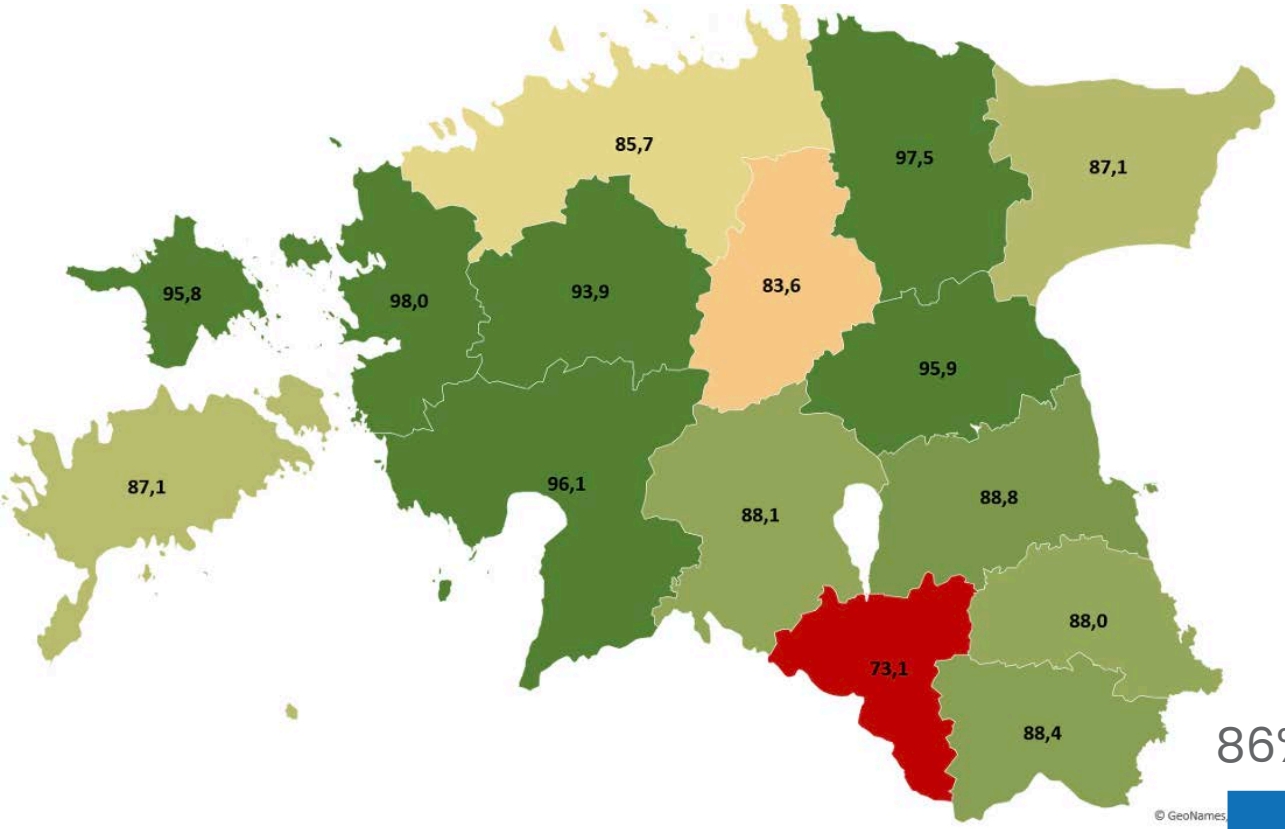
Action Network

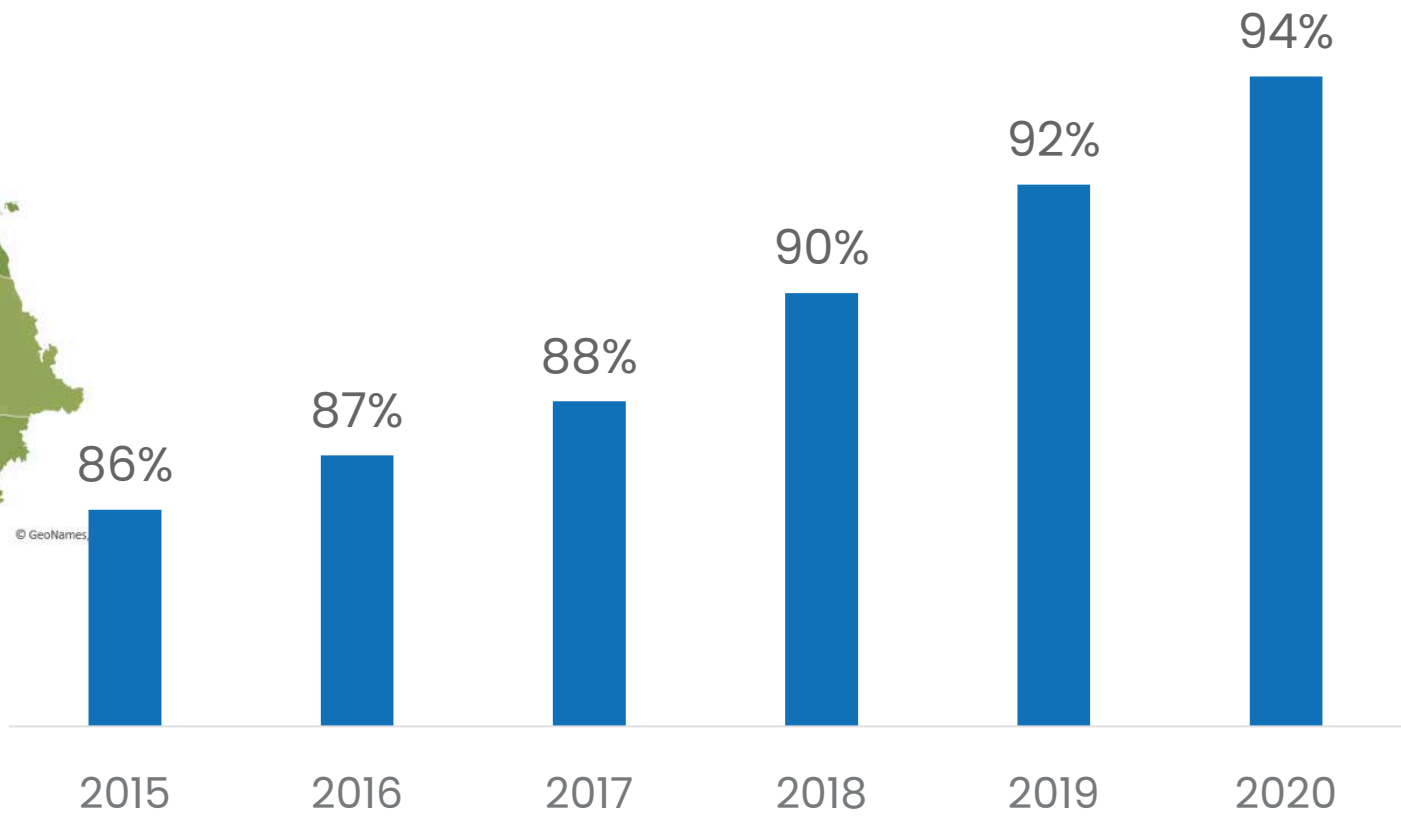
# % of GP`s who achieved quality bonus payment



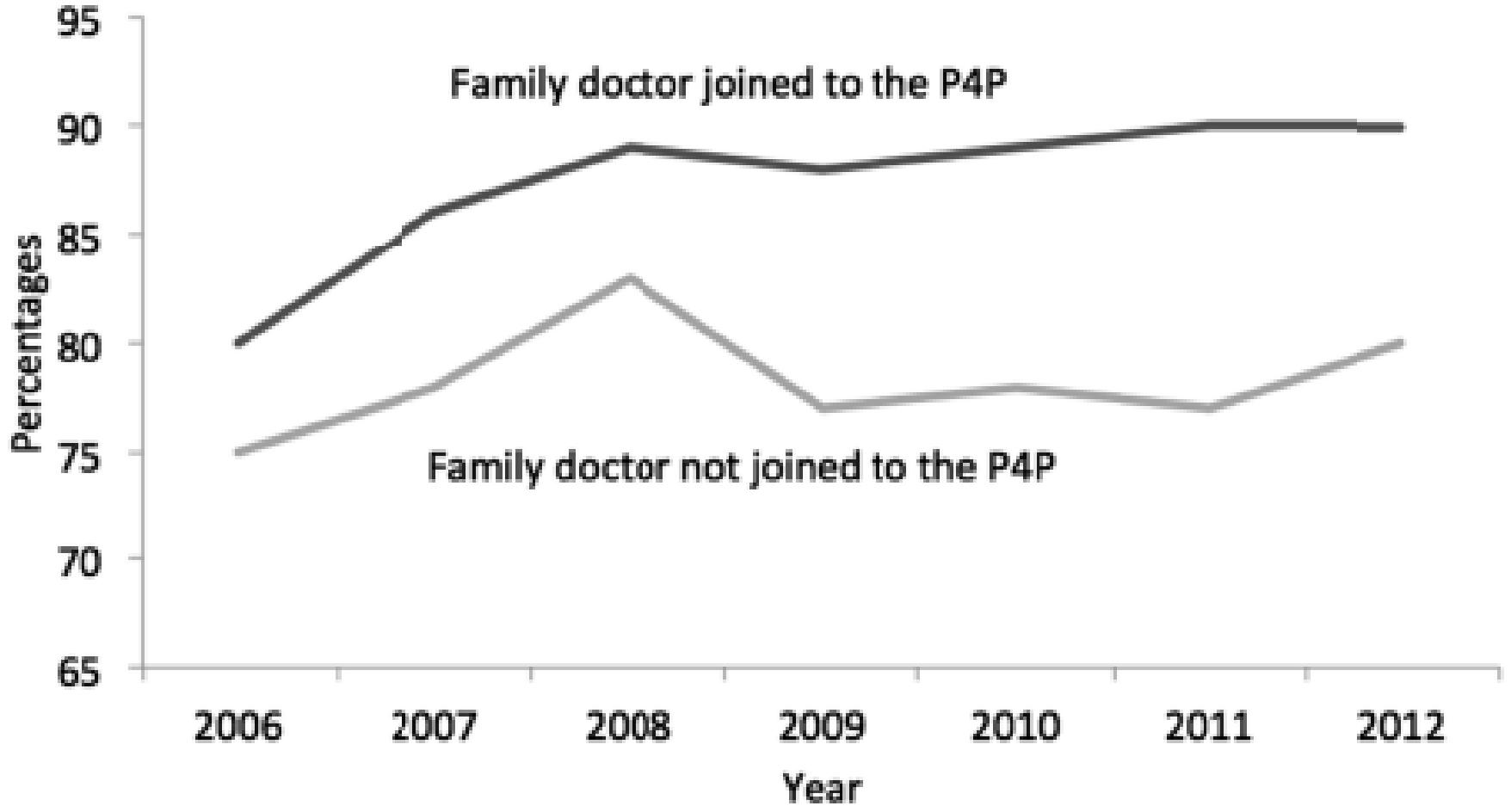



# Vaccination indicator coverage in QBS, %



# Vaccinaiton coverage between FDs participating and not participating in the QBS (2006-2012)




coverage (%) of all vaccinations (pertussis, diphtheria, tetanus, poliomyelitis, hepatitis B, Haemophilus influenza, measles, mumps, rubella)

Linked Immunisation Action Network

# Fairness in QBS – "need-adjusted" approach to coverage

In the previous QBS scheme:

- concern that the the scheme did not equally rewarded GP efforts - significantly easier for GPs serving a relatively young, healthy population to receive QBS rewards than their colleagues serving populations with a higher proportion of complex cases.
- providers who were doing the most work (number of patients treated) were not receiving recognition for it in their QBS scores.
- the points were awarded on an all-or-nothing basis for each indicator: either the threshold was achieved or it was not.

# Fairness in new QBS

- Each service provider is required at an average level – until he has opportunity prove the opposite- positively or negatively;
- If the service provider has few patients in the target group, he is not penalized or rewarded;
- If the service provider has not patients in the target group- he will achieve average coverage

Linked Immunisation Action Network

# The Estonian Health Insurance Fund role in quality assurance

- Monitoring of health insurance benefits;
- Clinical audits;
- Methods for measuring activities and outcomes (clinical indicators);

# Non-Financial incentives

Linked Immunisation Action Network

# Non-financial incentives

- In Estonia we launched mentoring program for GP`s in 2020
- We publish the QBS results on the homepage
- We organize trainings for GP`s (about managemet, QBS etc).

# Mentoring program for GP`s

- 15 mentees and 15 mentors
- Mentor could be someone from other field (for example managers etc)
- Main problems were not based on medical issues but mainly general management
- Mentors training
- Regular support to mentors (coaching, supervision);
- One to one meetings between mentee and mentor (online meetings and on site meetings);
- Regular dback to mentee and mentor.

# Additional slides

Linked Immunisation Action Network

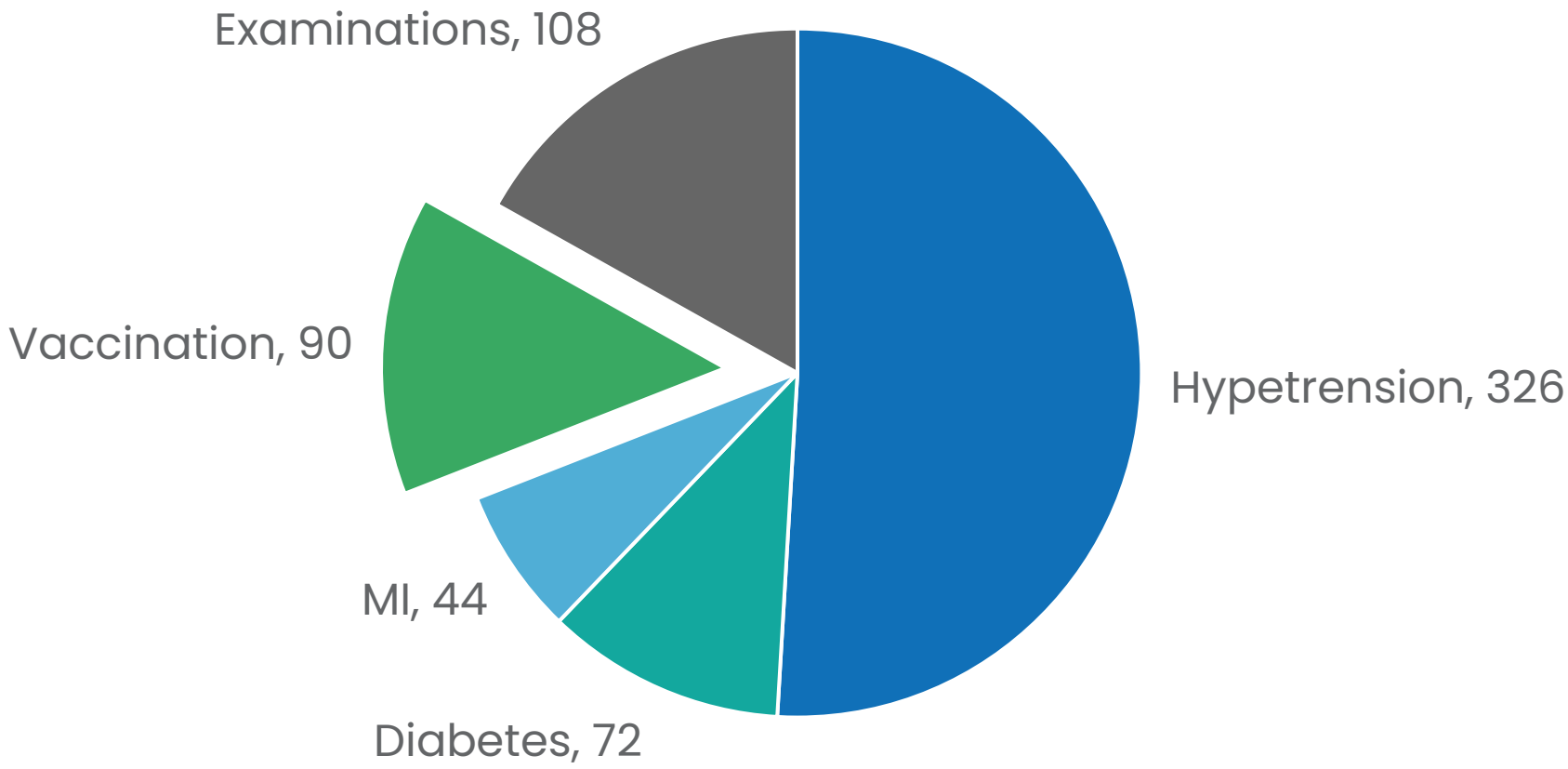
# Immunisation schedule

| AGE | VACCINE | NOTES |
|---|---|---|
| **12 hours** | Viral hepatitis B | Only newborns in the risk group, born to mothers who are HBsAg-positive or have not been tested for viral hepatitis B during the pregnancy. |
| **1–5 days** | Tuberculosis | |
| **2 months** | Rotavirus 1 | |
| **3 months** | Diphteria, tetanus, pertussis, poliomyelitis and Haemophilus influenzae type b and B-viral hepatitis B (hexavalent vaccine) and Rotavirus 2 | Only in the case of 5-valent rotavirus infection vaccine. |
| **4,5 months** | Diphtheria 2, tetanus 2, pertussis 2, poliomyelitis 2 and Haemophilus influenzae type b 2 and B-viral hepatitis 2 (hexavalent vaccine) and Rotavirus 3 | |

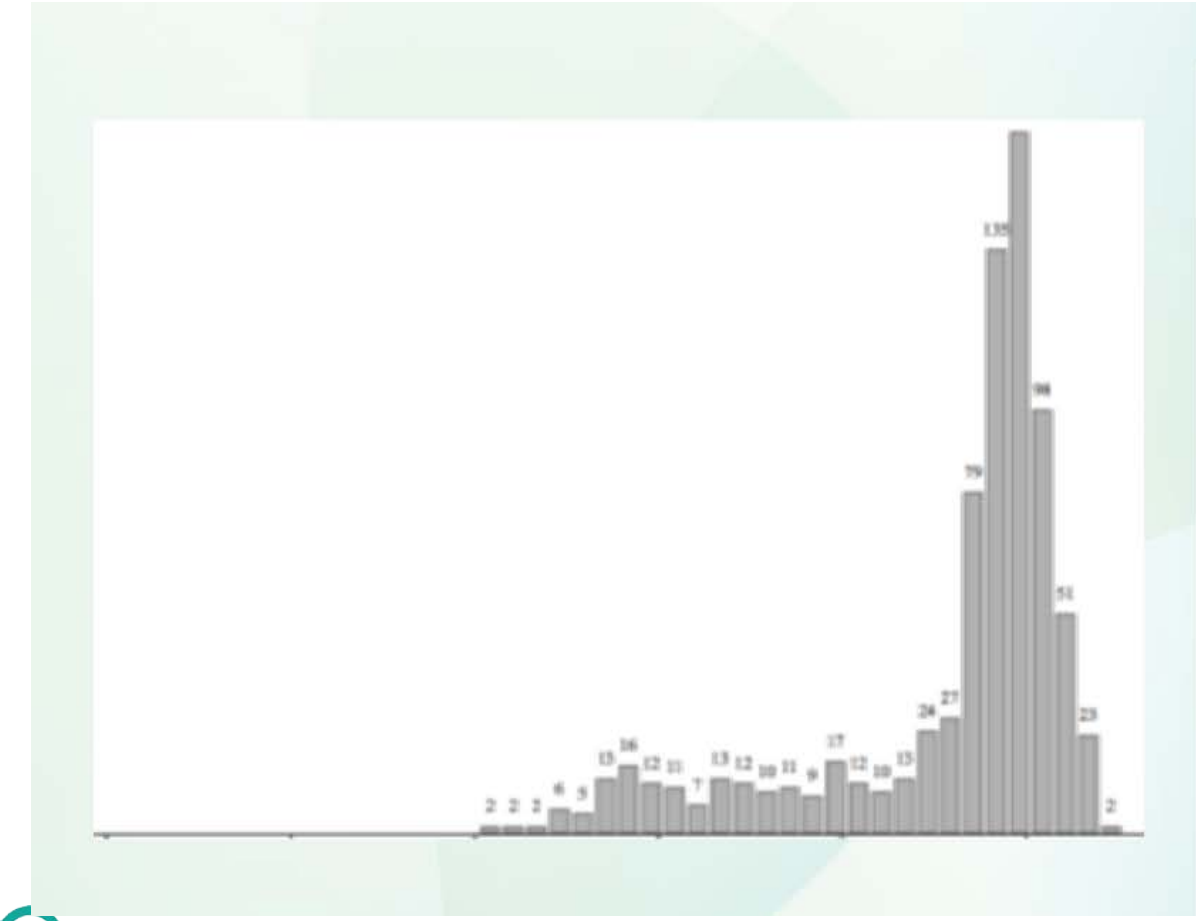
# Immunisation schedule

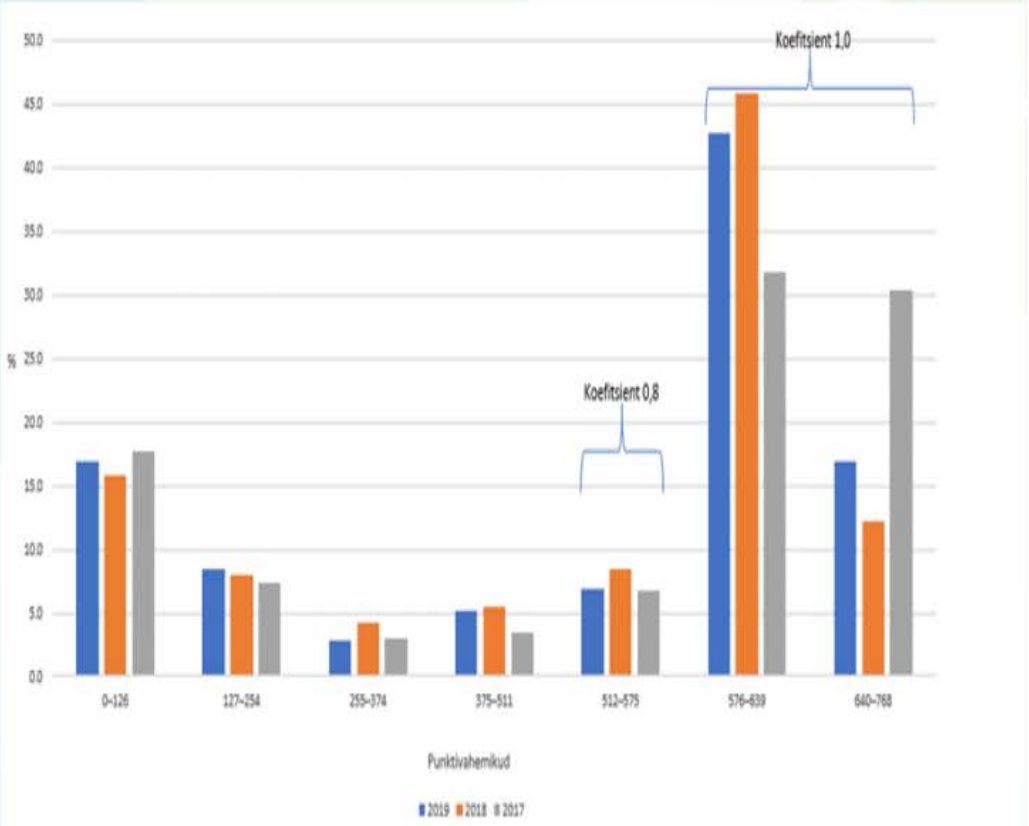
| | | |
|---|---|---|
| **6 months** | Diphtheria 3, tatanus 3, pertussis 3, poliomyelitis 3 and Haemophilus influenzae type b 3 and B-viral hepatitis 3 (hexavalent vaccine) | |
| **1 year** | Measles, mumps and rubella | |
| **1,5-2 years** | Diphtheria 4, tetanus 4, pertussis 4, poliomyelitis 4 and Haemophilus influenzae type b 4 and B-viral hepatitis 4 (hexavalent vaccine) | |
| **6–7 years** | Diphtheria 5, tetanus 5, pertussis 5, polio 5 | |
| **12 years** | Human Papillomavirus 1 and 2 | Only girls. Minimum interval between the first and second dose is at least 6 months, but not more than 13 months. |
| **13 years** | Measles 2, mumps 2 and rubella 2 | |
| **15–17 years** | Diphtheria 6, tetanus 6, pertussis 6, polio 6 | |
| **Adults** (every 10 years) | Diphtheria and tetanus | |

# Maximum points in domain I and II



# Distribution of points in QBS based on the new system and old system






Linked Immunisation Action Network