

# Pharmacies' new roles in pharmaceutical care: bridging research and practice – the Danish case

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Association of Danish Pharmacies

apotek

# Agenda

- My personal PCNE history
- From research to practice
- Pharmacies in Denmark
- Four cases: from research to practice
- Implementation of services
- The Future



## My personal PCNE history

- Projects:

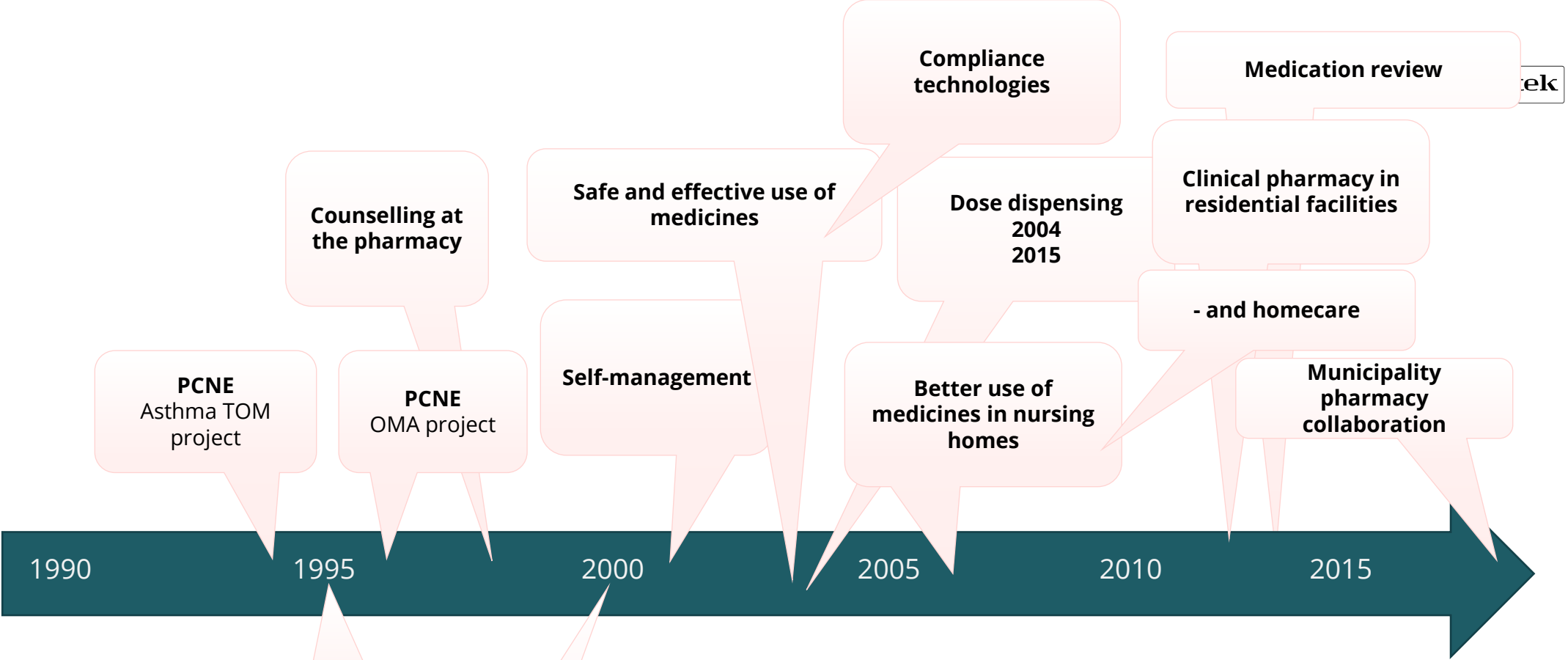
- TOM Asthma (1994)
- OMA project (1996)

- Board member 2008-2010

- Organising committee for Fifth International Working Conference on Pharmaceutical Care, Göteborg 21. – 24. February 2007

## Workshop leader

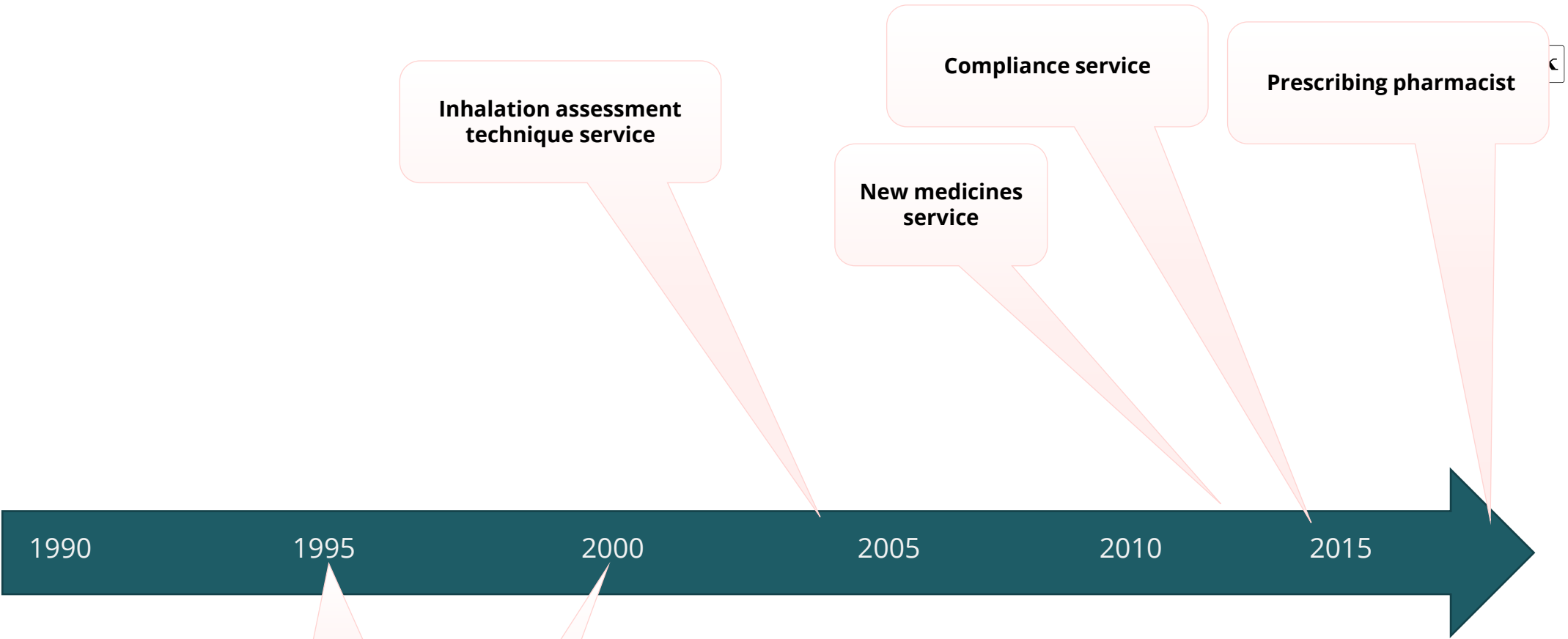
- 2001: Assessing changes in drug use (Bert Leufkens, the Netherlands & Birthe Søndergaard, Denmark)
- 2003: Economic aspects of pharmaceutical care provision (Grianne Crealy, N. Ireland & Birthe Søndergaard, Denmark)
- 2005: Exploring study design for phase 4 (Dennis Helling, USA & Birthe Søndergaard, Denmark)



**PCNE-funded**  
Pharmaceutical Care  
Network Europe (research)

**PCNE working conferences**  
Every second year

- Topics**
- Patient satisfaction/health
  - Health economics
  - Designing interventions
  - Barriers and facilitators
  - Individualised interventions
  - Implementation of new practice
  - Change management
  - Indicators to measure progress
  - Theory and practice
  - Building capacity for change



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## Pharmaceutical Care services

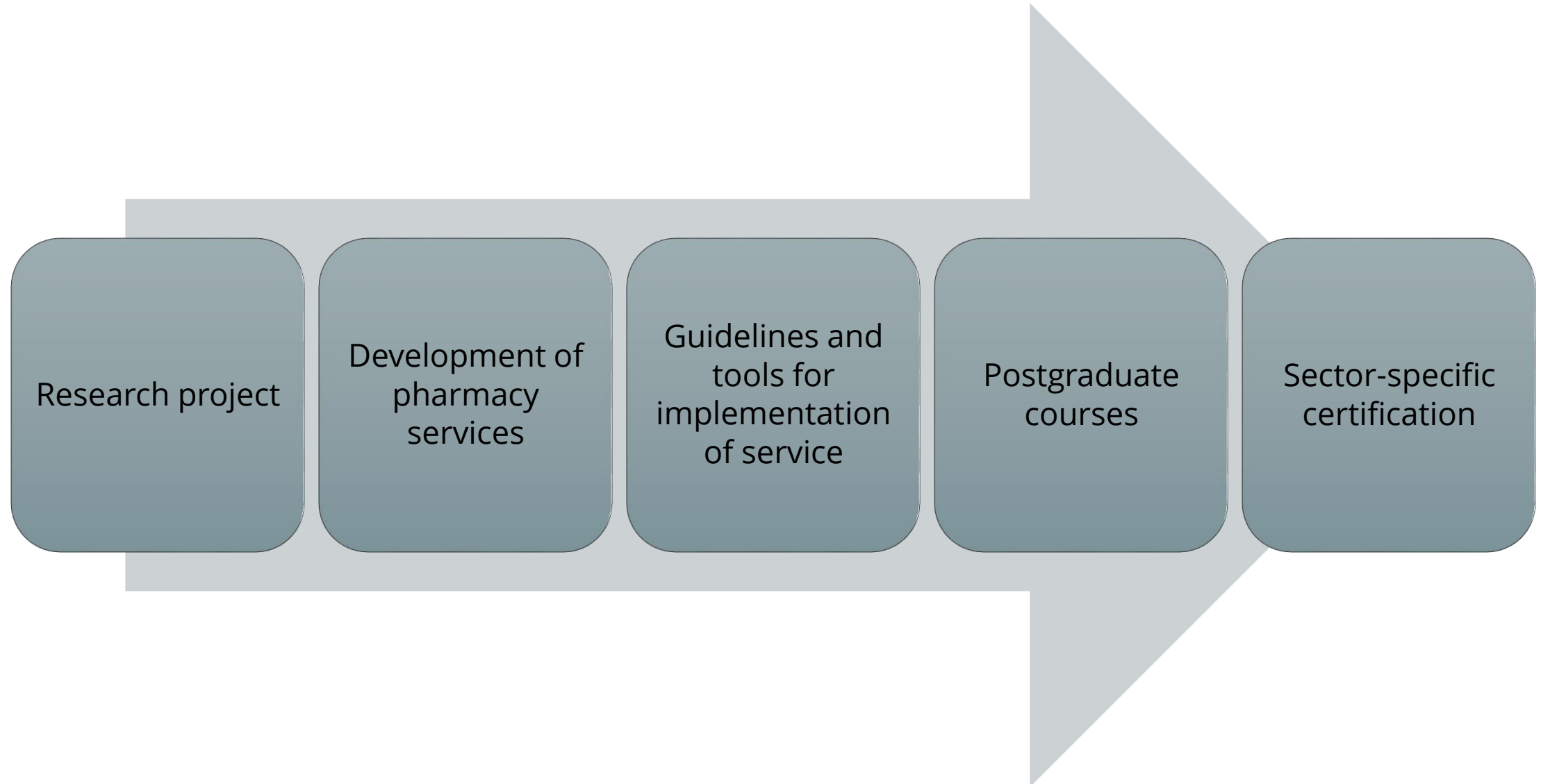
### Responsible use of medicine:

- Counselling at the counter
- New medicines service (SEM projects)
- Compliance service (SEM projects)
- Inhalation techniques assessment service (TOM asthma)
- Pharmacist re-prescribing service
- Dose dispensed medicine (several projects)
- Medication reviews and teaching safe medicines handling (several projects)
- Online counselling 24/7

### Health promotion/disease prevention services:

- Smoking cessation (different models)
- Vaccinations: Flu, Pneumococcus, COVID-19

# From research to pharmacy practice in Denmark



# How to develop a community pharmacy service



## Year 1

Identifying a need for a service

Patients?  
Medicines?  
Population?



## Year 2

Designing and piloting a service



## Year 3-4

Obtain funding for testing and evaluating a service



## Year 4-7

Test and evaluation

E-conomic  
C-linical  
H-umanistic  
O-utcomes



## Year 8-9

Finalising the service for practice

Manuals and guidelines



## Year ?

Negotiating for reimbursement



## Year ?

Reimbursement obtained

Implementation of new practice in pharmacy



## Facts about Denmark

- 5.9 million inhabitants
- 182 pharmacy owners
- 523 community pharmacies
- Pharmacists (approx. 900) and Pharmacy technicians (approx. 2.500)
- 1060 prescribing pharmacists

# Inhalation technique assessment service

## Background for service

- Service developed and tested in Asthma TOM project (1994-1996) and pilot project (2001 + 2004)
- Report from 2002 concludes that 'all patients getting an inhaler need training'
- Approximately 50 percent doesn't use their inhalation device correct
- An agreement with the Danish Ministry of Health in 2005:
  - All relevant patients must be offered the service at Danish pharmacies



# Inhalation technique assessment service (ITAS)

- Prevent, improve and solve difficulties with inhalation technique among patients
- Asthma and COPD
- New and experienced users of inhaler devices
- Kids and grownups
- Performed by educated and certified pharmacy staff



The pharmacies have performed 326,000 ITAS's since January 2017 (with the highest number ITAS's in 2019)

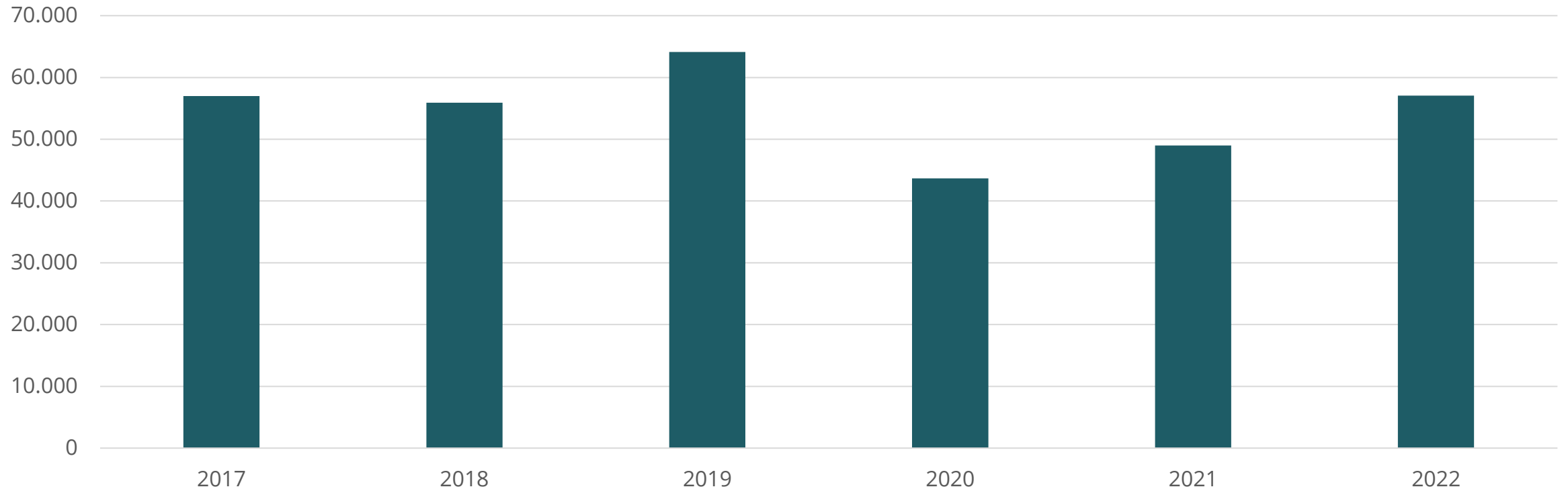
Financed by the state

The pharmacy receive 8.5 Euro per service (ex. VAT)

3.8 million kr. is allocated to the pharmacy service per year, which corresponds to app. 60,000 ITAS's per year.



## ITAS's per year since 2017

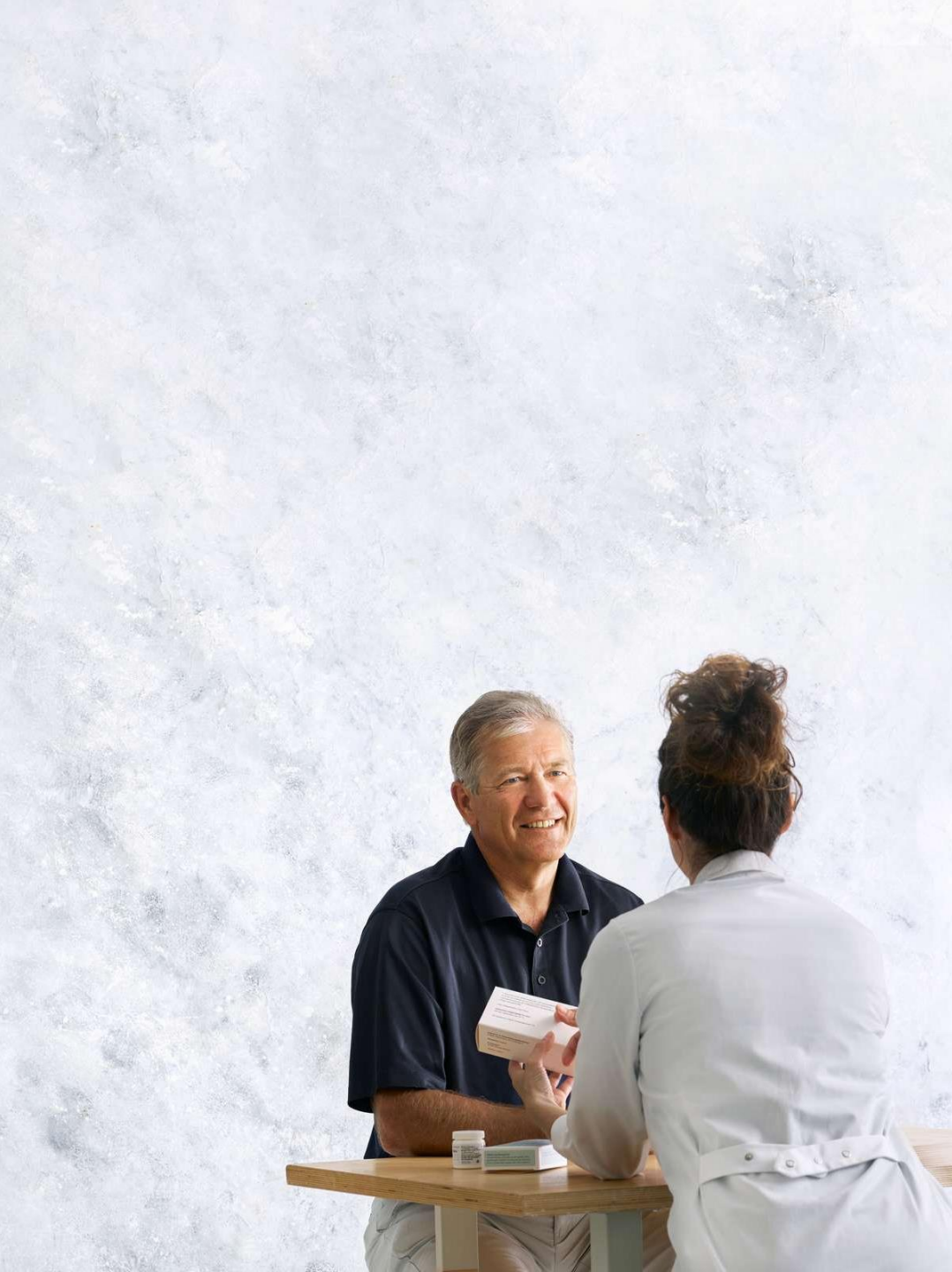


# **New Medicine Service and Compliance Service**

# Facts about Legislation

- New pharmacy law in 2015
- New services (New medicine service, compliance service)
- Report on pharmacy staff's possibility to dispense medicine without valid prescription
- New legislation (1 July 2019)
- Doctors, dentists, vets and prescribing pharmacists can prescribe medicine (Prescribing Pharmacist)





- Developed and tested in Safe and Effective Medicine Use projects (2004-2007)
- All pharmacies are obliged to offer the two services
- Short, private consultations between a pharmacist and a patient
  - 10 minutes counselling in the pharmacy
  - 10 minutes follow-up after 2-4 weeks
- Financed by the state (Danish Medicines Agency)
- 21 Euro per service (ex VAT)

## New Medicine Service

Since January 2016

Service for patients, who within the last six months have been diagnosed with a chronic disease and prescribed new medicine against the newly diagnosed chronic disease

More than 44,000 services in 2022





## Compliance Service

Since April 2018

Service for patients, who have been taking medicine for a chronic disease for more than 12 months and experiences problems with compliance

More than 16,000 services in 2022

# Who gets a New Medicine or Compliance Service?

Patients with:

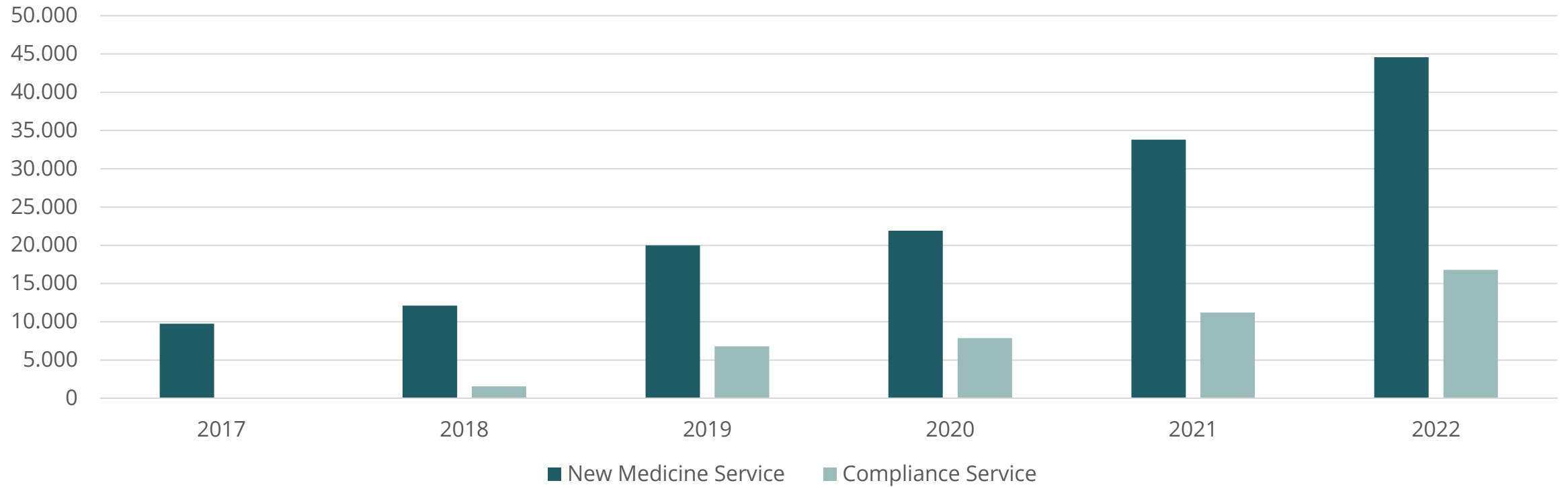
- High blood pressure
- High cholesterol
- Depression
- Diabetes
- Asthma

Patients in treatment :

- With blood thinners
- For unregular heartbeat



# Number of New Medicine Services and Compliance Services



# Pharmacist Prescribing

# Prescribing Pharmacist

- **New roles for community pharmacists in the primary health care system**
  - To improve the patient-oriented service
  - To make better use of the skills and knowledge of the community pharmacists
  - Based on evidence and practice from other countries



A photograph of a sign for 'apotek' (pharmacy) mounted on a brick building. The sign is white with the word 'apotek' in large, dark, 3D block letters. The background shows a brick wall and a window.

## Prescribing authorization

- A 'task-specific' authorization
  - to re-prescribe certain medicine
  - to initiate automated dose dispensed medicine with subsidy
- Must be offered during all opening hours in all pharmacies
- Only pharmacists employed in community pharmacies
- Since July 2019/June 2020

## Education to become a Prescribing pharmacist



- Study material on laws and rules
- Mandatory two-day training course
  - Plenary lessons
  - Case training
- Exam: Online multiple-choice test

# Duties of the Prescribing Pharmacist

- Skills within basic patient treatment
- Knowledge on informed consent, patients' right of self-determination, confidentiality
- Acquisition and sharing of health data
- Record keeping
- Reporting of Adverse Drug Events including Adverse Drug Reactions



**Re-prescribing:** A once-only prescription for the smallest package of a patient's medicine – if the patient has no valid prescription

### **Inclusion criteria**

- Patients without valid prescription, having a therapeutic need
- Patients in stable treatment with medicine for at least 6 months – same dose and same strength
- Patients who are not pregnant or breastfeeding
- Patients over 15 years in age

### **The prescribing pharmacist**

- Prescribe the smallest package – only once
- Prescribe medicine at the Danish Patient Safety Authority's list of medicine for pharmacist prescribing
- Write a journal
- Inform the patient's doctor about the prescription

## Background for the developed list of medicine for re-prescribing

- Medicine where the patient:
  - can monitor the disease and effect of treatment
  - has good knowledge of the disease
  - has good knowledge of correct handling of the medicine
- Medicine without potential for misuse
- Medicine where delay of treatment can be life threatening and where re-prescribing in the pharmacy is regarded as a service for the patient and a relief for general practitioners

# Medication List

**Lægemidler der kan genordineres af behandlerfarmaceuter:**

ATC gruppe	Præparat/gruppe	Indikation	Bemærkning
A02BC	Protonpumpehæmmere	GI reflux	Enkelte præparater findes i håndkøb.
A07EC	Aminosalicylsyrer og analoger	Forebyggende behandling af colitis ulcerosa	Kun til patienter i stabil monoterapi behandling
A10AB	Insuliner og analoger, hurtigt virkende	Insulinbehandlet type 1 og type 2 diabetes.	
A10AC	Insuliner og analoger, intermediært virkende		
A10AD	Insuliner, kombinationer		
C01CA24	Adrenalin	Anafylaksi beredskab	Kun injektions-pen til selv-administration
	Antihypertensiva:	Essentiel hypertension	For hele gruppen af antihypertensiva gælder: Kun til patienter i stabil behandling. Kun perorale præparater.
C03AA	1. Thiazider		
C03AB	2. Thiazider og kalium i kombination		
C03DA	3. Aldosteron antagonist		
C07AA	4. Non-selektive $\beta$ -blokerende midler, usammen-satte		
C07AB	5. $\beta$ 1-selektive $\beta$ -blokerende midler		
C07AG	6. $\alpha$ - og $\beta$ -blokerende midler		
		Postmenopausal osteoporose	Kun til patienter i stabil behandling Kun perorale præparater.
R01AD	Glukokortikoider, til nasal administration	Allergi/høsnue	Enkelte præparater findes i håndkøb
R03AC	$\beta$ -2-agonister, til inhalation	Astma, KOL	Kun til patienter i fast stabil behandling som ikke virker akut respiratorisk på-virkede.

Examples of prescription-only medicine allowed to re-prescribe (26 different ATC-groups):

- Birth Control Pills
- Insulin
- Medication for Hypertension
- Statines
- Allergy Medication
- Inhalers to treat Asthma and COPD
- Bisphosphonates for postmenopausal osteoporosis
- Topical steroids
- Adrenalin
- Proton-pump-inhibitors for reflux
- Medication for Colitis Ulcerosa

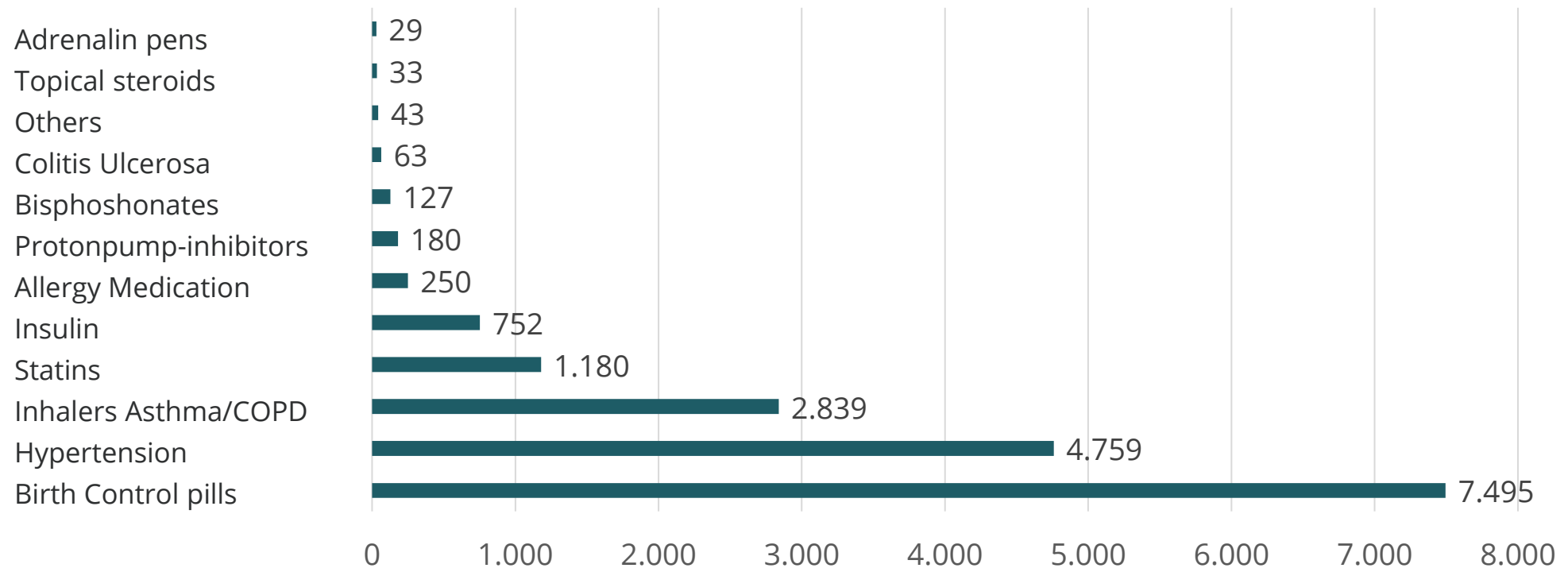
# Responsibilities of the Prescribing Pharmacist

The prescribing pharmacist must have access to electronic systems and health data to be able to:

- evaluate if the treatment is stable
- collect disease history and make relevant clinical examinations
- secure that the patient has not had a similar re-prescription in another pharmacy
- create prescription in patients' electronic medicine card
- react on obvious errors in other prescriptions

# Most Frequent Prescribed Medicine

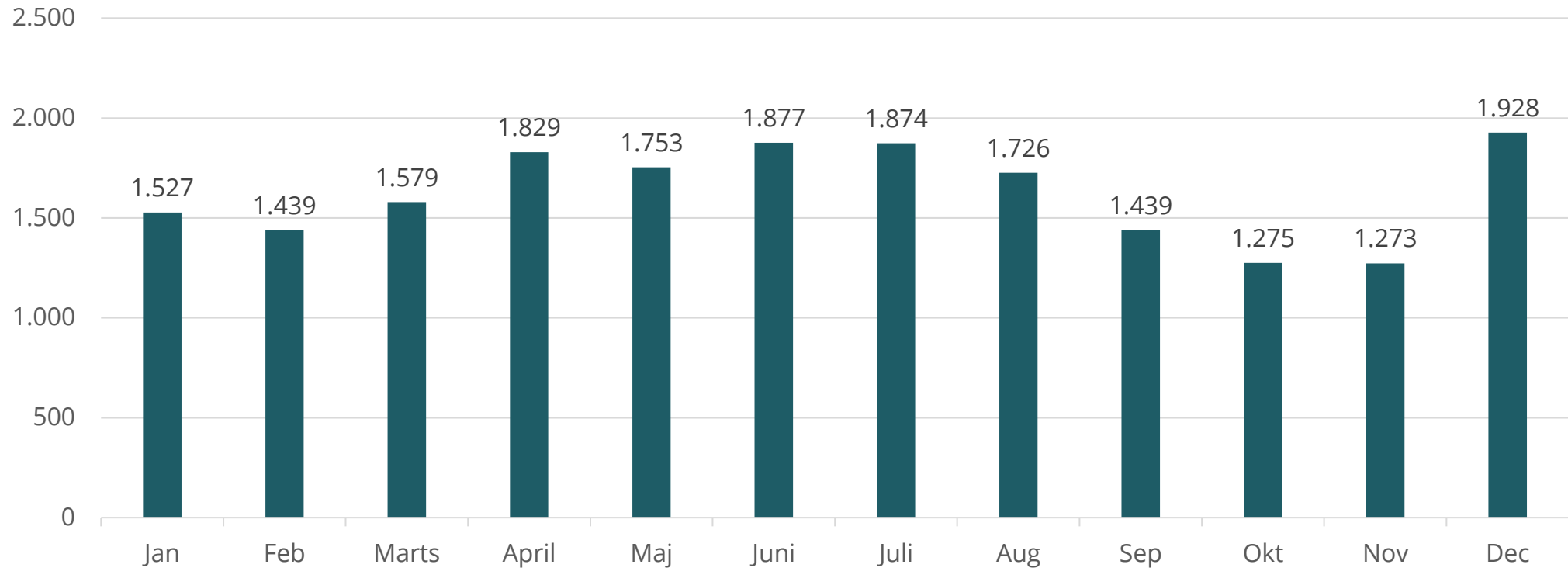
## From 1 July 2019 - 30 June 2020



Source: The Danish Health Data Authority and The Association of Danish Pharmacies

# 19,500 Re-prescriptions

## Number of re-prescriptions per month in 2022



Source: The Association of Danish Pharmacies



## The Fee for Pharmacist Prescription

The pharmacy gets approx. 5.5 Euro per prescription.

The patients' co-payment amounts to half the price.

# Automated dose dispensing

The prescribing pharmacist can prescribe the reimbursement of the dose dispensing packing fee

## Criteria:

- Patients in stable treatment with medicine for at least 6 months - same dose and same strength
- Write a journal
- Inform the patient's doctor about the initiated automated dose dispensing



# Vaccination Service in Denmark

# Facts about vaccination



- Only state-registered doctors are allowed to vaccinate
- Vaccines are prescription-only medicine
- A doctor can delegate to another person qualified to conduct vaccinations

## The Danish Model for Vaccination at the pharmacy

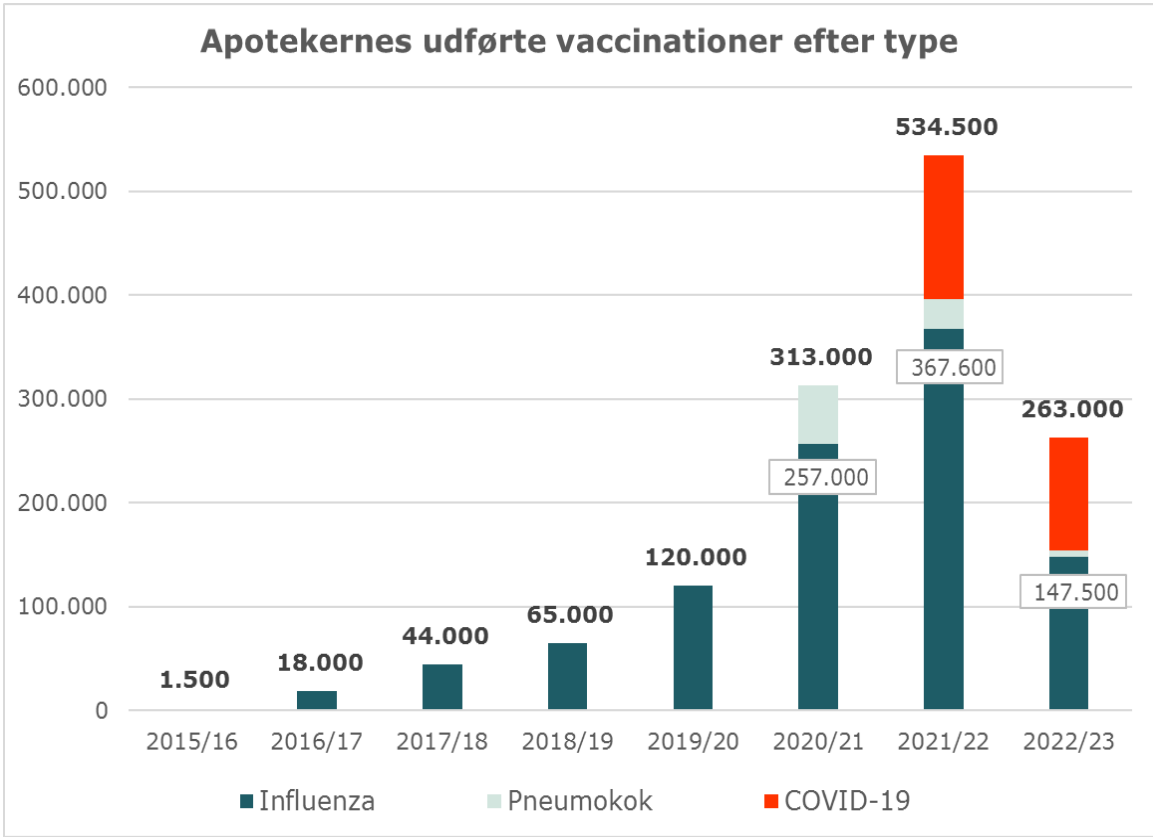
- In 2015 a doctor delegate to pharmacy staff to conduct vaccination for the first time
- Pilot study in five pharmacies (travel vaccines)
- In 2019 a pharmacy owned company started offering vaccination at the pharmacies in cooperation with a doctor

## Vaccines offered by pharmacies

- Travel vaccination
- Flu vaccination
- Pneumococcus vaccination
- COVID-19 vaccination



# Does Vaccination Service at the Pharmacies have a Future?



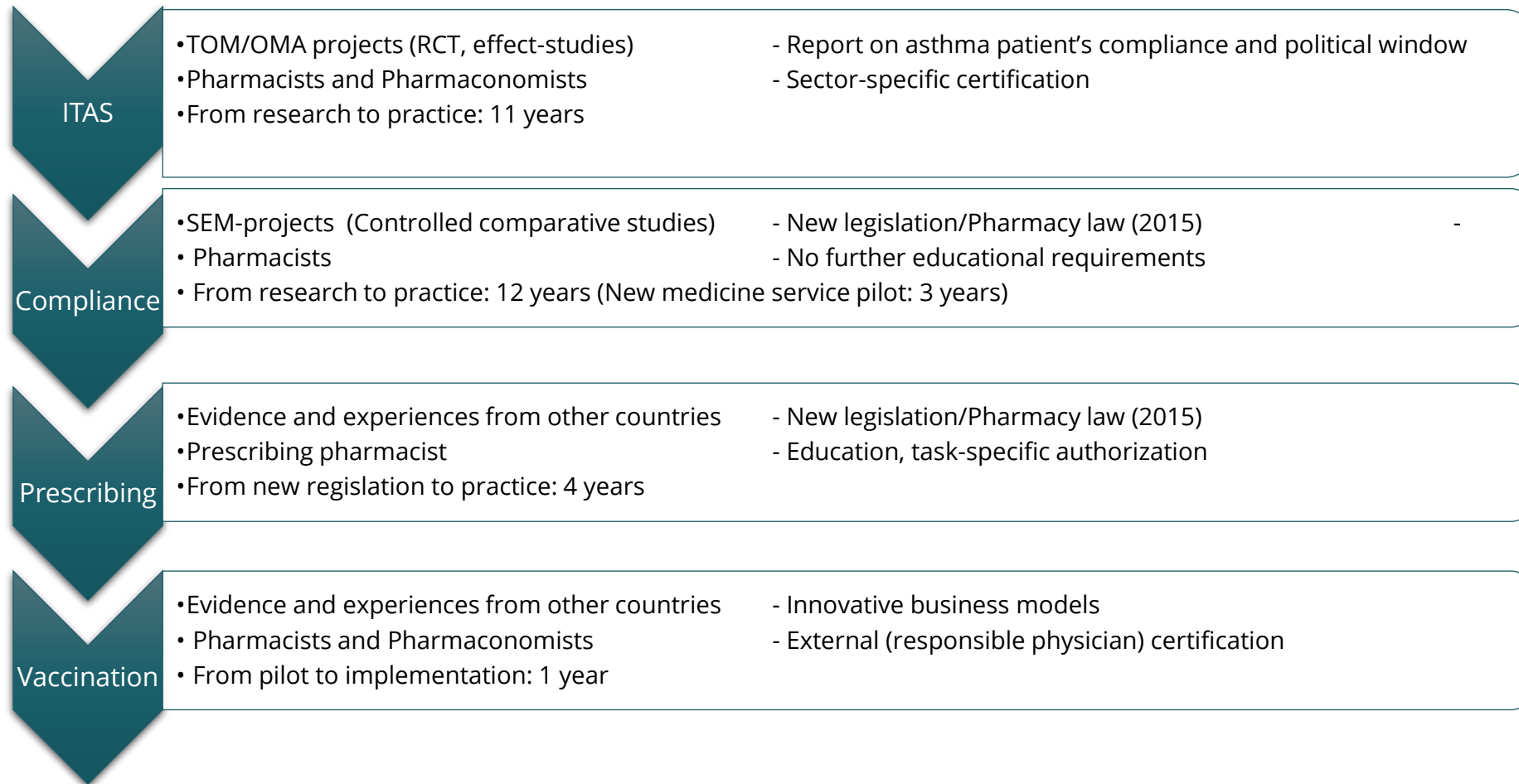
- Does the vaccination rate need to be increased?
- Advantages and disadvantages of the existing model
- Vaccination at pharmacies in the future

## Manuals and Tools

- Quality assured services
- Manuals and tool
- Webinars and videos
- Continuous development and update of manuals and tools
- Post graduate courses



# The four cases



## The Future?

- Strategy for the Danish Community Pharmacies
- Health Care Reform
- Future role and tasks for the pharmacies



# Common Strategy – Visions

## 1. The Competent Pharmacy

- Develop/maintain high competencies, high quality counselling and health services

## 2. The Cooperating Pharmacy

- Use high professional competencies better to expand pharmacy role in the health care sector (with regions)

## 3. The Digital Pharmacy

- Exploit technological opportunities to embrace customer needs and increase pharmacy efficiency

## 4. The Responsible Pharmacy

- Expand the social responsibility and collaborate with alliance partners on broader societal agendas

## Medication Safety and Health Promotion close to citizens





Sundhedsreformen

Gør Danmark sundere

Sundhedsministeriet



## Government Health Care Reform - Visions

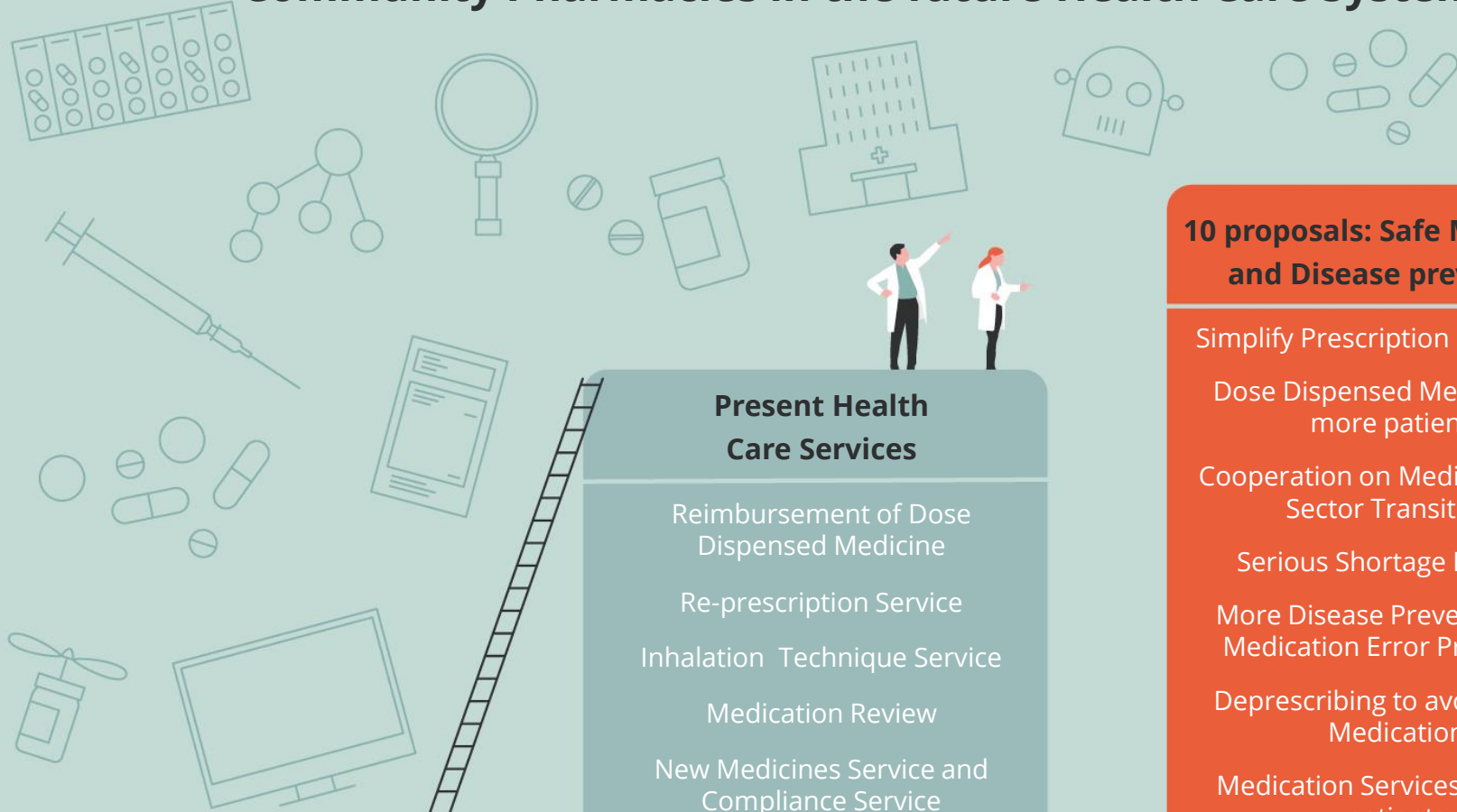
1. **New path for Health Promotion**  
(Alcohol, Nicotine, Nutrition, Exercise, Inequalities)
2. **Increased Quality in Local Health Care close to citizens\***  
(Quality Standards, Local “hospitals”, municipality acute care, outlays follows demographic pressure)
3. **Time for the individual patient (more resources)**  
(Normalize waiting lists after covid-19, Commission for “robustness” in Health Care Sector, education and recruitment)

”Today community **pharmacies play an active role** in the local health care sector, dispensing pharmaceuticals and counselling patients. They provide **professional health care services** such as new medicines service and compliance advice for chonical medicines patients. At the same time, community pharmacies **relieves general practitioners by re-prescribing** certain medicines. Pharmacies contribute to **good access** to health care services, as they are well represented throughout the country – including digitally”



**\*) “Focus on the role of community pharmacies in the local health care sector”**

# Community Pharmacies in the future Health Care System



**Core pharmacy tasks**

Safe medicines distribution and counselling on medicines use

**Present Health Care Services**

Reimbursement of Dose Dispensed Medicine

Re-prescription Service

Inhalation Technique Service

Medication Review

New Medicines Service and Compliance Service

Medicines Safety Education at elderly homes and social homes

Vaccination

Smoking Cessation Courses

Online Sales and Distribution

**10 proposals: Safe Medication and Disease prevention**

Simplify Prescription Procedures

Dose Dispensed Medicine for more patients

Cooperation on Medication Safe Sector Transitions

Serious Shortage Protocol

More Disease Prevention and Medication Error Prevention

Deprescribing to avoid Excess Medication

Medication Services for more patients

Medicines Safety Education in more municipalities

Start-up of Simple Treatments

Support and Education of Patients next of kin

Support and Education of Patients next of kin

# Questions?



Thank you for your attention