

---

# *Investing in Primary Care for Diabetes patients (Aruba)*

*Martijn Roos*



## *How it started ...*



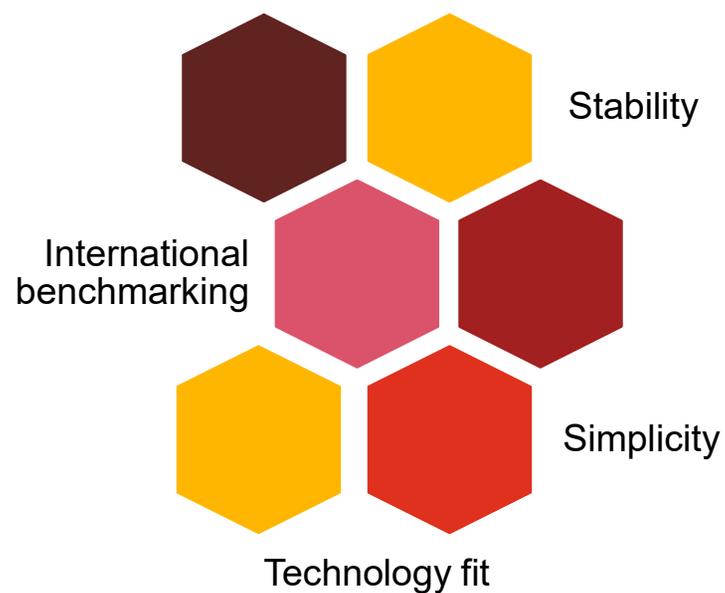
Increasing cost of secondary care



Lack of transparency of quality and efficiency



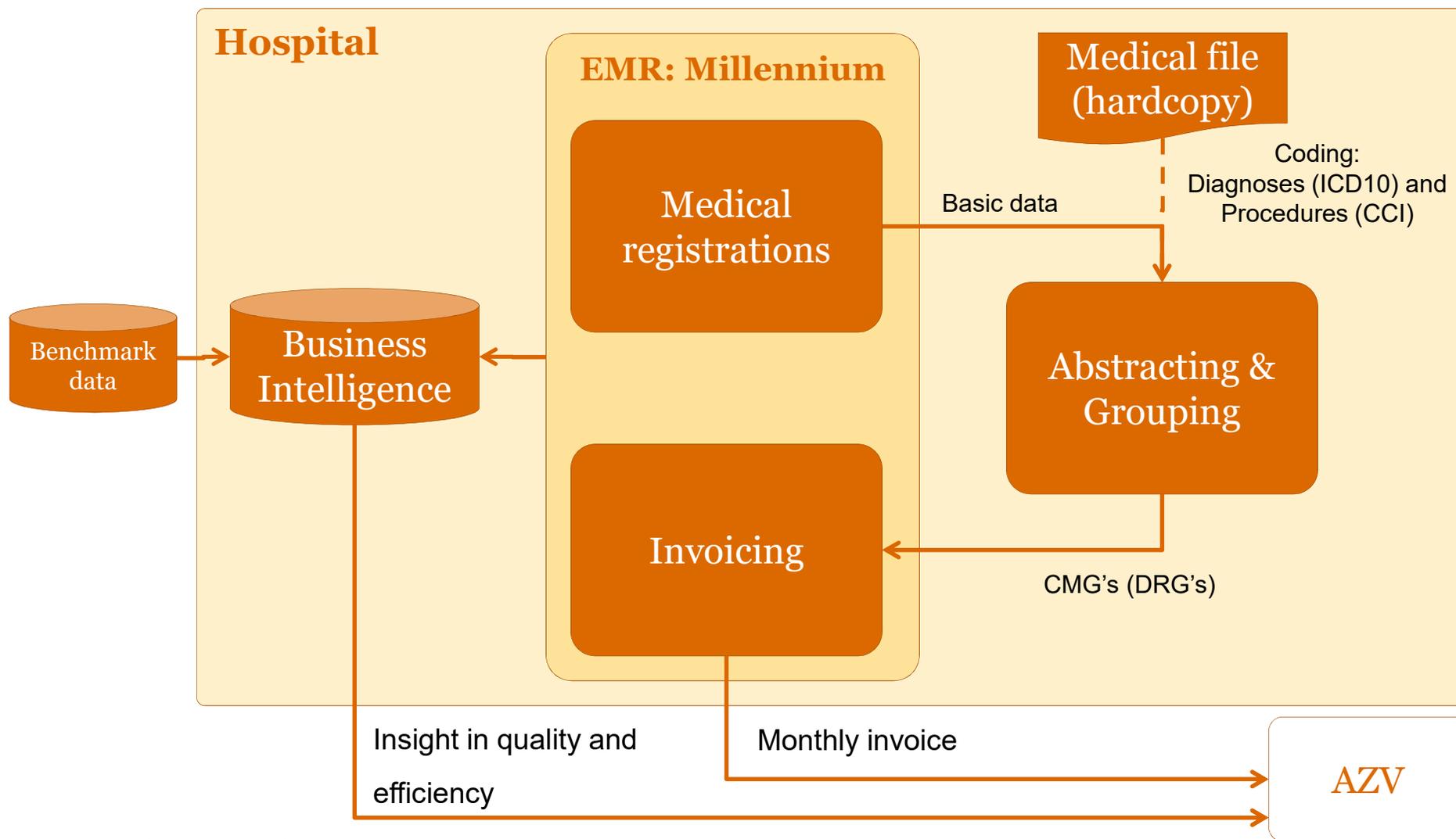
Selection of a new system for cost management and quality control



## *Selecting the Canadian CMG (DRG) system*

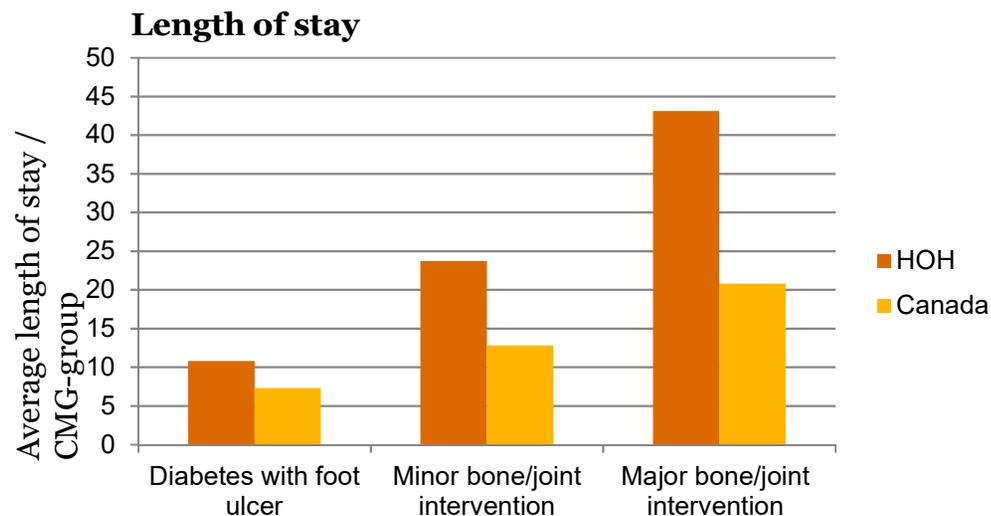


# Implementing the DRG-system

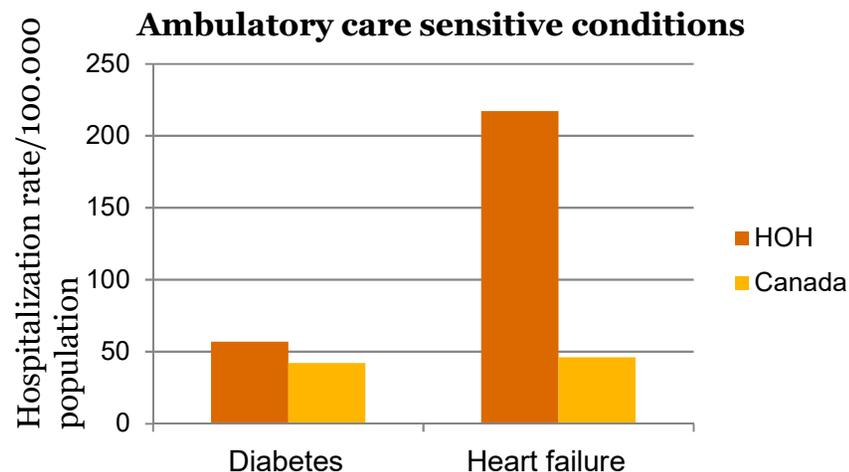


# A whole new insight in cost and quality of secondary care

# Many and heavy complications of diabetes



Relatively heavy late complications



Therapeutic non-compliance leads to high admission rates (with a 5,2% 28-day re-admission rate)

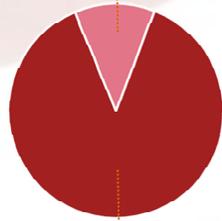
Source: zorgregistratie HOH 2013 (CMG) en benchmark CIHI

# Our answer: Transmural Diabetes Care

***Current costs (2014)***

***Cost level  
Primary care Diabetes  
2014***

Costs of nurse practitioners



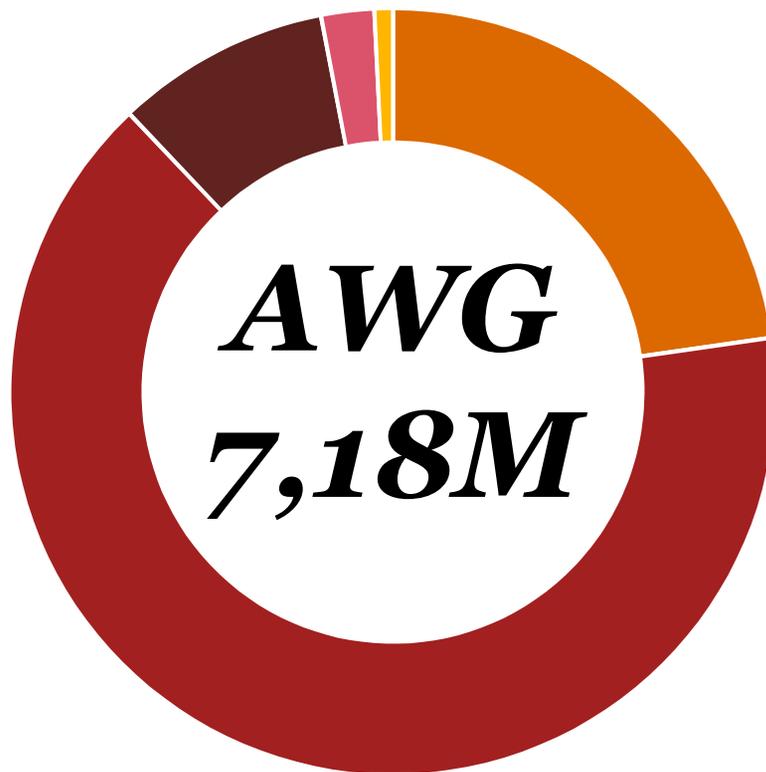
Treatment costs

***Cost level  
Primary care Diabetes  
2025***



# **Medication and lab tests biggest cost components Aruban primary for care diabetes**

*Cost level 2014<sup>1</sup>*



**Medication; AWG 4,68M<sup>2</sup>**

**Lab tests; AWG 1,63M<sup>2</sup>**

**Practitioner; AWG 0,65M<sup>3</sup>**

**Diabetes nurse; AWG 0,16M<sup>3</sup>**

**Podo / dietist; AWG 0,06M<sup>3</sup>**

1: Excluding GP fee

2: Invoicing data AZV

3: Wit Gele Kruis / ImSan

## *Approximately 43% of the patients known in the Aruban Healthcare domain*

International diabetes  
foundation prevalence  
16,2%

**18.000**

Estimated number of  
patients unknown in health  
system (at insurer or GP)

**10.109**

Patients NOT in pilot group

**5.391**

Patients in pilot group

**2.500**

**7,891** diabetes patients  
identified at insurer based on  
medication data

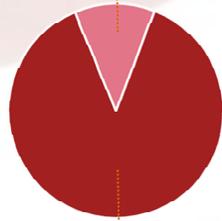
Source: International Diabetes Foundation (IDF), AZV, Werkgroep

# Investing in Primary Care

*Cost level  
Primary care Diabetes*

**2014**

Costs of nurse practitioners



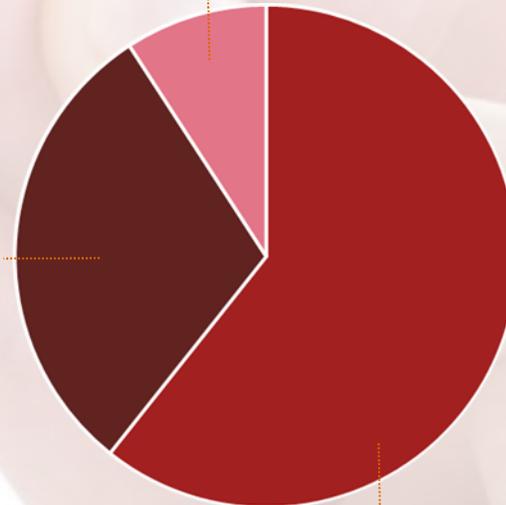
Treatment costs

*Cost level Primary  
care Diabetes*

**2025**

Extra nurse practitioners

Current costs



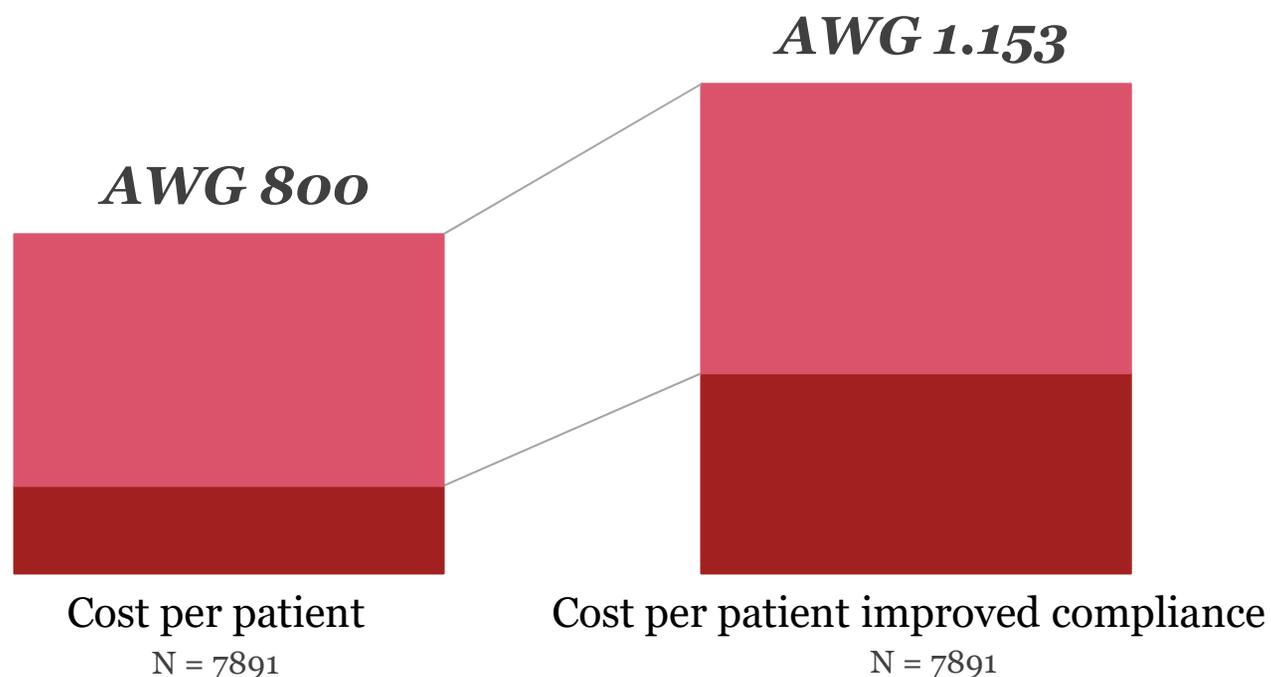
Improved compliance and detection

# 44% cost increase per patient due to improved compliance

Average cost per diabetes patient (excl. GP fee)

■ Medication

■ Laboratory

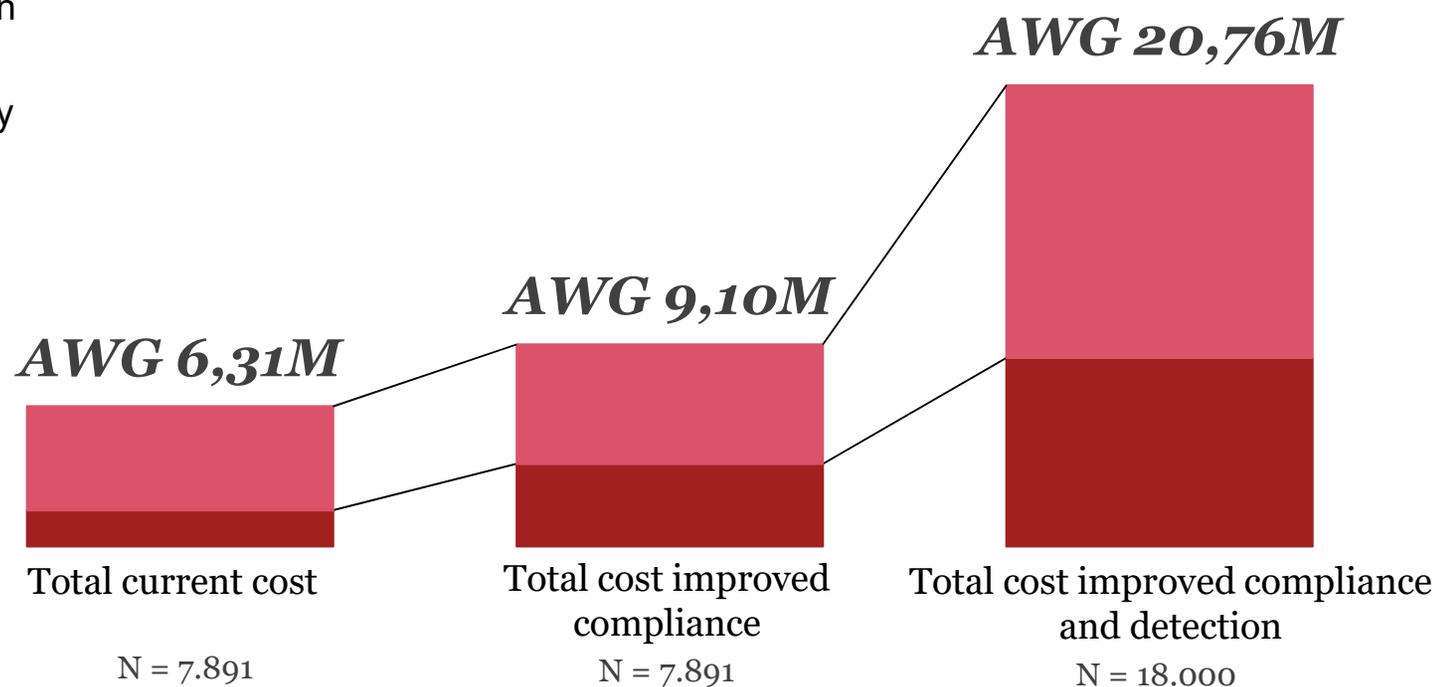


Source: Declaratiegegevens AZV gekoppeld aan protocol *Transmurale Multidisciplinaire Ketenzorg DMII*

# Further increase due to improved detection

Total cost increase (excl. GP fee)

- Medication
- Laboratory



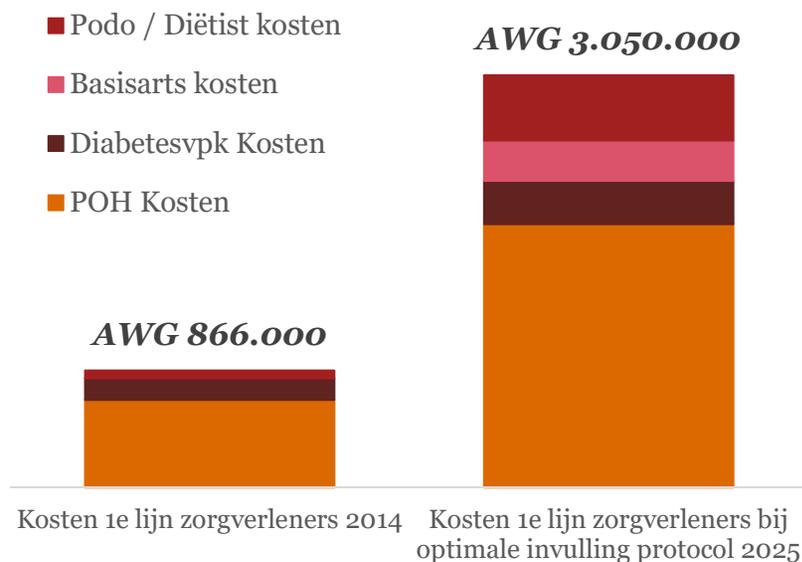
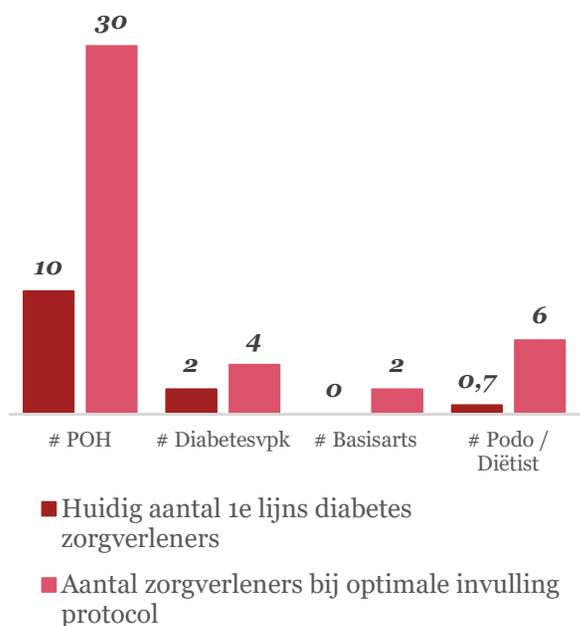
Bron: Declaratiegegevens AZV gekoppeld aan protocol *Transmurale Multidisciplinaire Ketenzorg DMII*

# Investing in nurse practitioners

Number of practitioners in primary diabetes care current and optimal



Total cost of nurse practitioners



Source: Declaratiegegevens AZV gekoppeld aan protocol *Transmurale Multidisciplinaire Ketenzorg DMII*

\* Exclusief honorarium en andere kosten huisartsen

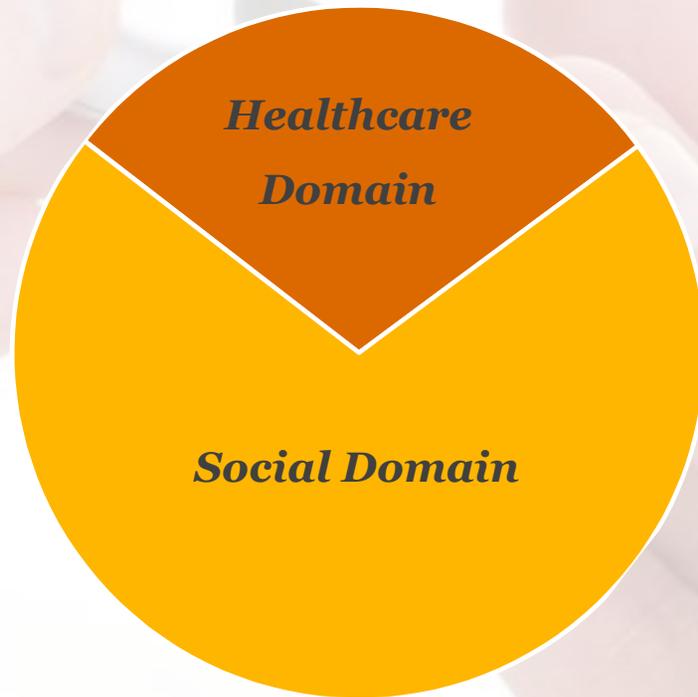
---

## ***Other investments***

- ICT
  - Interfaces of pharmacies with primary care system
  - Interface of laboratories with primary care system
  - Data extraction from primary care system
- Education
  - Existing 40 General Practitioners and 10 Nurse Practitioners
  - 20 new Nurse Practitioners

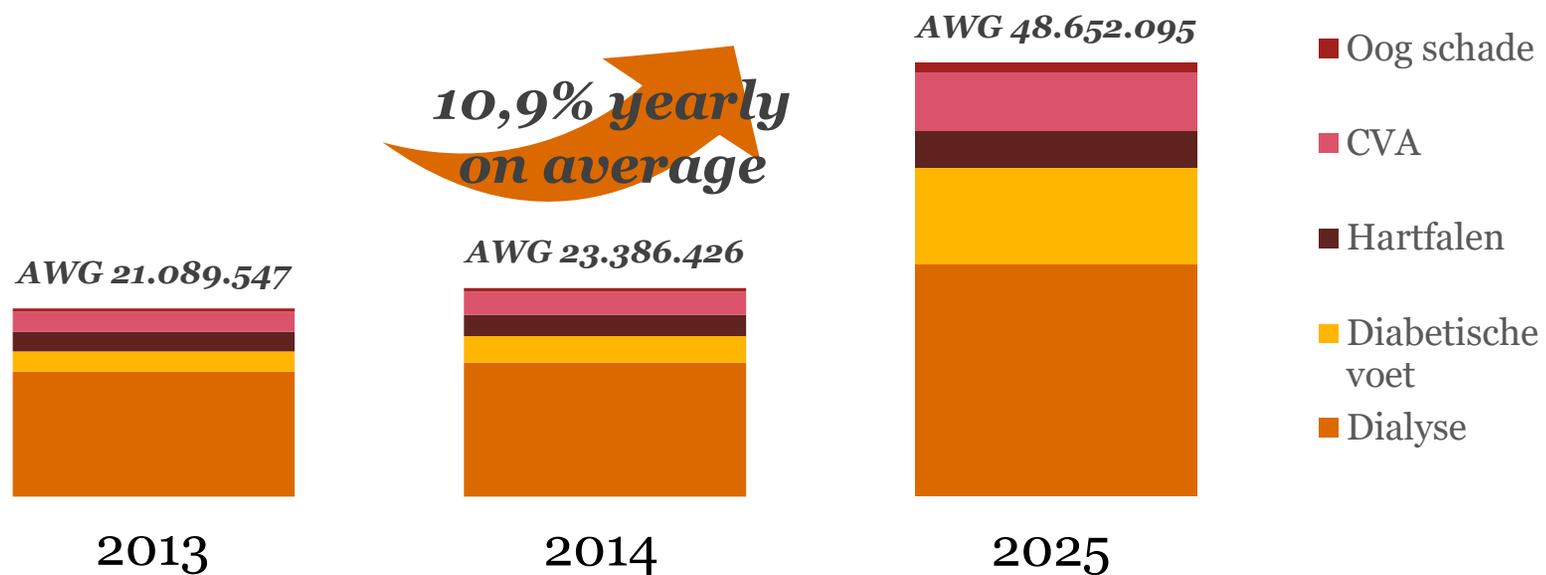
# *Benefits*

## *Benefits 2025*



# 48,6M cost in 2025 due to a yearly increase in the number of cases

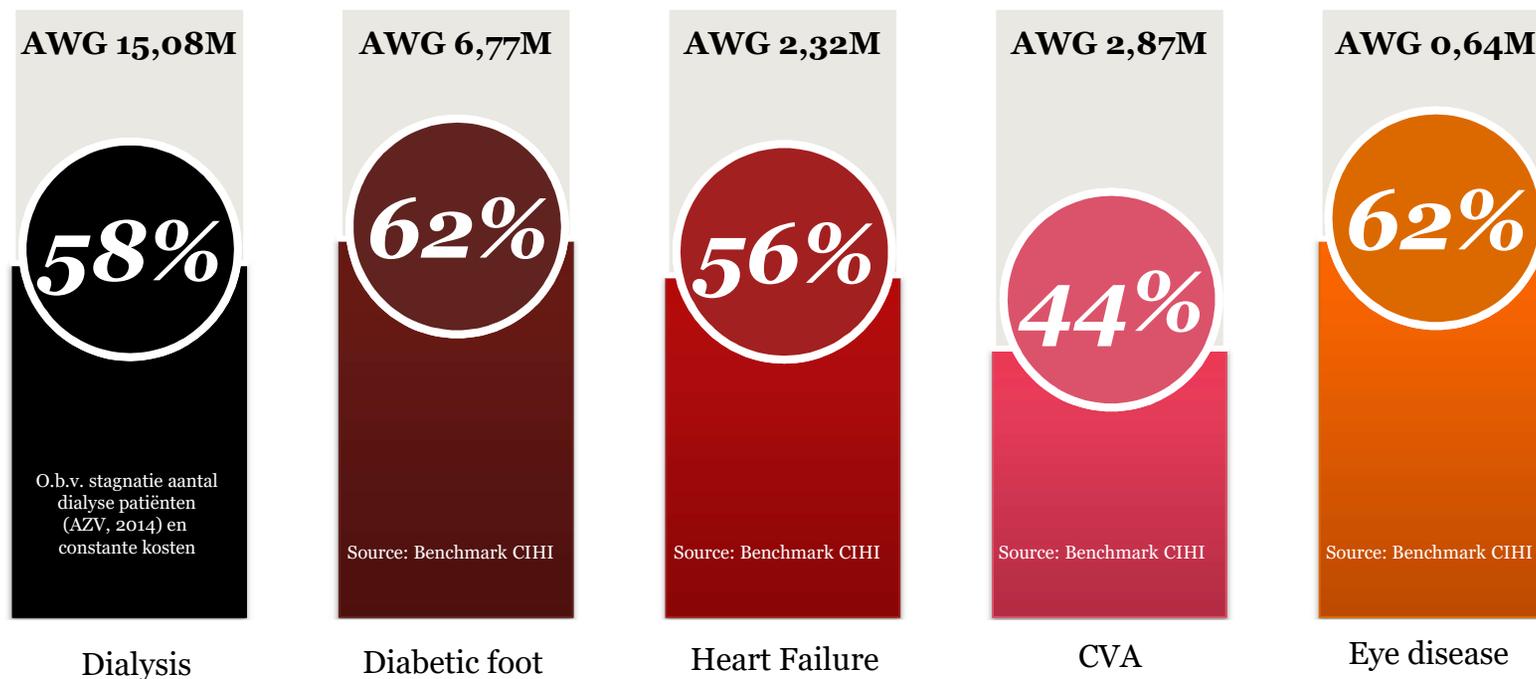
Costs secondary care for diabetes related (clinical) cases



Source: Data per aandoening 2013 en 2014 HOH

# 27,7M clinical care savings by investing in transmural diabetes care

*Saving potential secondary care per complication*



# Structural benefits higher than costs

Cost level  
Primary Care Diabetes

2014

7,18M

Cost level  
Primary Care Diabetes

2025

22,94M

Benefits: Health and Social  
domain

2025

94,2M



15,76M

Investment

