



Careers in Care

Femke Cnossen

Sierdjan Koster

University of Groningen



June 26, 2023

Roadmap of Talk

Introduction

Theory

Data

Descriptive statistics

Regional statistics

Stayrate statistics

Direction of outflow

Next steps

Motivation

- Globally, there are rising shortages in the health care sector, exacerbated by covid-19
- Imbalance between **growing demand** and **lagging supply**. Factors:
 - Ageing population (high future demand for care)
 - Entry rate of new workers
 - Retention rate of (young) existing workers
- With specific rural dynamics (Weinhold and Gurtner, 2014)



Projected health shortages (WRR, 2021)



┌ zorgpersoneel ─┐

┌ succesvolle inzet op (meer) personeel ─┐

┌─────────────────────────────────── zorgvraag ────────────────────────────────────┐

This paper

- **Goal** Understand dynamics of workers in the health care sector, focus on careers: *transitions* that people make on the labour market

This paper

- **Goal** Understand dynamics of workers in the health care sector, focus on careers: *transitions* that people make on the labour market
- **Data** Universe of health care workers in 2015, follow yearly until 2021

This paper

- **Goal** Understand dynamics of workers in the health care sector, focus on careers: *transitions* that people make on the labour market
- **Data** Universe of health care workers in 2015, follow yearly until 2021
- **Descriptives** Who leaves the health care sector?
 - Demographics
 - Educational background
 - Regional differences

This paper

- **Goal** Understand dynamics of workers in the health care sector, focus on careers: *transitions* that people make on the labour market
- **Data** Universe of health care workers in 2015, follow yearly until 2021
- **Descriptives** Who leaves the health care sector?
 - Demographics
 - Educational background
 - Regional differences
- **Theory** Role of labour market structure in shaping careers of health care workers
 - Outflow out of jobs in health sector can be explained by exposure to outside opportunities in local labour market
 - More opportunities → more volatility

Roadmap of Talk

Introduction

Theory

Data

Descriptive statistics

Regional statistics

Stayrate statistics

Direction of outflow

Next steps

Reasons to leave or stay in the health care sector

Employer-employee interactions:

- **Subjective well-being** at work: e.g. job satisfaction, relatedness with co-workers or bosses
- Objective **working conditions**: pay, career opportunities

Reasons to leave or stay in the health care sector

Employer-employee interactions:

- **Subjective well-being** at work: e.g. job satisfaction, relatedness with co-workers or bosses
- Objective **working conditions**: pay, career opportunities

Societal influence

- Status and recognition

Reasons to leave or stay in the health care sector

Employer-employee interactions:

- **Subjective well-being** at work: e.g. job satisfaction, relatedness with co-workers or bosses
- Objective **working conditions**: pay, career opportunities

Societal influence

- Status and recognition

Personal sphere

- Combine with household or family care
- Skills
- Partner's (location of) occupation

Reasons to leave or stay in the health care sector

Employer-employee interactions:

- **Subjective well-being** at work: e.g. job satisfaction, relatedness with co-workers or bosses
- Objective **working conditions**: pay, career opportunities

Societal influence

- Status and recognition

Personal sphere

- Combine with household or family care
- Skills
- Partner's (location of) occupation

Regional

- Available jobs in local labour market

Roadmap of Talk

Introduction

Theory

Data

Descriptive statistics

Regional statistics

Stayrate statistics

Direction of outflow

Next steps

Data

Register data from Netherlands Statistics

- **Cohort 2015:** 1.2 million+ workers employed in health care in december (industry Q)
 - Plus Education (480k) and Financial Institutions (270k) as benchmark
 - using POLISBUS and BETAB

Data

Register data from Netherlands Statistics

- **Cohort 2015:** 1.2 million+ workers employed in health care in december (industry Q)
 - Plus Education (480k) and Financial Institutions (270k) as benchmark
 - using POLISBUS and BETAB
- Follow cohort 2015 over time:
 - (Sub)sector of employment using POLISBUS and BETAB
 - Wages, hours and contract type using POLISBUS
 - Labour market status (e.g. unemployed, self-employed retired, benefits) using SECMBUS
 - Location of work using GEMEENTESTPLTAB
 - Living location using GBAADRESBUS

Data

Register data from Netherlands Statistics

- **Cohort 2015:** 1.2 million+ workers employed in health care in december (industry Q)
 - Plus Education (480k) and Financial Institutions (270k) as benchmark
 - using POLISBUS and BETAB
- Follow cohort 2015 over time:
 - (Sub)sector of employment using POLISBUS and BETAB
 - Wages, hours and contract type using POLISBUS
 - Labour market status (e.g. unemployed, self-employed retired, benefits) using SECMBUS
 - Location of work using GEMEENTESTPLTAB
 - Living location using GBAADRESBUS
- Add time-invarying data
 - Demographics (gender, age, migration status) using GBAPERSOONTAB
 - Highest obtained education (field and level) using DIPLOMATAB, HOOGSTEDIPLOMA

Definitions

- Healthcare

- Industries

- SBI (NACE) letter: Human health and social work activities (Q)
- SBI (NACE) 2 digit: Human health activities (86); Residential care and guidance (87); Social work activities without accommodation (88)
- SBI (NACE) 3 and 4 digit also possible, following hierarchical structure

- Education

- ISCED 1 digit: Health and Welfare (9)

Roadmap of Talk

Introduction

Theory

Data

Descriptive statistics

Regional statistics

Stayrate statistics

Direction of outflow

Next steps

Descriptive statistics

- **Regional statistics**
 - Health employment by NUTS 3 region (relative and absolute)
 - Stay/Exit-rates by NUTS 3 region
- **Stayrate statistics**, by subgroups: who leaves and who stays?
 - By sector
 - By gender
 - By age group
 - By level of education
 - By wage percentile
 - By temporary contract
- **Direction of outflow**: where are workers going?
 - Stay in the health sector
 - Move out of employment
 - Move to different sector

Health employment, by NUTS 3 region

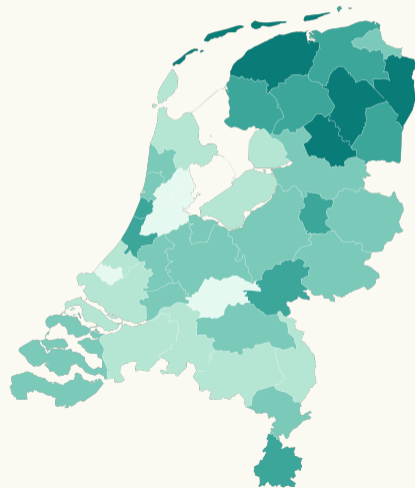
- Sample: all workers in 2015
- Calculate q by region: all health workers divided by total working population
- Strong **regional variation**: especially rural regions in the North are relatively specialized in health care

Health employment, by NUTS 3 region

- Sample: all workers in 2015
- Calculate q by region: all health workers divided by total working population
- Strong **regional variation**: especially rural regions in the North are relatively specialized in health care

Share of health employment, by commuting zone

All workers in health care (SBI sector Q) in 2015, divided by total amount of workers in commuting zone

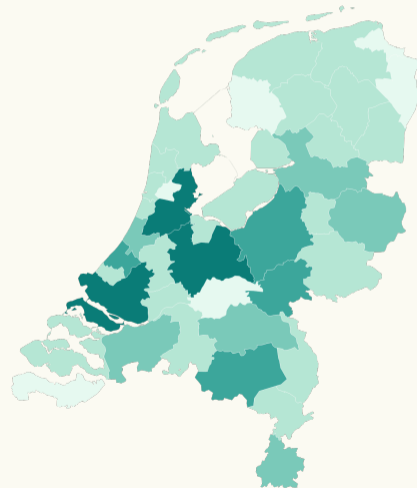
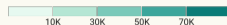


Health employment, by NUTS 3 region

- Sample: all workers in 2015
- Calculate q by region: all health workers divided by total working population
- Strong **regional variation**: especially rural regions in the North are relatively specialized in health care
- Which can partly be explained by the **size of the local labour market**: more outside options in urban environments
 - Correlation: -0.27%

Total health employment, by commuting zone

All workers in health care (SBI sector Q) in 2015



Do people leave health care sector more often in rural areas?

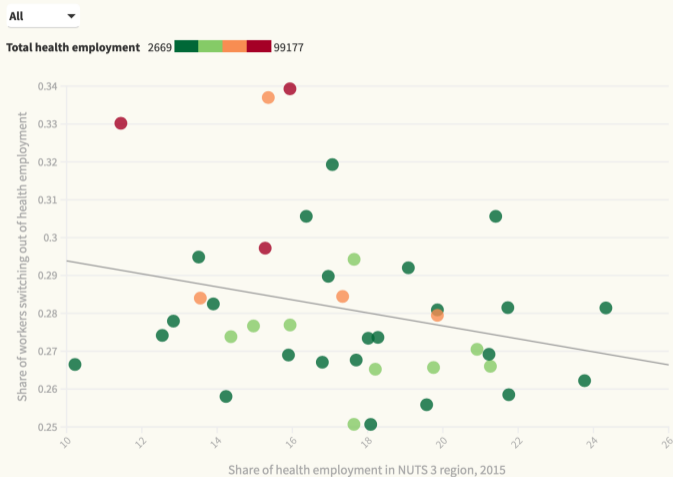
- X-axis: share of health employment in 2015, by NUTS 3 region
- Y-axis: share of health employment switched out of health sector by 2021, by NUTS 3 region

Do people leave health care sector more often in rural areas?

- X-axis: share of health employment in 2015, by NUTS 3 region
- Y-axis: share of health employment switched out of health sector by 2021, by NUTS 3 region
- **Red**: regions with high health employment
- **Green**: regions with low health employment

Do people leave health care sector more often in rural areas?

- X-axis: share of health employment in 2015, by NUTS 3 region
- Y-axis: share of health employment switched out of health sector by 2021, by NUTS 3 region
- **Red**: regions with high health employment
- **Green**: regions with low health employment



Regional statistics - summary

Regional variation in health employment

- Variation in **shares** of health employment
 - Share of health employment is usually higher in more rural areas, with lower total employment
- but relationship is not one-on-one

Regional statistics - summary

Regional variation in health employment

- Variation in **shares** of health employment
 - Share of health employment is usually higher in more rural areas, with lower total employment
- but relationship is not one-on-one

Correlates with share of workers **leaving** health sector

- Exit-rate higher in areas with lower share of health employment
- and in urban areas, that have higher total employment

Regional statistics - summary

Regional variation in health employment

- Variation in **shares** of health employment
 - Share of health employment is usually higher in more rural areas, with lower total employment
- but relationship is not one-on-one

Correlates with share of workers **leaving** health sector

- Exit-rate higher in areas with lower share of health employment
- and in urban areas, that have higher total employment

So **who** leaves the health sector?

Stayrates

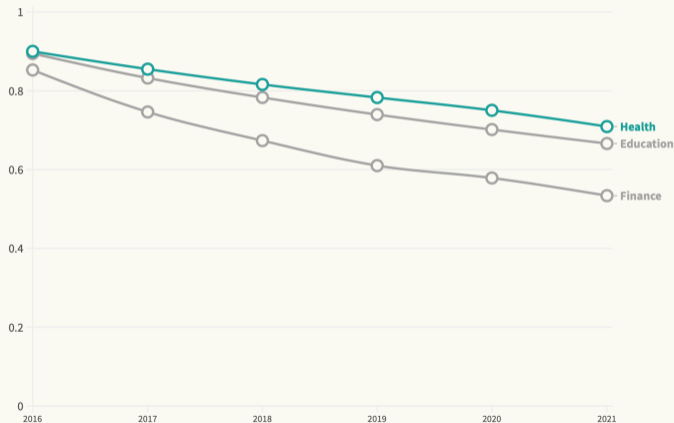
- Calculate stay-rates, by various subgroups
- Of cohort 2015: what share still works in health?
- Compare to two benchmark sectors: education and finance
- N.B. **No inflow**: only outflow, stick to cohort 2015

Stayrates

- Calculate stay-rates, by various subgroups
- Of cohort 2015: what share still works in health?
- Compare to two benchmark sectors: education and finance
- **N.B. No inflow:** only outflow, stick to cohort 2015

Stayrate

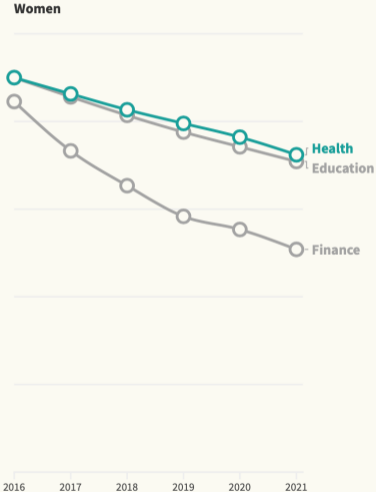
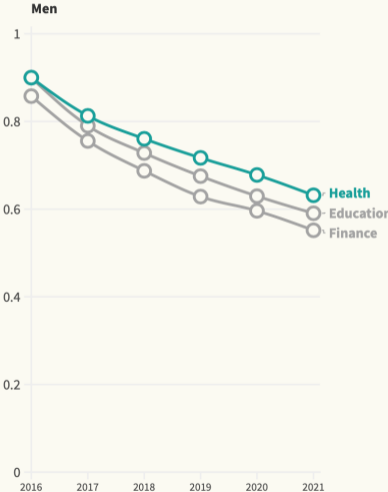
Share of people working in the same sector in 2015



Share of people working in the same sector: by gender

Stayrate

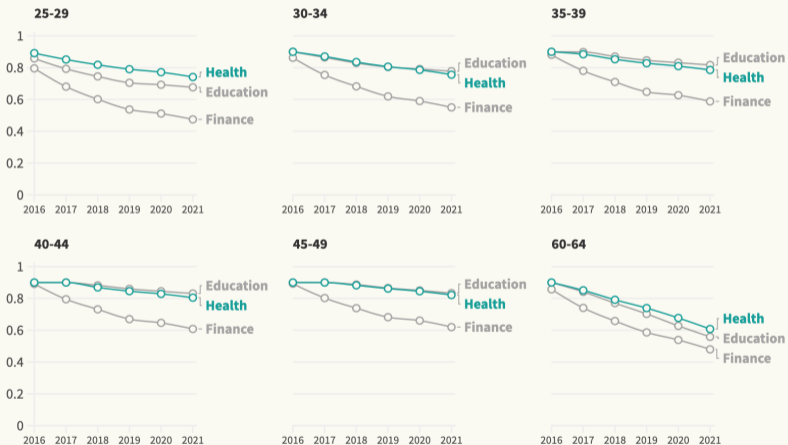
Share of people working in the same sector in 2015



Share of people working in the same sector: by age group (in 2015)

Stayrate

Share of people working in the same sector in 2015

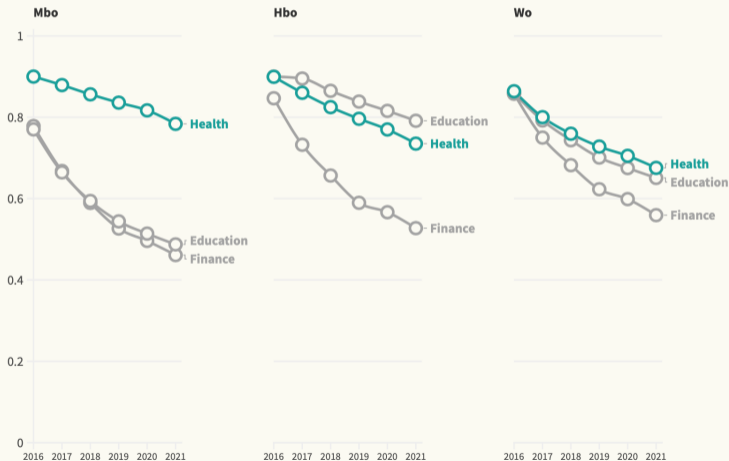


Share of people working in the same sector: by level of education

Note: sample selection of relatively young people, as education data is only reliably available since 2005

Stayrate

Share of people working in the same sector in 2015



Share of people working in the same sector: by wage percentile

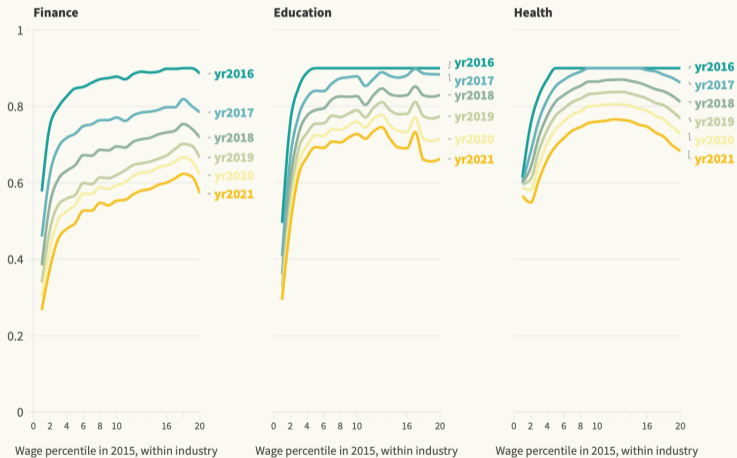
- Rank workers' monthly wages in 2015
- Divide in 20 bins of equal count
- Calculate stayrate of workers in that bin

Share of people working in the same sector: by wage percentile

- Rank workers' monthly wages in 2015
- Divide in 20 bins of equal count
- Calculate stayrate of workers in that bin

Stayrate

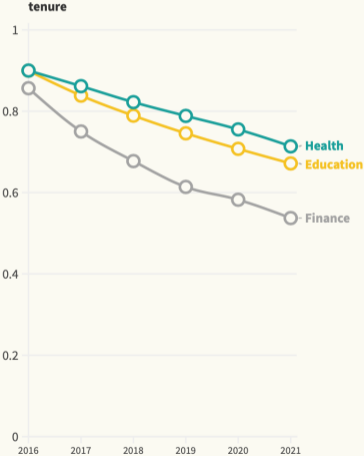
Share of people working in the same sector in 2015



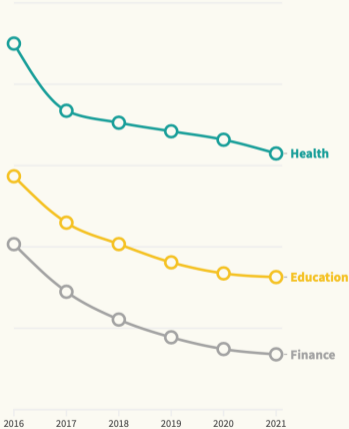
Share of people working in the same sector: by contract type

Stayrate

Share of people working in the same sector in 2015



flex

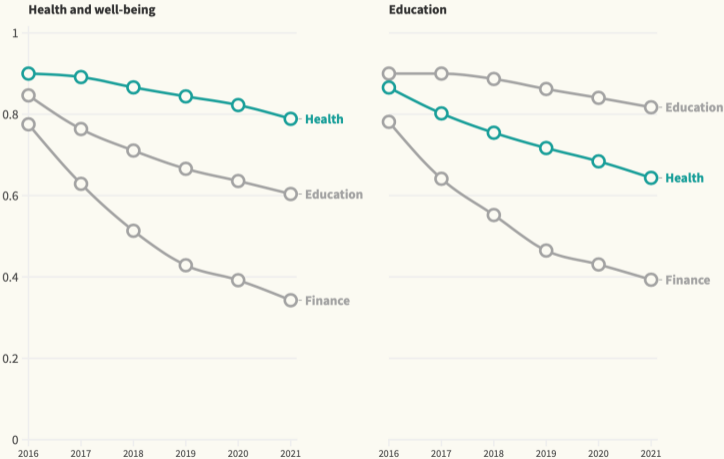


Share of people working in the same sector: by field of education

Only ISCED 97 Fields of 'Health and Well-being' and 'Education'

Stayrate

Share of people working in the same sector in 2015



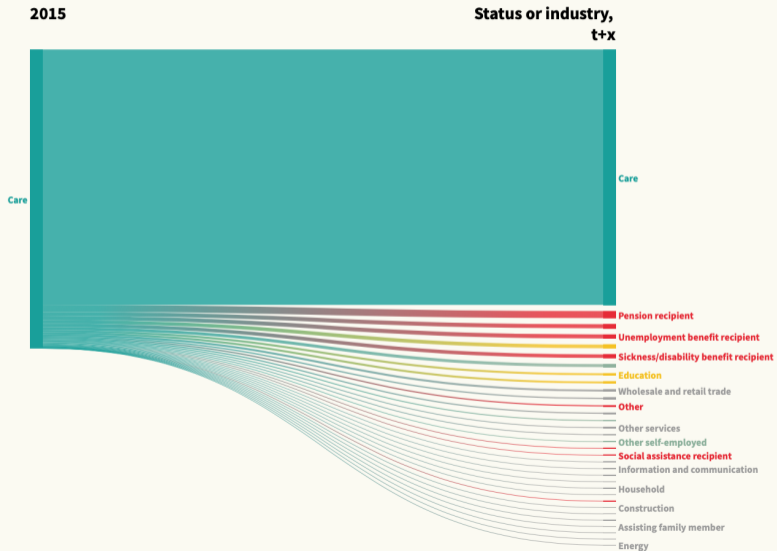
Where are workers going?

Next, we study **direction of outflow** up until 2021

- Either still working in **care sector**
- Or **left** the labour force
 - Pension
 - Unemployment benefits
 - Sickness benefits
 - Social benefits
- or became **self-employed**
- Or **switched** to a different sector
 - Most workers go to: Education, Public administration, or Temporary employment agencies

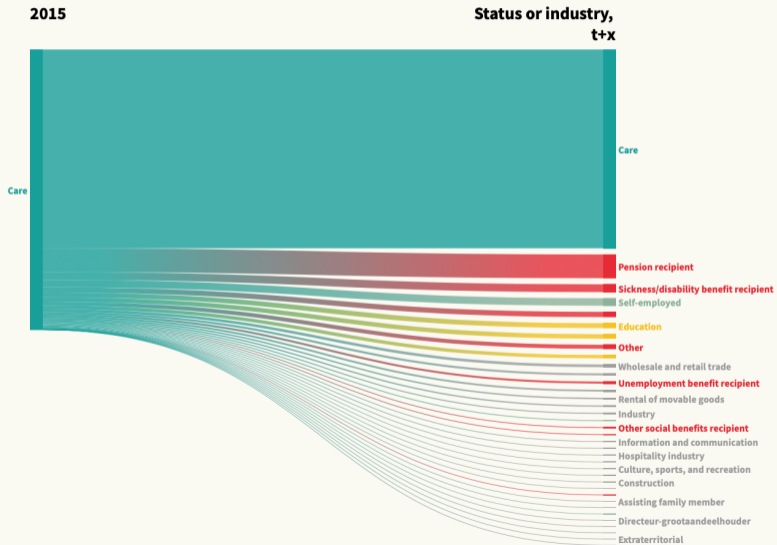
Direction of outflow 2017

All ▼



Direction of outflow 2021

All ▼



Outflow statistics

Who is more likely to switch out of health sector?

- Men
- 'Young' and 'old'
- Higher educated and higher paid
- Lowest wage deciles
- With flexible contract
- But in comparison to finance and education: relatively high retention rate

Outflow statistics

Who is more likely to switch out of health sector?

- Men
- 'Young' and 'old'
- Higher educated and higher paid
- Lowest wage deciles
- With flexible contract
- But in comparison to finance and education: relatively high retention rate

Where are they going?

- Out of labour force (up to 15% in 6 years after observation)
- To public administration, education or temporary employment agencies (in preparation for move to other job, either within or outside health employment)

Roadmap of Talk

Introduction

Theory

Data

Descriptive statistics

Regional statistics

Stayrate statistics

Direction of outflow

Next steps

Next steps

- Develop **spatial model** to test whether workers are less likely to leave the health care sector in rural areas that are more specialized in health care

Next steps

- Develop **spatial model** to test whether workers are less likely to leave the health care sector in rural areas that are more specialized in health care
 - Include **sub-sectors** of health care:
 - Specialization in complex health care (e.g. hospitals) should have different dynamics than day-to-day care (e.g. residential care)
 - Include distance to closest academic hospital
 - Expand theoretical framework

Next steps

- Develop **spatial model** to test whether workers are less likely to leave the health care sector in rural areas that are more specialized in health care
 - Include **sub-sectors** of health care:
 - Specialization in complex health care (e.g. hospitals) should have different dynamics than day-to-day care (e.g. residential care)
 - Include distance to closest academic hospital
 - Expand theoretical framework
- Suggestive evidence so far seems to hint at regional labour market dynamics, highlighting potential need for **place-based policies for worker retention** in health care, beyond firm- or worker-level interventions

Conclusion

- Given growing demand for health, important to understand labour market dynamics within health care sector
- We highlight focus on studying careers: switching patterns, transitions between states, sectors and work location
- This paper focuses on **outflow** with a regional focus
- Using data on the universe of Dutch health care workers in 2015, follow that cohort over time

Conclusion

- Given growing demand for health, important to understand labour market dynamics within health care sector
- We highlight focus on studying careers: switching patterns, transitions between states, sectors and work location
- This paper focuses on **outflow** with a regional focus
- Using data on the universe of Dutch health care workers in 2015, follow that cohort over time
- Want to know more about our work in this project?
www.talentinderegio.com/talentmonitor