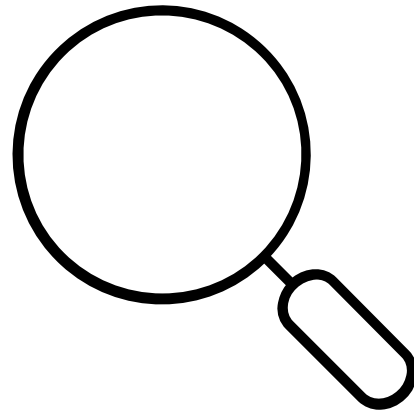


# Putting the National Hospital Medicine Register to work: A quetiapine case study

Disclosure: I work in the Capital Region's Copenhagen Phase 4 Unit, which has received industry funding for unrelated projects; today's presentation is independent of any industry-funded work.

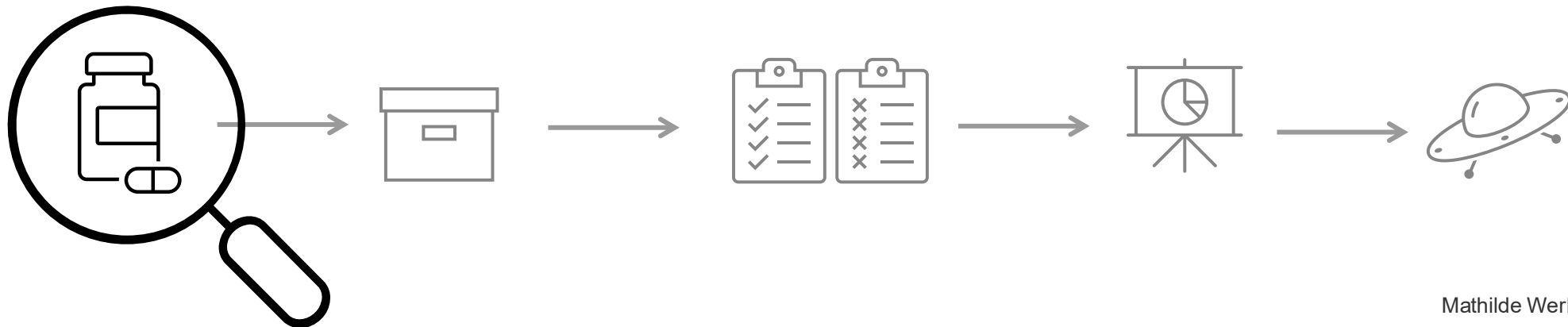
## Aim

- My aim is to give you a practical look at how we have applied the relatively new National Hospital Medicine Register (NHMR), using the antipsychotic, quetiapine, as a case.



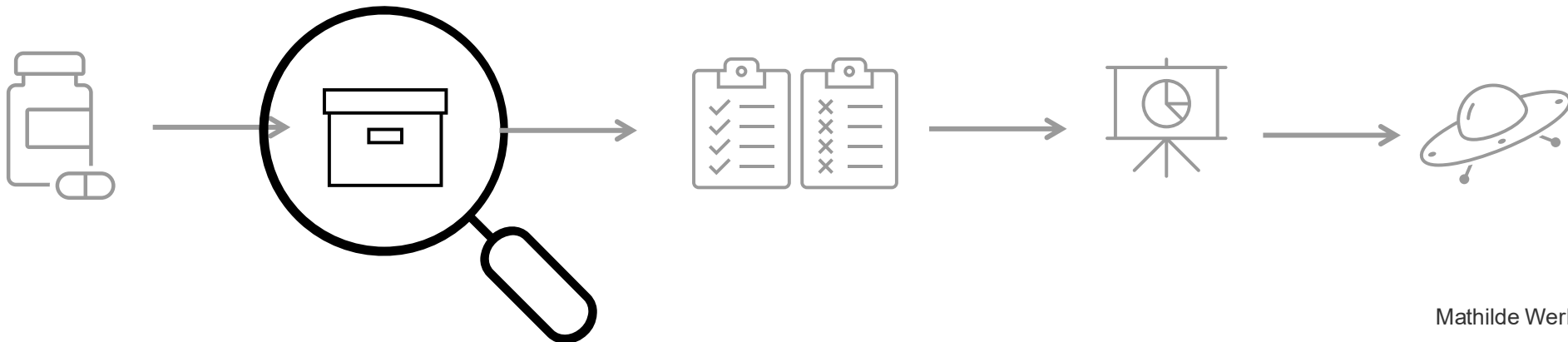
## Aim

- My aim is to give you a practical look at how I have applied the relatively new National Hospital Medicine Register (NHMR), using the antipsychotic, quetiapine, as a case. I'll introduce the case and why quetiapine is of interest



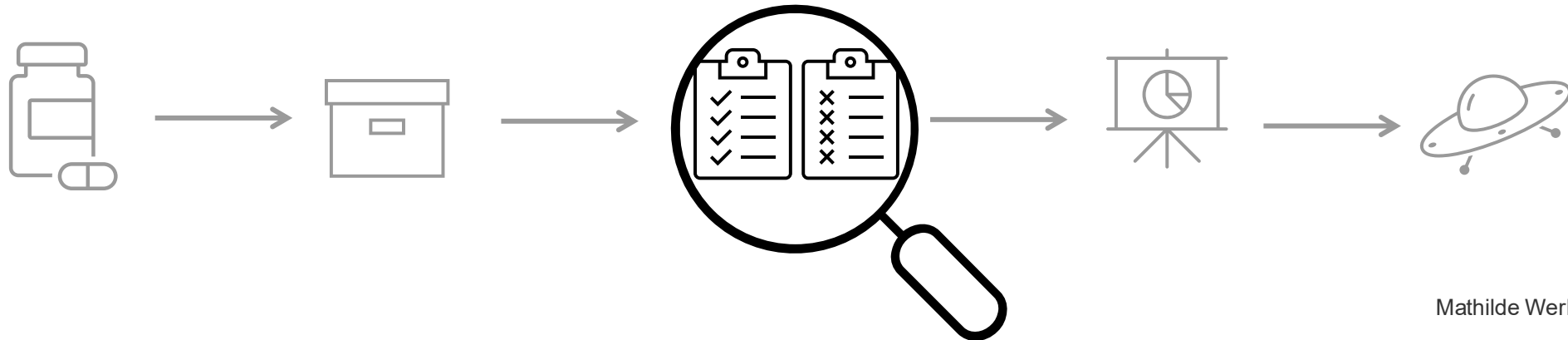
## Aim

- My aim is to give you a practical look at how we have applied the relatively new National Hospital Medicine Register (NHMR), using the antipsychotic, quetiapine, as a case. I'll introduce the case and why quetiapine is of interest, **look at what we knew before the NHMR**



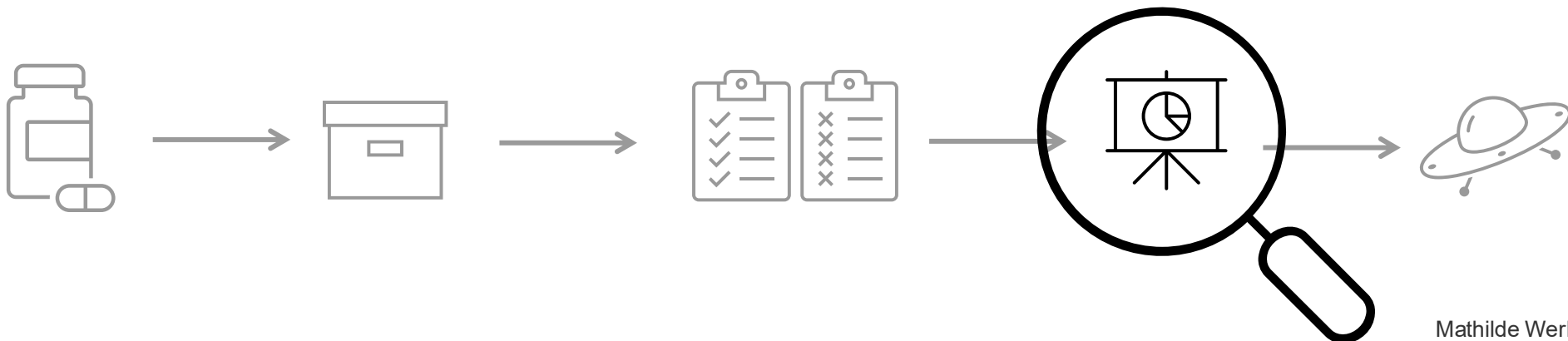
## Aim

- My aim is to give you a practical look at how we have applied the relatively new National Hospital Medicine Register (NHMR), using the antipsychotic, quetiapine, as a case. I'll introduce the case and why quetiapine is of interest, look at what we new before the NHMR, then turn to the register's added value and its limitations, and how we addressed them



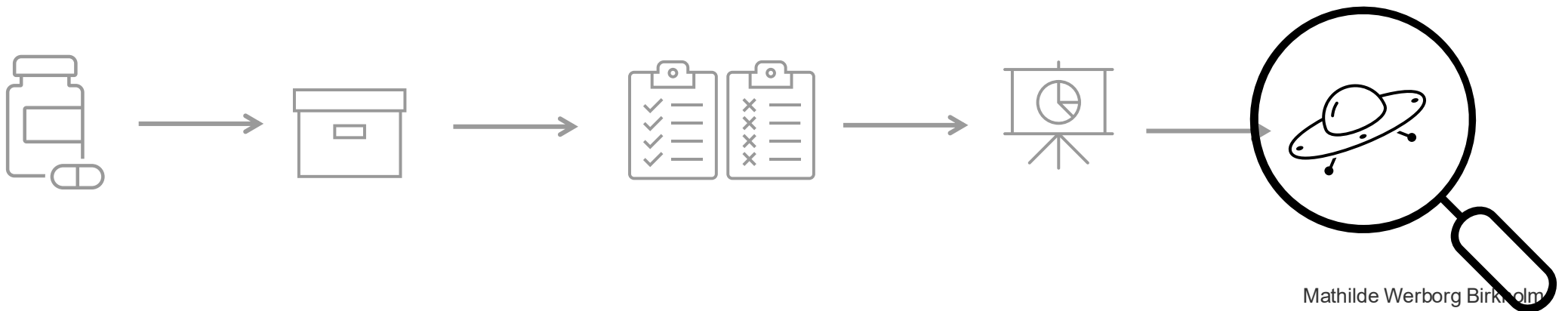
# Aim

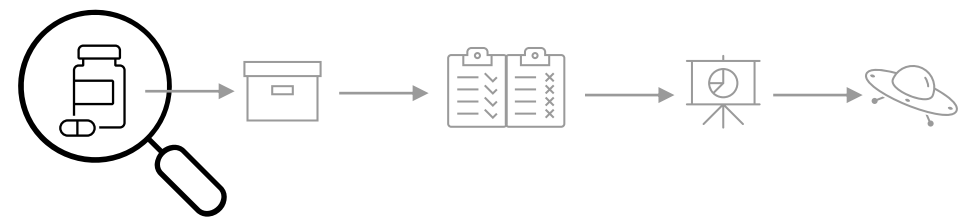
- My aim is to give you a practical look at how we have applied the relatively new National Hospital Medicines Register (NHMR), using the antipsychotic, quetiapine, as a case. I'll introduce the case and why quetiapine is of interest, look at what we new before the NHMR, then turn to the register's added value and its limitations, and how we addressed them — before presenting some initial results



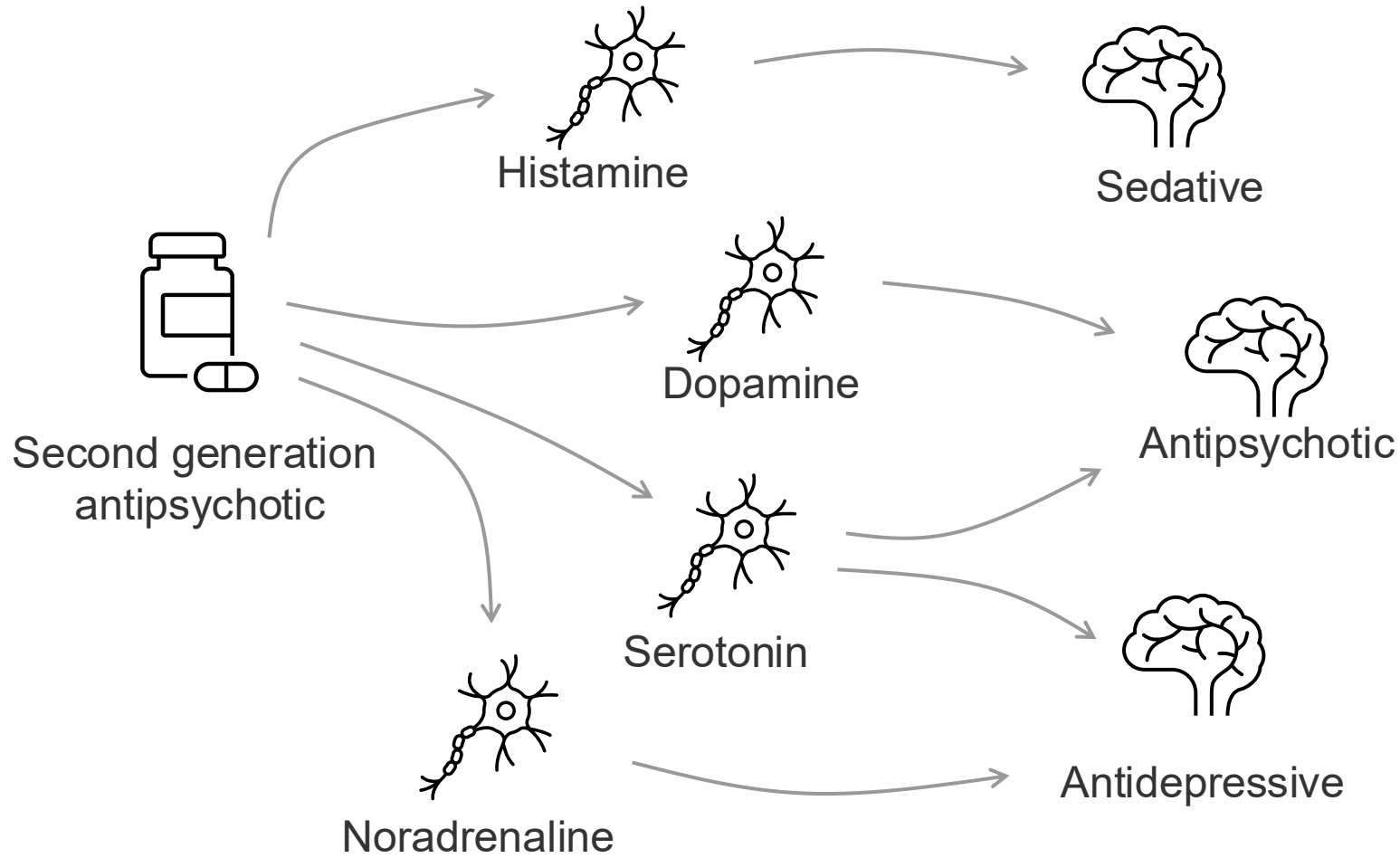
## Aim

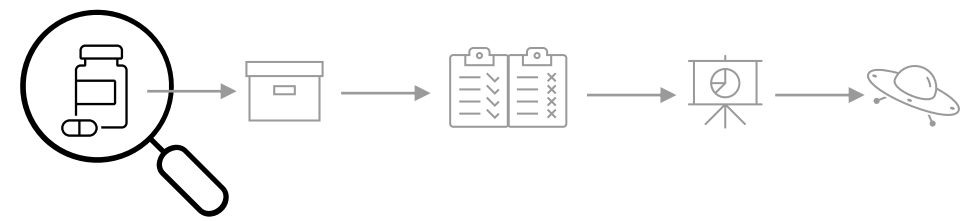
- My aim is to give you a practical look at how we have applied the relatively new National Hospital Medicine Register (NHMR), using the antipsychotic, quetiapine, as a case. I'll introduce the case and why quetiapine is of interest, look at what we new before the NHMR, then turn to the register's added value and its limitations, and how we addressed them — before presenting some initial results and finally considering where this register could take us in the future.



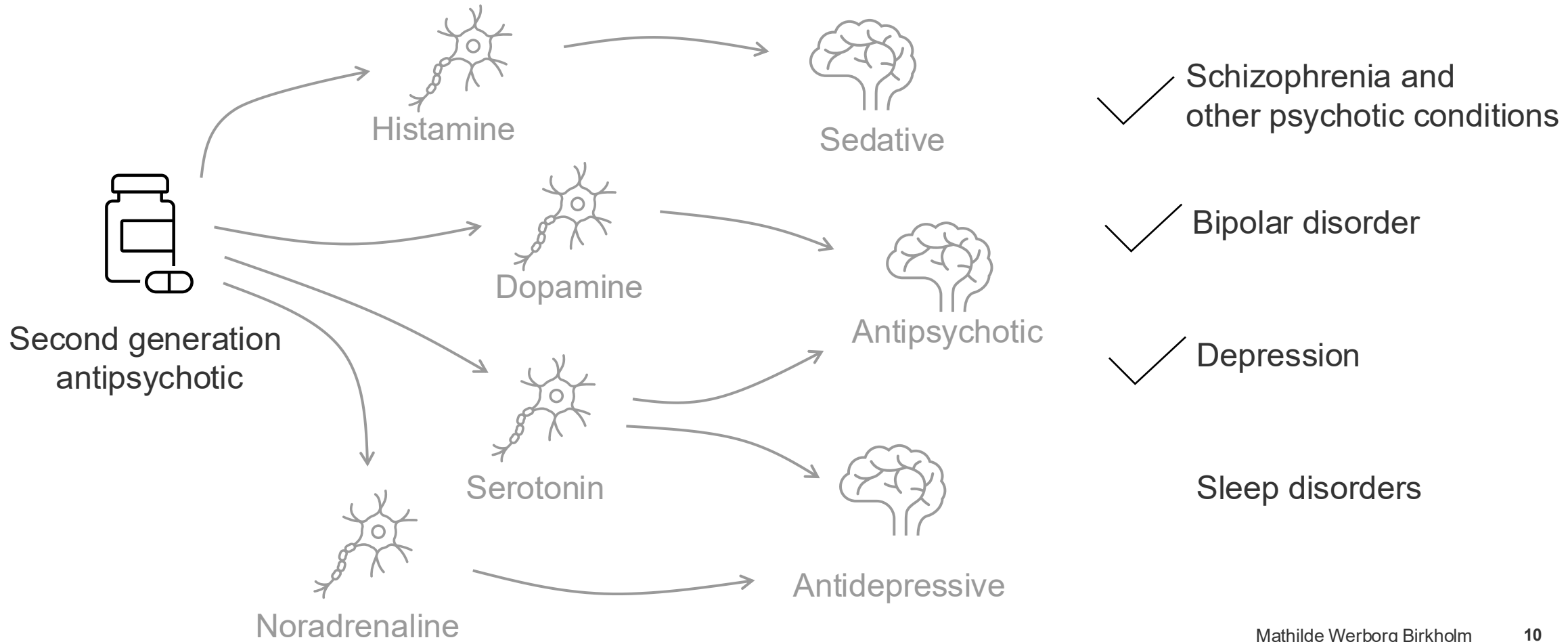


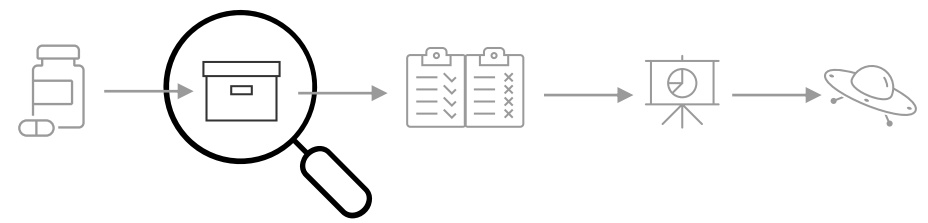
# Quetiapine – the case





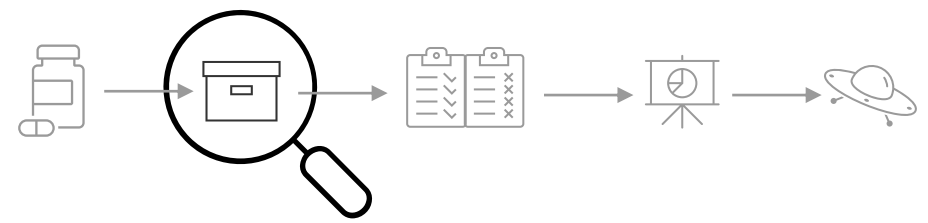
# Quetiapine – the case





## What we know about quetiapine

- One of the most widely used antipsychotics in Denmark and worldwide
- Notable side effects: sedation, weight gain, metabolic disturbances, and risk of long-term cardiovascular complications

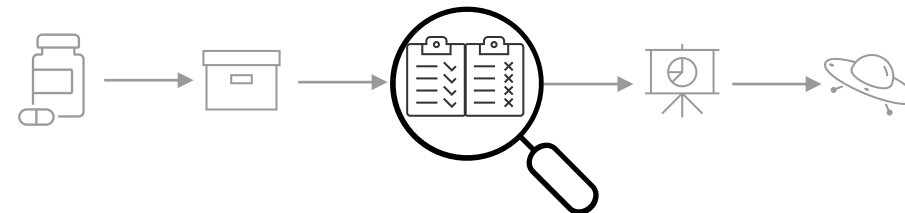


**want to**

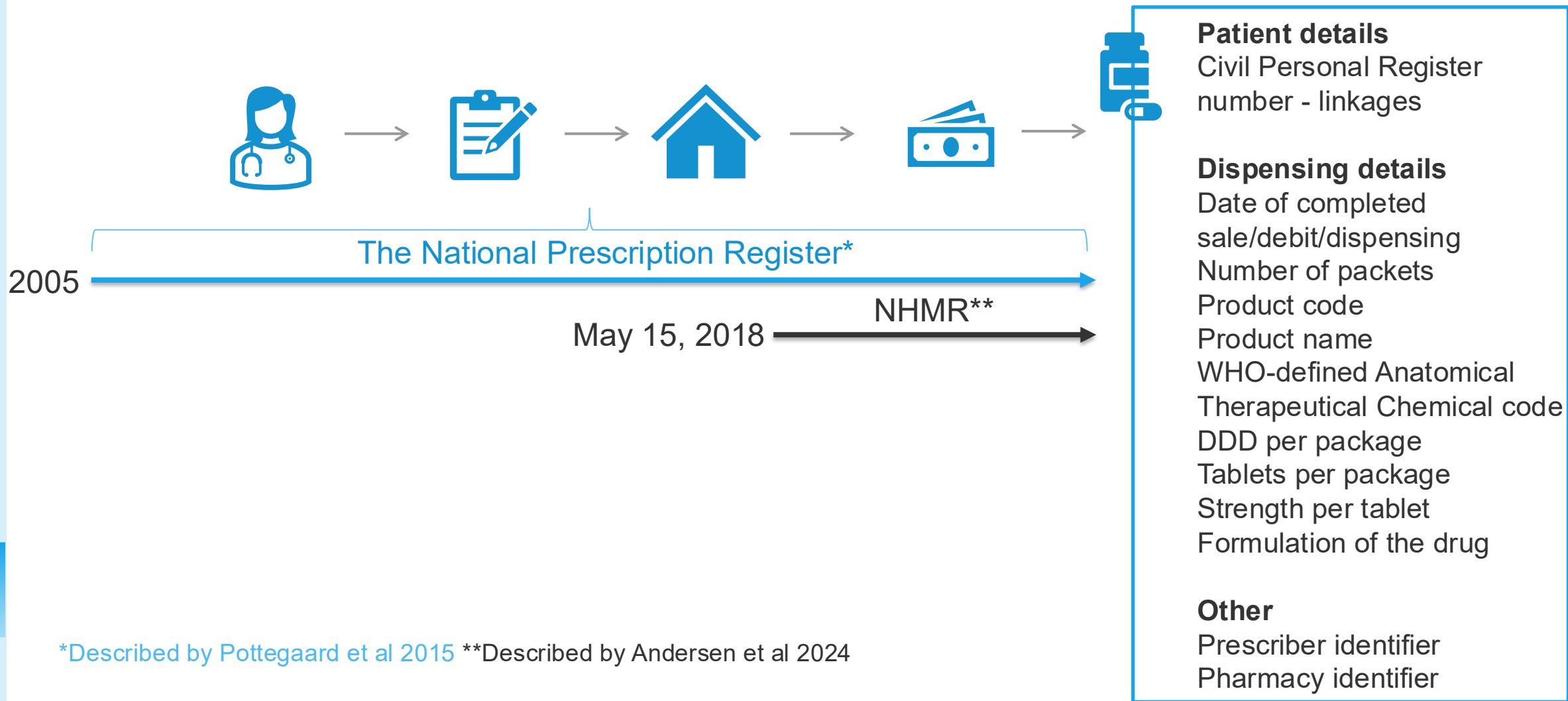
## What we know about quetiapine

- Use in Denmark well documented (Højlund et al., 2019, 2021, 2022)
  - Mostly used off-label (no approved indication)
  - Mostly initiated in primary care
- — based on prescription data only

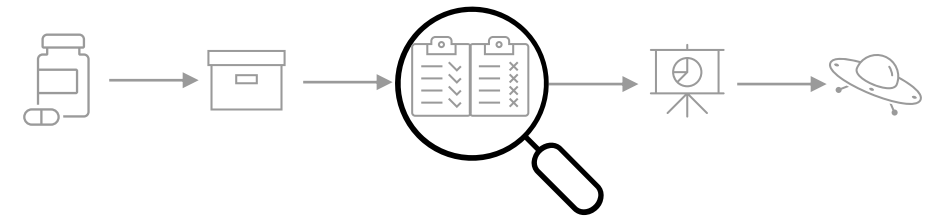
How can hospital medicine information from the NHMR add to our knowledge of quetiapine?



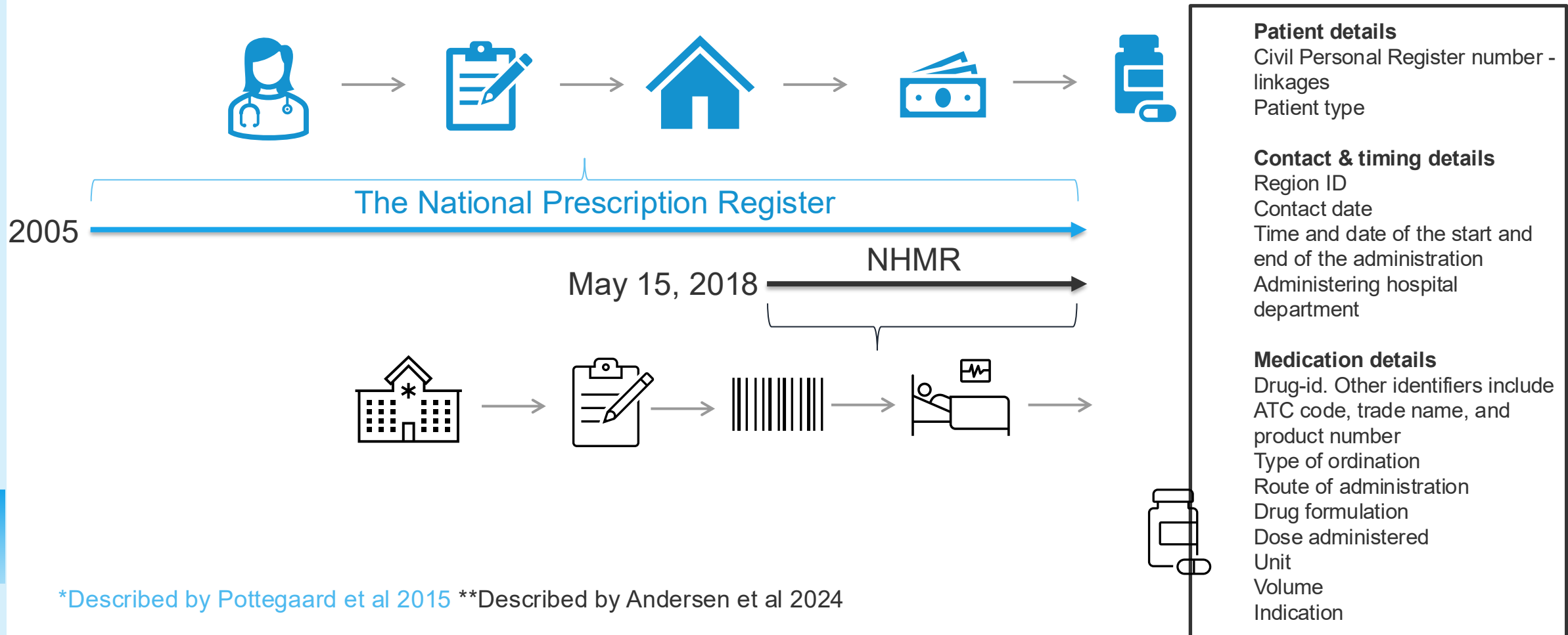
# What does the NHMR add?



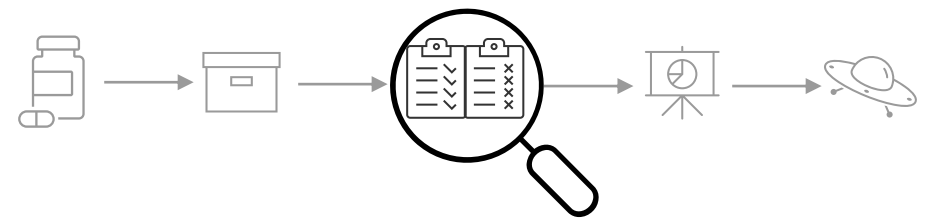
\*Described by Pottegaard et al 2015 \*\*Described by Andersen et al 2024



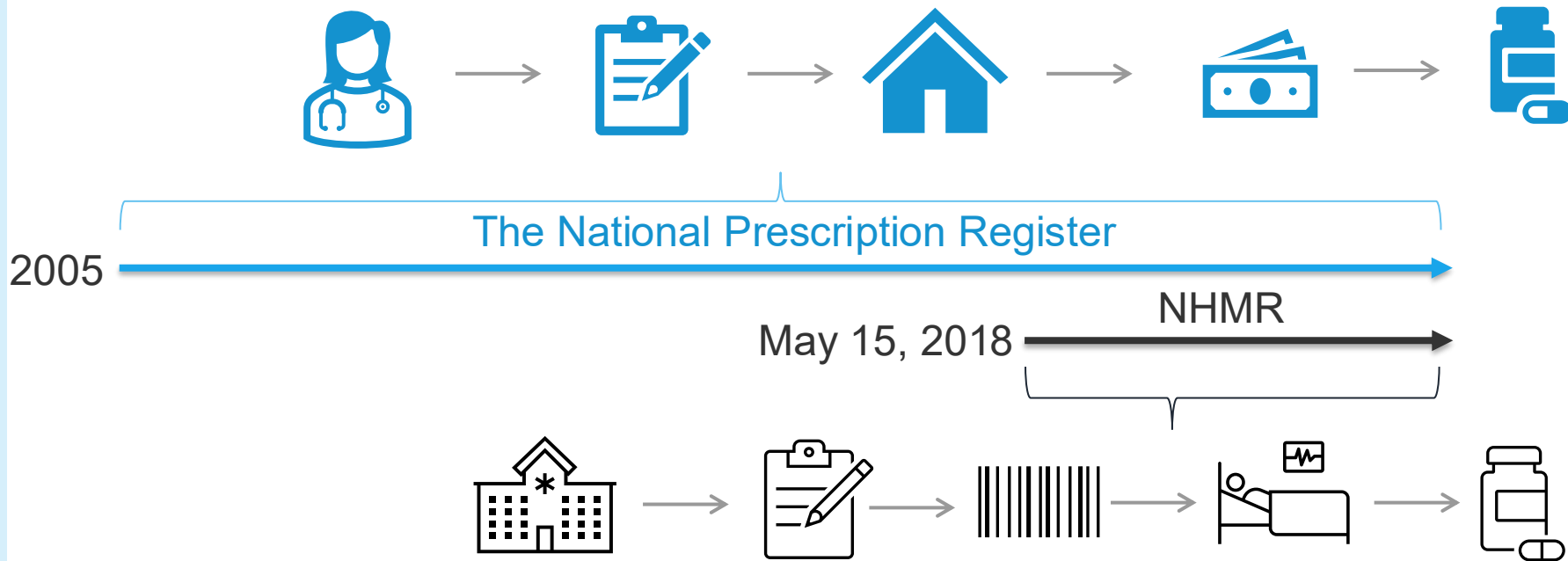
# What does the NHMR add?

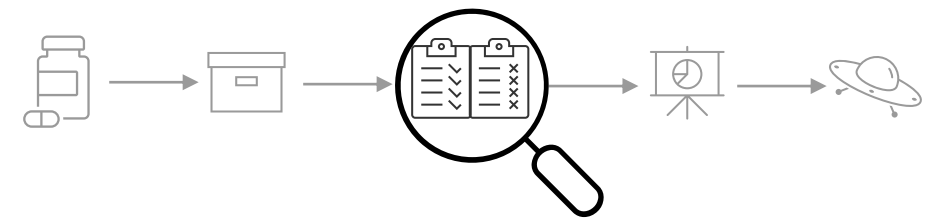


\*Described by Pottegaard et al 2015 \*\*Described by Andersen et al 2024

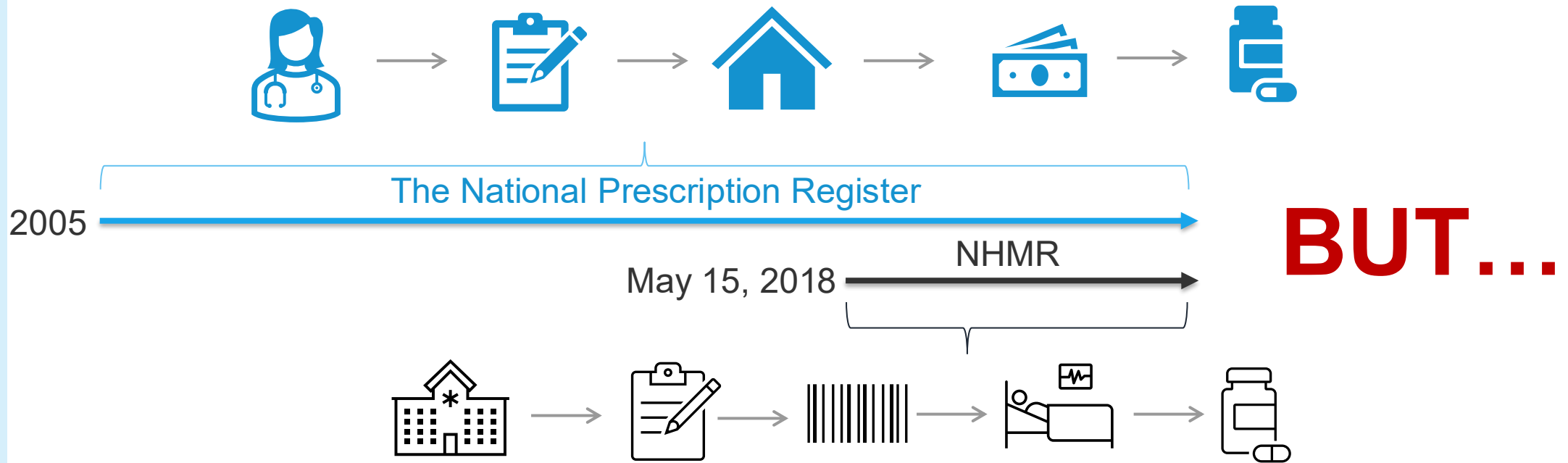


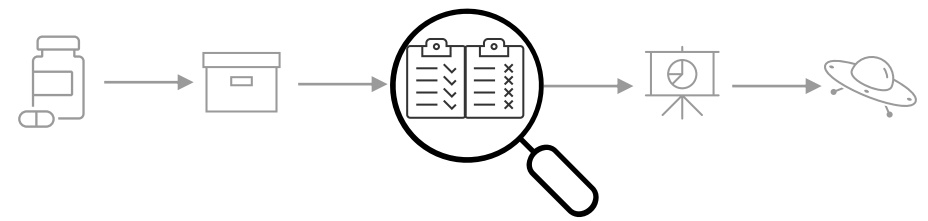
# What does the NHMR add?





# What does the NHMR add?

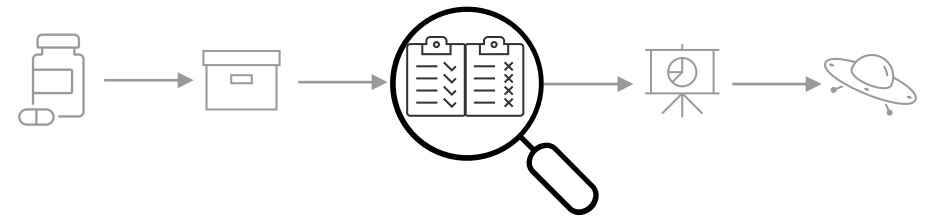




# Limitations of the NHMR



- No private hospitals or self-governt



# Limitations of the NHMR

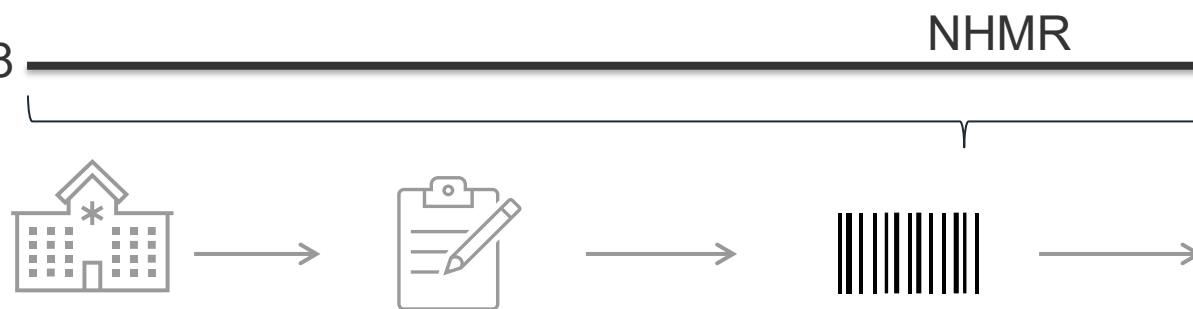


- Incomplete medication coverage:

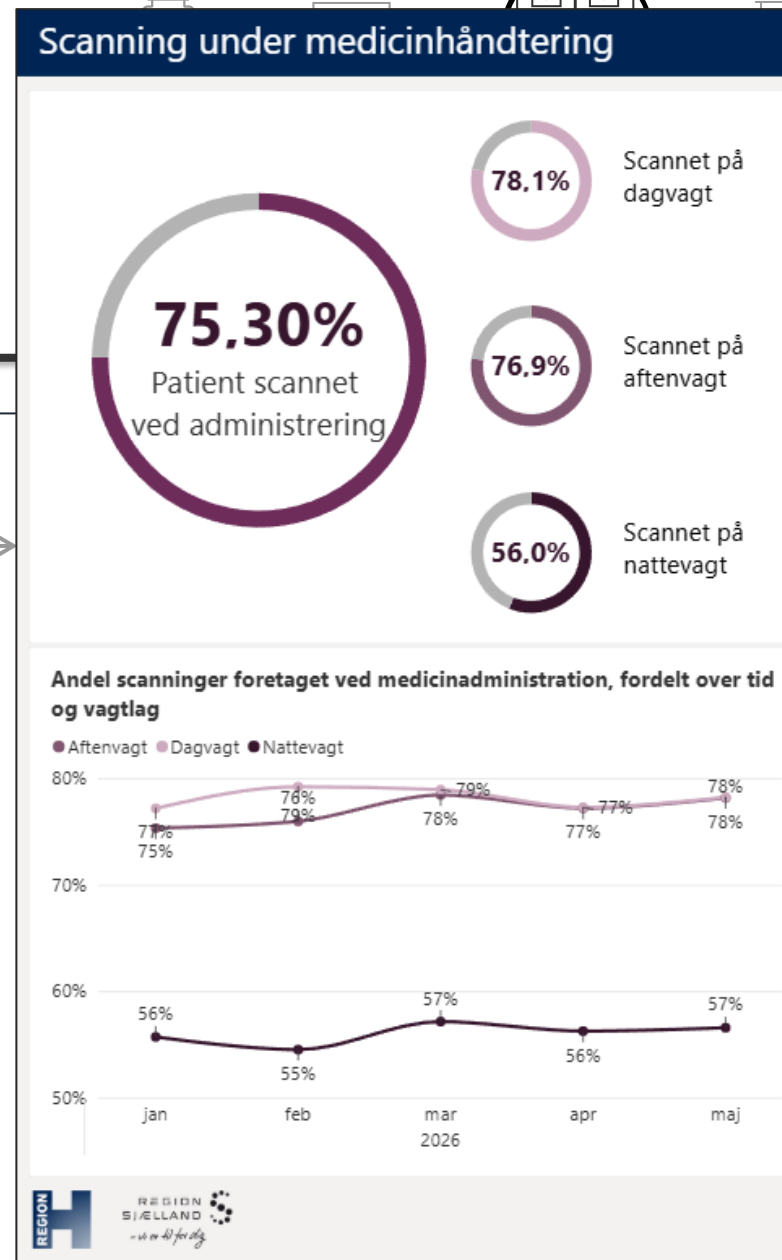
- Cancers
- Anticoagulation
- anaesthesia and intensive care units
- Ophthalmology
- Radiology and nuclear medicine
- Emergency and acute admission units

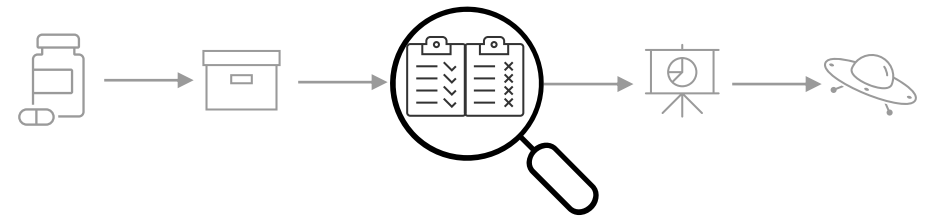
# Limitations of the NHMR

May 15, 2018



- Regional IT-differences hindering scans
- Not all medications are scanned

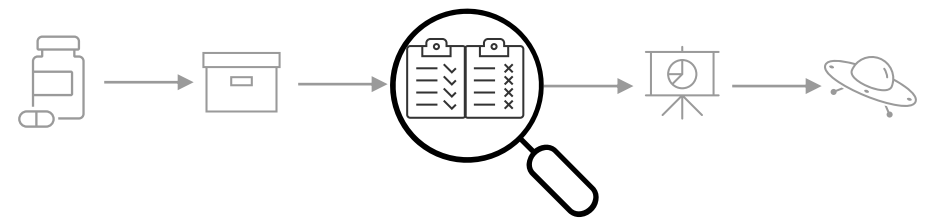




# Limitations of the NHMR



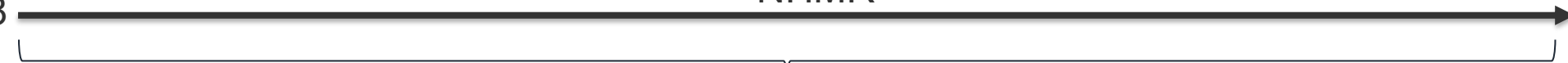
- Medication handed to patient at discharge or in outpatient clinics



# Limitations of the NHMR

May 15, 2018

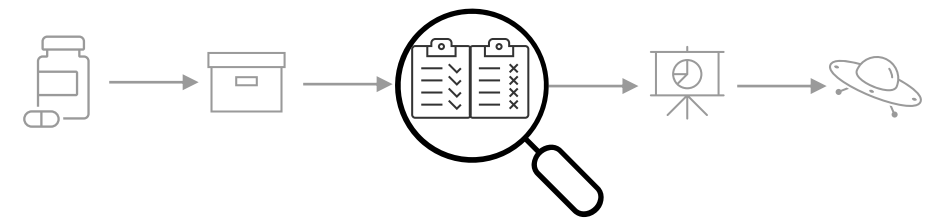
NHMR



ID	Drug	Date	Administrations
ID_1	Quetiapine	01.01.2022	1
ID_1	Quetiapine	01.01.2022	1
ID_1	Quetiapine	01.01.2022	1

Volume units=(TBL, TABL, or STK): dose=strength\*volume  
 Volume units=(Milligram or MG): dose=dose  
 Else dose=NA

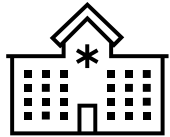
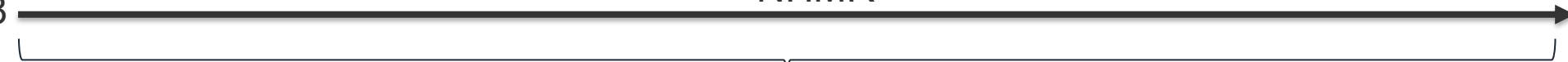
- Missing indications
- Issues in dose estimation



# Limitations of the NHMR

May 15, 2018

NHMR

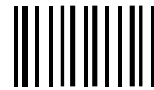


- No private hospitals or self-governt



- Incomplete medication coverage:

- Cancers
- Anticoagulation
- anaesthesia and intensive care units
- Ophthalmology
- Radiology and nuclear medicine
- Emergency and acute admission units



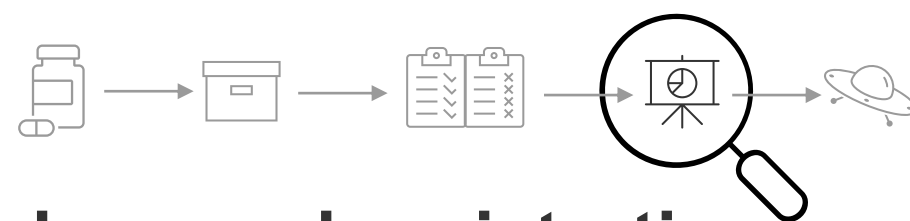
- Not all medications are scanned
- Regional IT-differences hindering scans



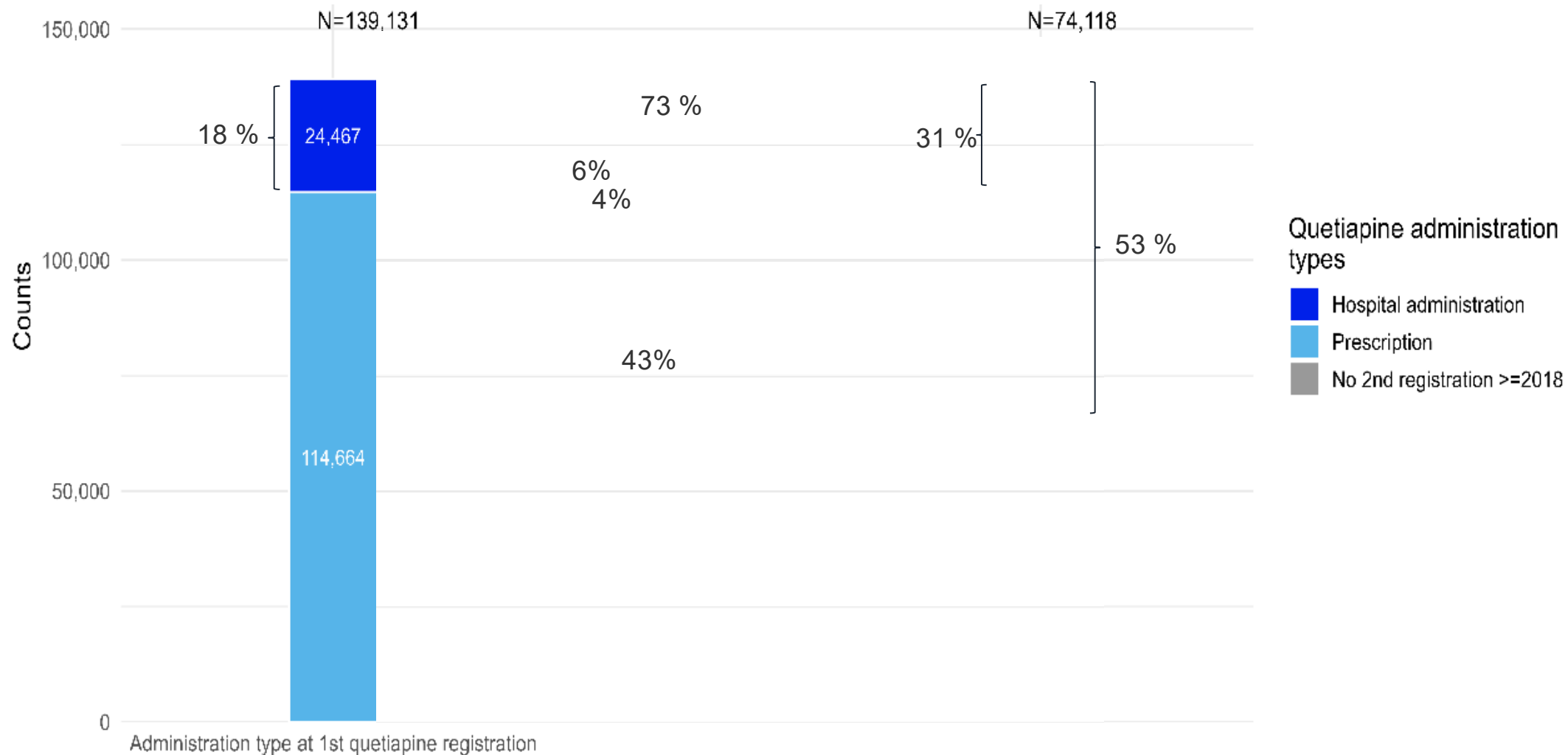
- Medication handed to patient at discharge or in outpatient clinics

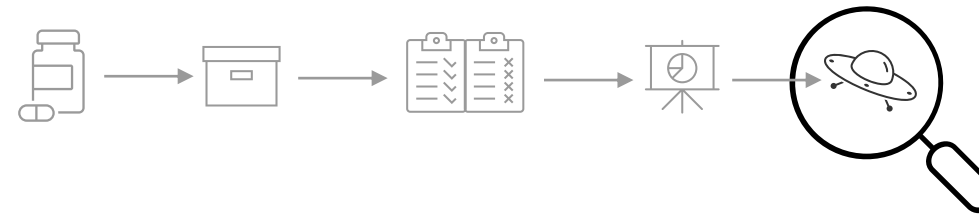


- Missing indications
- Issues in dose estimation



# Quetiapine registration type at first and second registration 2018-2024





## Future opportunities

The NHMR brings multiple future opportunities as coverage improve

Our plans combining **NHMR + National Prescription Register**:

- **Treatment lines** — capturing in-admission treatment changes; hospital-only medications now visible
- **Inequality in health** — social factors among admitted patients → who redeems the same drug after discharge? Does price matter?

Other opportunities

- Natural experiments of drug/treatment efficacy



## Closing remarks

The NHMR fills a gap — medication administered in hospital, not just redeemed at the pharmacy

Its value comes with caveats: young register, uneven coverage, variables (including indication, dose) that need careful handling

The real promise is to fully cover treatment pathways and estimate treatment efficacy

# Aknowlegdements

Janne Petersen

Merete Osler

Asta Catrine Krenchel

Sean Jonas Valdemar Marker

Aleksander Søltoft-Jensen

# Thank you for your attention