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# ABSENTEEISM, HEALTH, AND DISABILITY IN A WORKING COHORT

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# Background

- While changed employee incentives have resulted in longer work-life, disability claims are also rising at all ages

- Transitions into short and long-term disability is associated with:
  - Loss of lifetime earnings (Breslin et al. 1999)
  - Increased medical cost (Sears et al. 2012)
  - Family disruption (Eriksen 1999)
  - Psychological distress (Bultmann 2002)

- Absenteeism may be a precursor to eventual disability

- Absenteeism may be a replacement to disability

# Research Questions

- What are the patterns of absenteeism in a working cohort?
- Are the patterns of absenteeism disease-specific?
- Are patterns of absenteeism predictive of subsequent disability events?
- If so, for what diseases?
- Do workers use absenteeism as a short-term or long-term substitute for disability events when opportunities for disability are unavailable or limited?

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## Workplace Safety & Environment

- Injury experience
- Hygenius workplace samples
- Job Demand Survey
- Production/Quantity & Quality by month
- Community Health Indices (Census/BRFSS)
- Employee Engagement Survey

## Financial

- Payroll (hours)
- W-2's
- 401K and Pension
- Housing Values
- Links to SSA-household earnings, life-work and disability

## Data Vault

## Health

- OHM: Cardiovascular data, PFTS, Audiometry, and Workplace Medical Surveillance Files
- Medical Claims Files
- EAP (roll-up by plant)
- Disability claims
- Injury Management System
- Medicare Claims linked to work-life claims
- Death - NDI
- Health Risk Scores

## Demographic Data

- SSN – Childhood Locale
- Geocoded addresses
- Human Resources
- Dependent Information

# Data and Definitions

Sample:

- Continuously employed workers from seven firms
- Hourly workers
- Jan. 1 2003 – Dec. 31 2008
- 9,738 workers

Absenteeism

- Hourly shift/Payroll Data
- “Unexcused” absence

Metrics:

- Ever Absent: 2+ Consecutive Days
- Total Absent Days
- Maximum Duration
- Total Absent Spells

# Data and Definitions

Disability

- 7,396 employer-sponsored STD events
- 3,800 workers
- 40% of workers have at least one STD event
- Income coverage for disability insurance

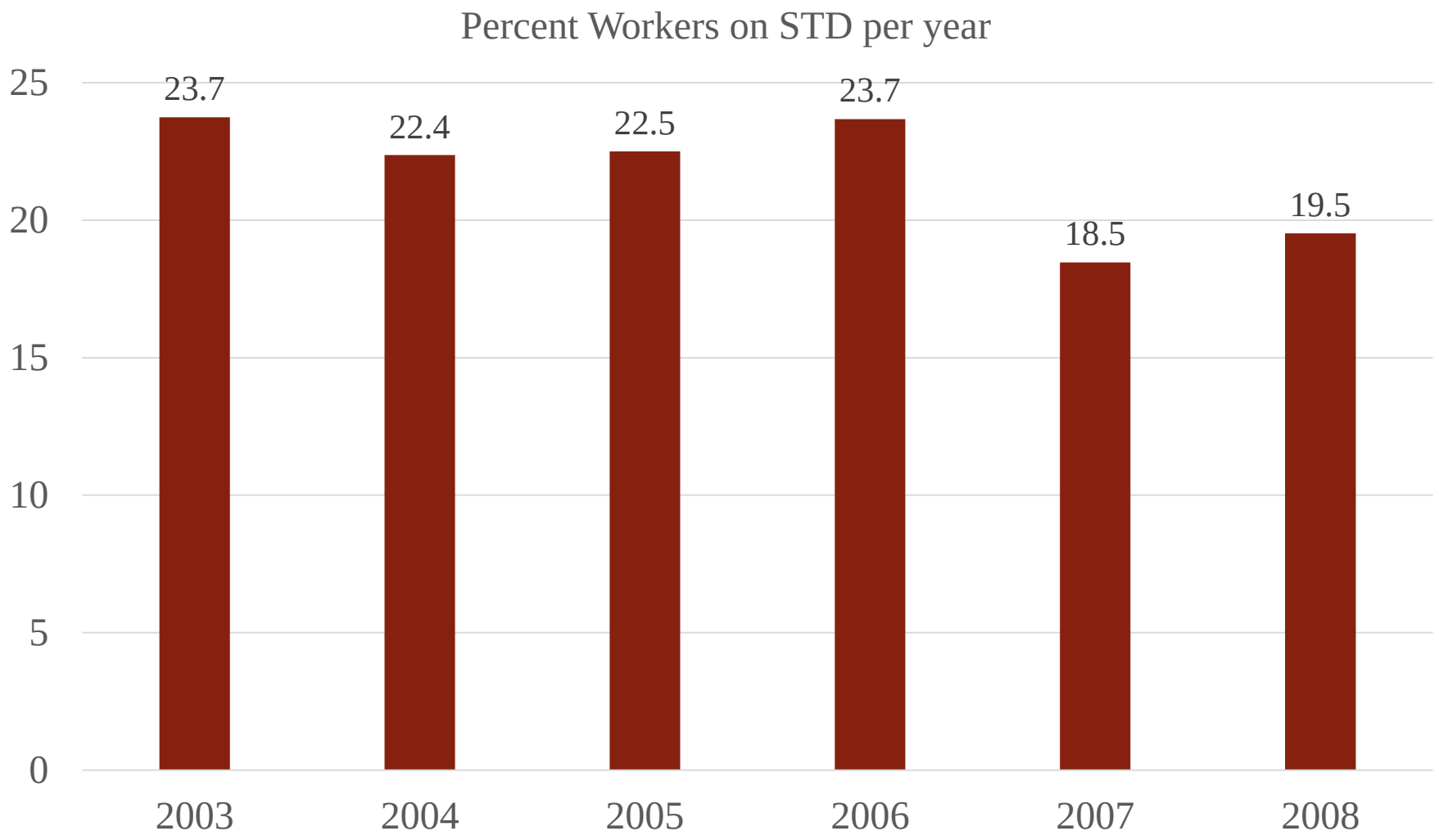
Health

- Asthma, Arthritis, Diabetes, Depression, Ischemic Heart Disease, Hypertension
- ICD-9 codes
- New diagnoses

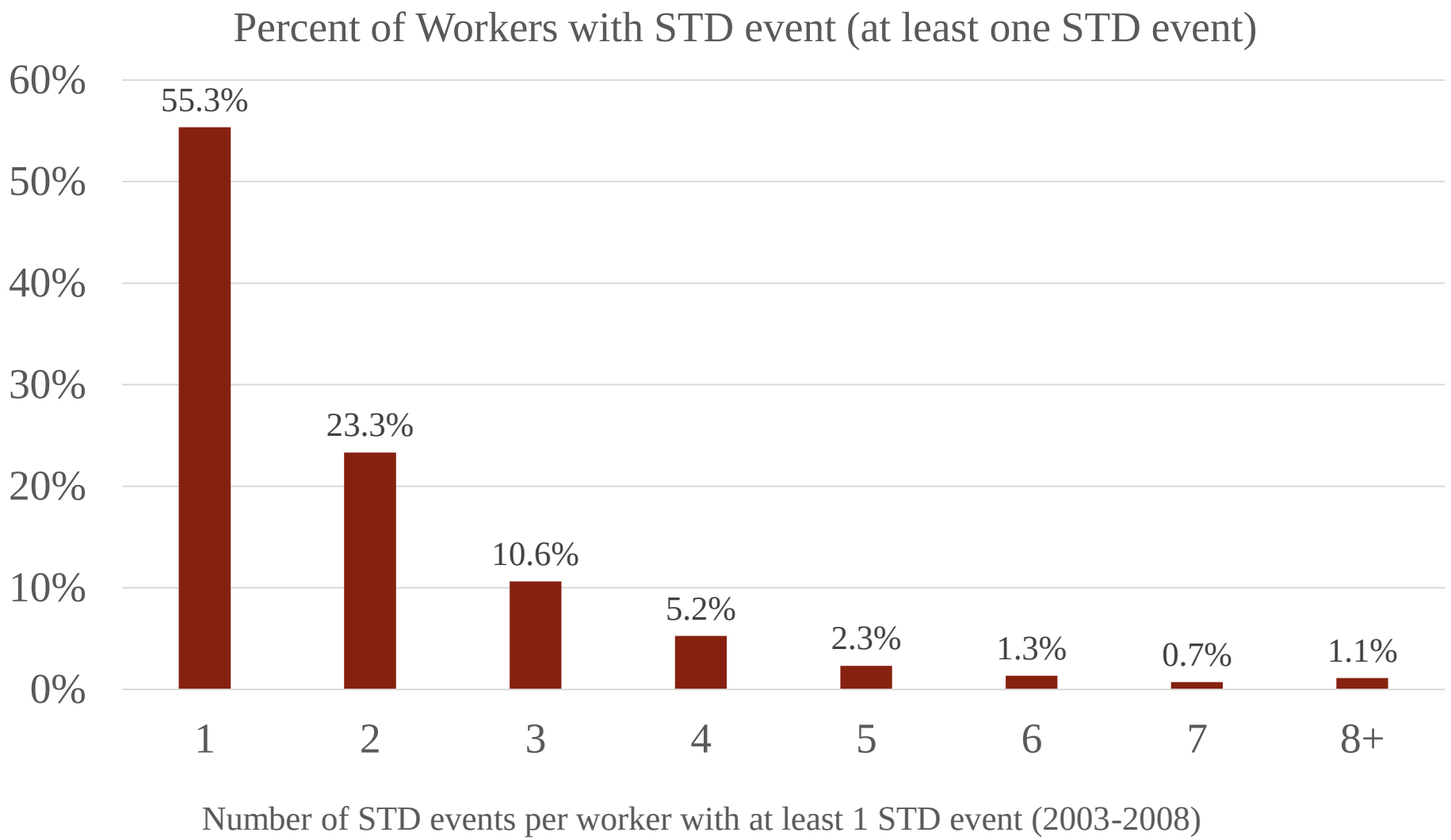
# Cohort Characteristics

| | Full Sample | With STD Event | Without STD Event |
|---|---|---|---|
| Female | 7.84% | 9.49% | 6.75% |
| White | 79.69% | 79.12% | 80.06% |
| Age (at Baseline) | 42 | 44.5 | 40.7 |
| Ever Absent 2+ consecutive days | 57.75% | 75.15% | 46.27% |
| Maximum Absent Duration (Mean) | 1.99 | 2.36 | 1.59 |
| Total Absent Days (Mean) | 5.10 | 6.20 | 4.00 |
| Has any disability insurance coverage | 96.62% | 99.51% | 94.71% |
| Coverage>=80% | 10.93% | 10.23% | 11.88% |
| 60%<=Coverage<80% | 3.84% | 4.24% | 3.30% |
| 40%<=Coverage<60% | 74.32% | 71.52% | 78.09% |
| No Coverage | 10.90% | 14.02% | 6.73% |
| | | | |
| Observations | 9,738 | 3,888 | 5,850 |

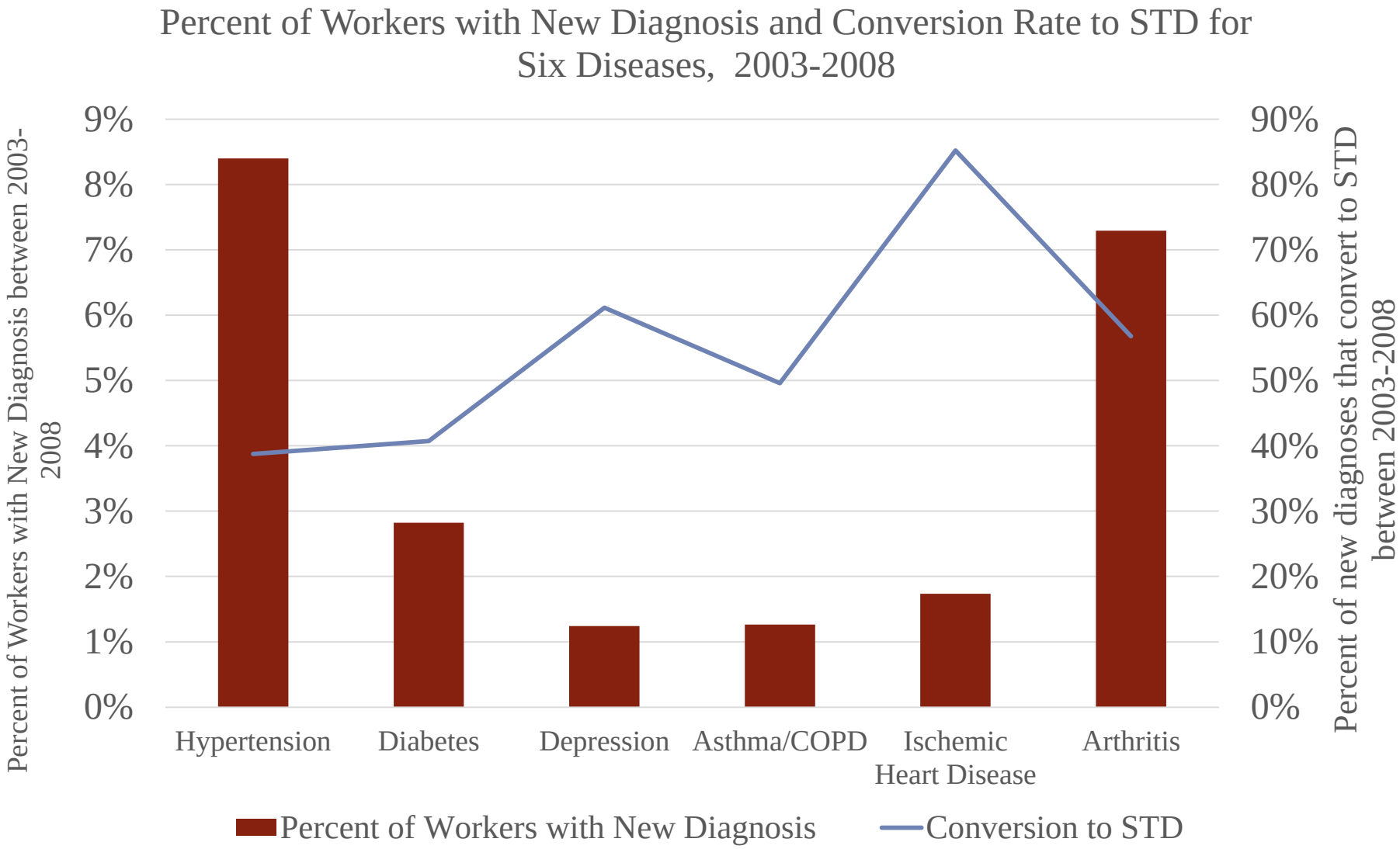
# Nearly a quarter of workers have at least one STD event in a given year



# Many workers have more than one STD event



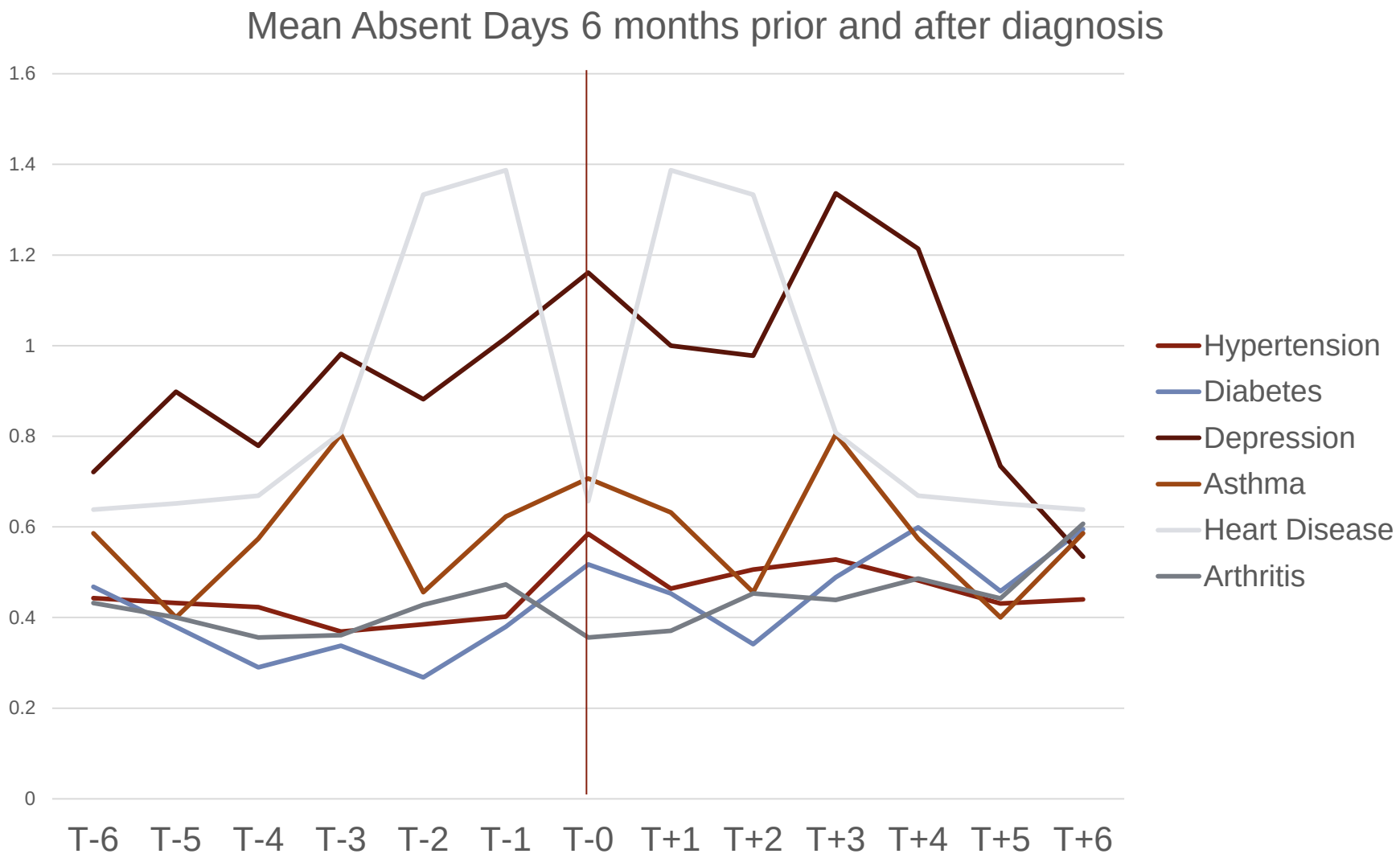
# Conversion rates for new health diagnoses are high



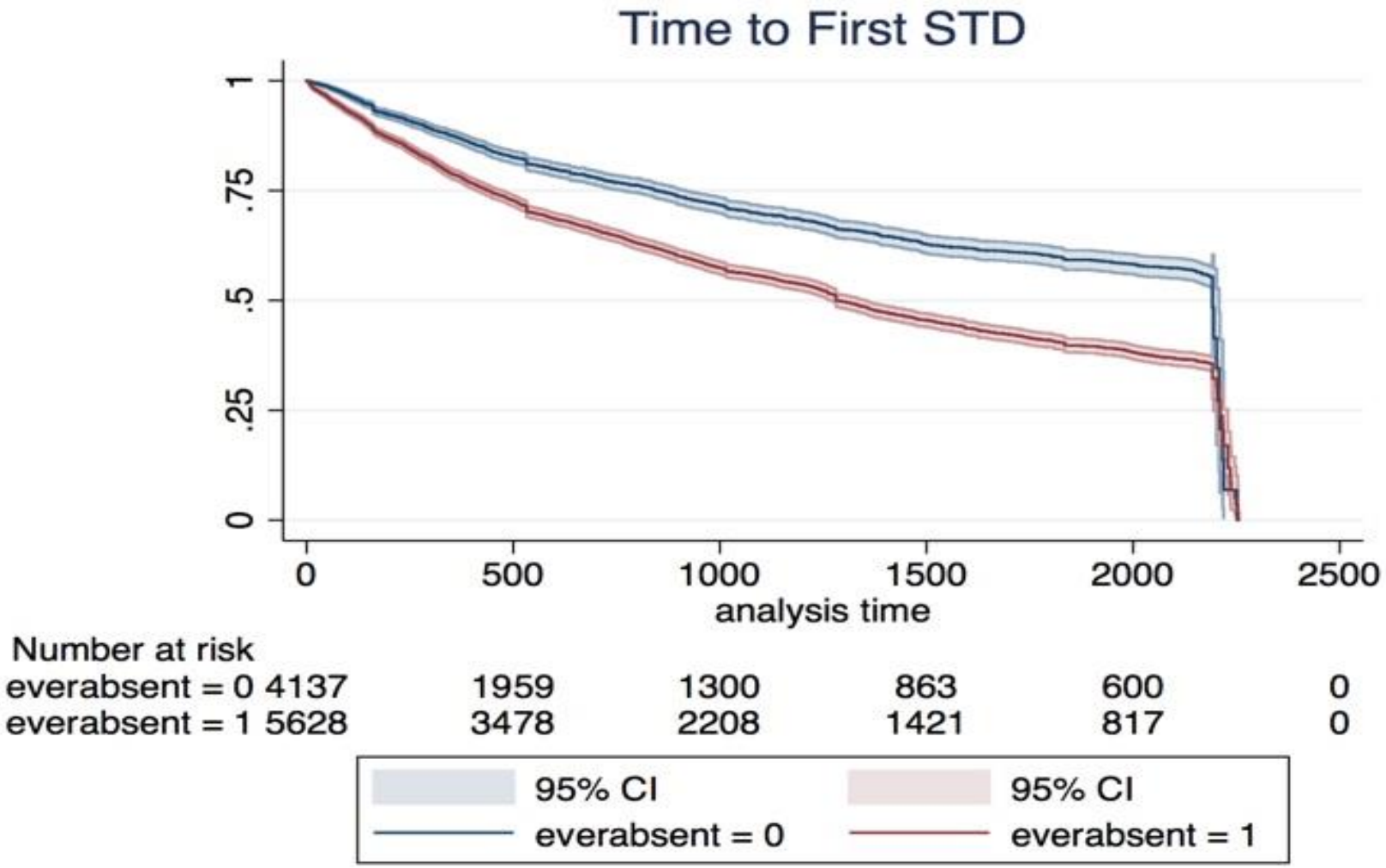
# What are the patterns of absenteeism in this working cohort?

| | (1) Full Sample | (2) With STD Event | (3) Without STD Event | (4) With 2+ days consecutive absence |
|---|---|---|---|---|
| **Ever Absent 2+ consecutive days** | 57.75% | 75.15% | 46.27% | 100% |
| **Total Absent Days (Mean)** | 5.10 | 6.20 | 4.00 | 6.6 |
| **Median Absent Days** | 2 | 3 | 2 | 4 |
| **Number of absence spells** | 2.62 | 2.98 | 2.23 | 3.19 |
| **Maximum Absent Duration (Mean)** | 1.99 | 2.36 | 1.59 | 2.51 |
| | | | | |
| **Observations (Person-Years)** | 33,161 | 17,319 | 15,842 | 24,051 |
| **Observations (Person)** | 9,738 | 3,888 | 5,896 | |

- Are the patterns of absenteeism disease-specific?



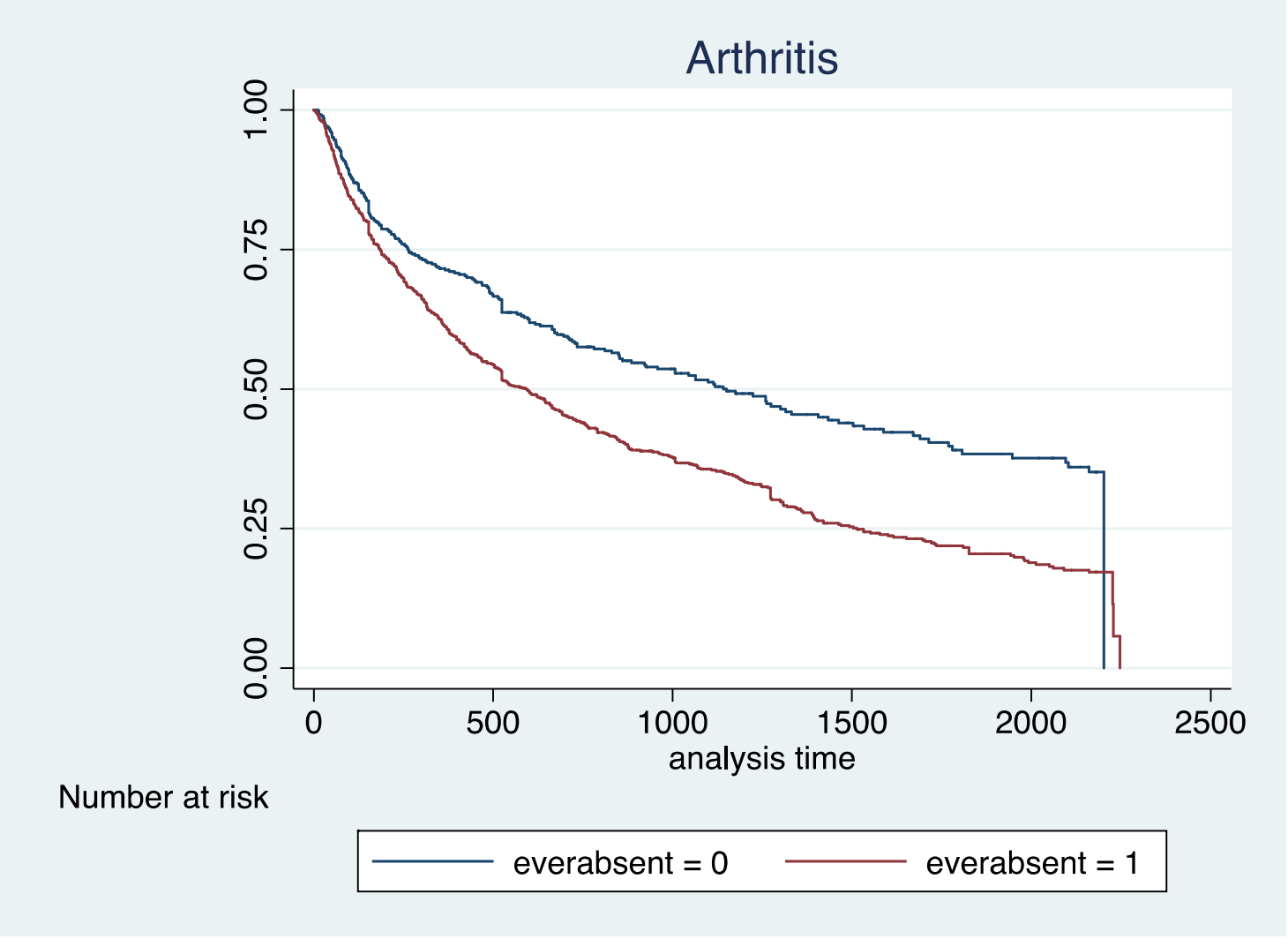
# Are patterns of absenteeism predictive of subsequent disability events?



# Are patterns of absenteeism predictive of subsequent disability events?

| | (1)<br>Time to First STD | (2)<br>Time to Any STD (Multiple Failures) |
|---|---|---|
| | | |
| **Ever Absent (2+ days)** | 1.67*** | 1.81*** |
| **Maximum Duration of Absence** | 1.03*** | 1.02*** |
| **Number of Spells** | 1.004*** | 1.006*** |
| **Have Disability Insurance** | 1.853*** | 1.94*** |
| **Person Observations** | 9,738 | 9,738 |

# If so, for what diseases?



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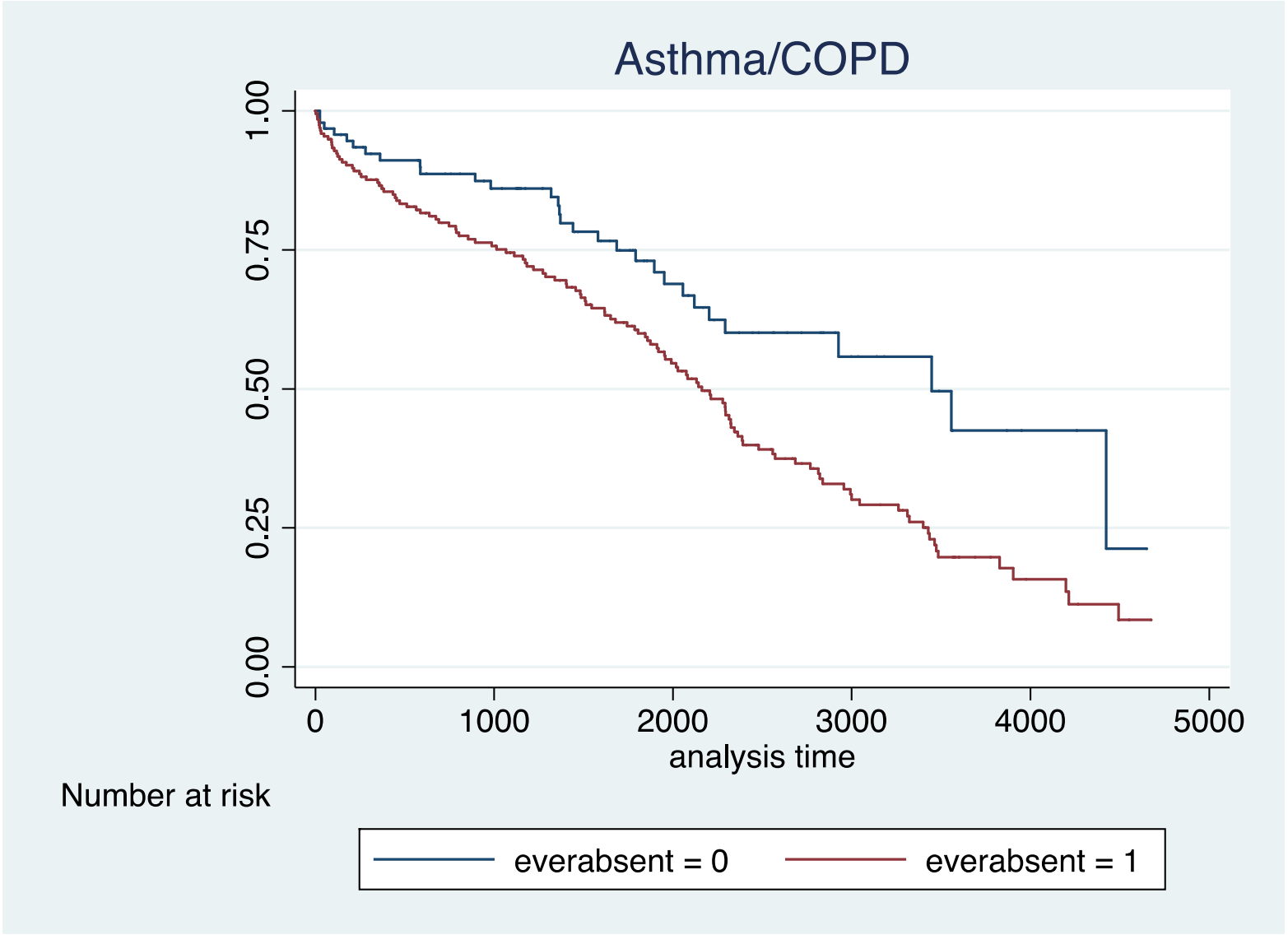

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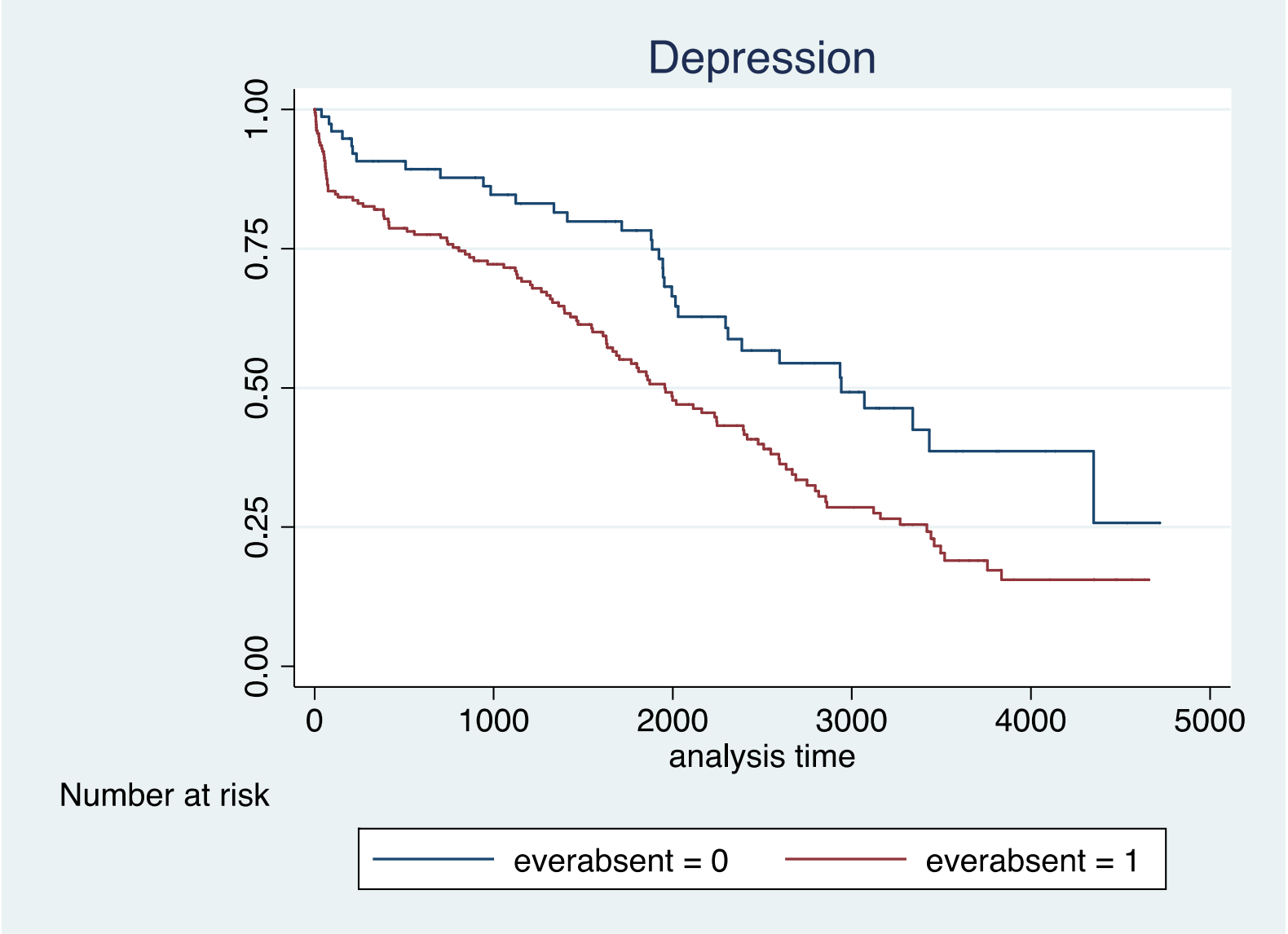

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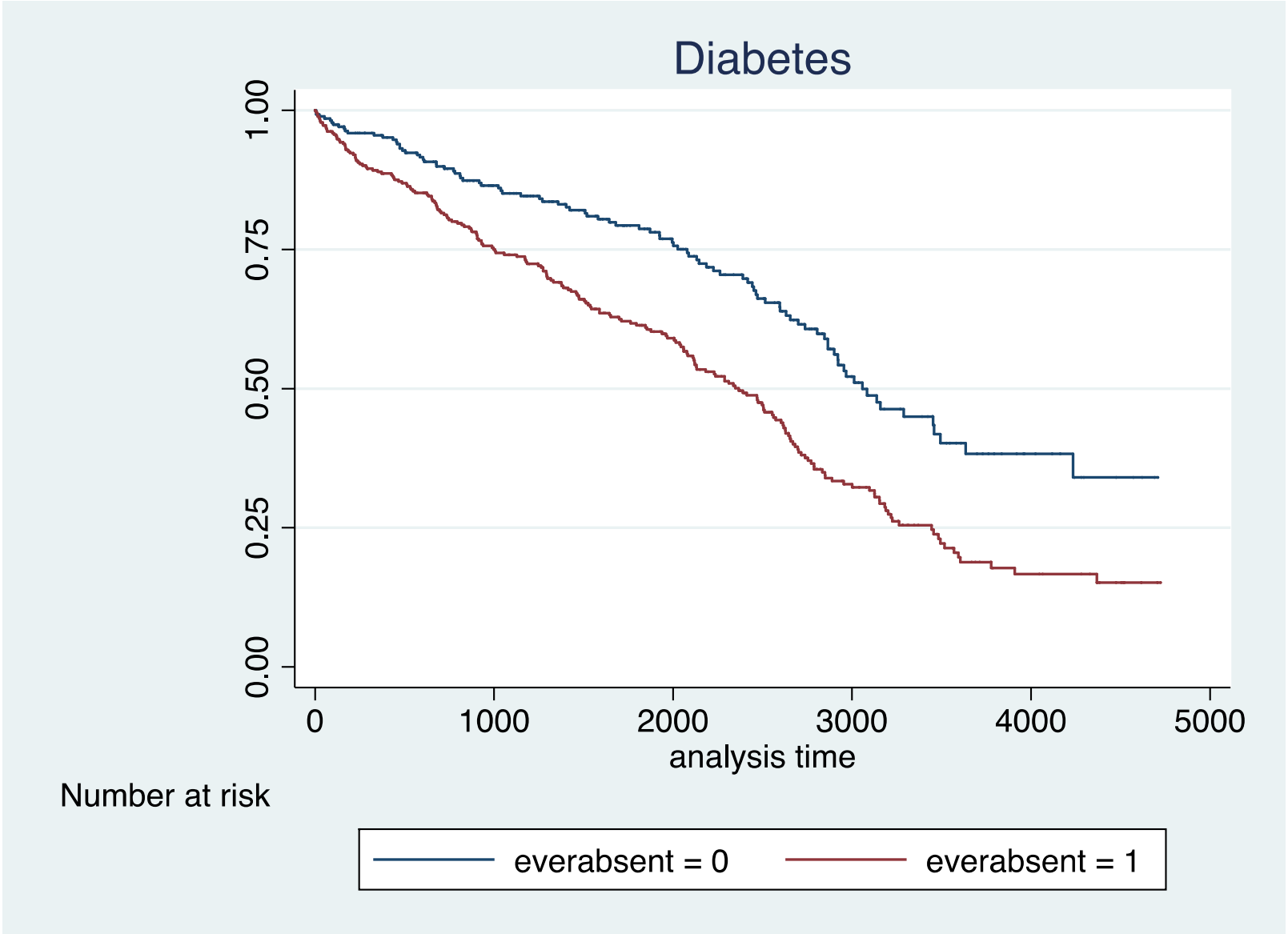

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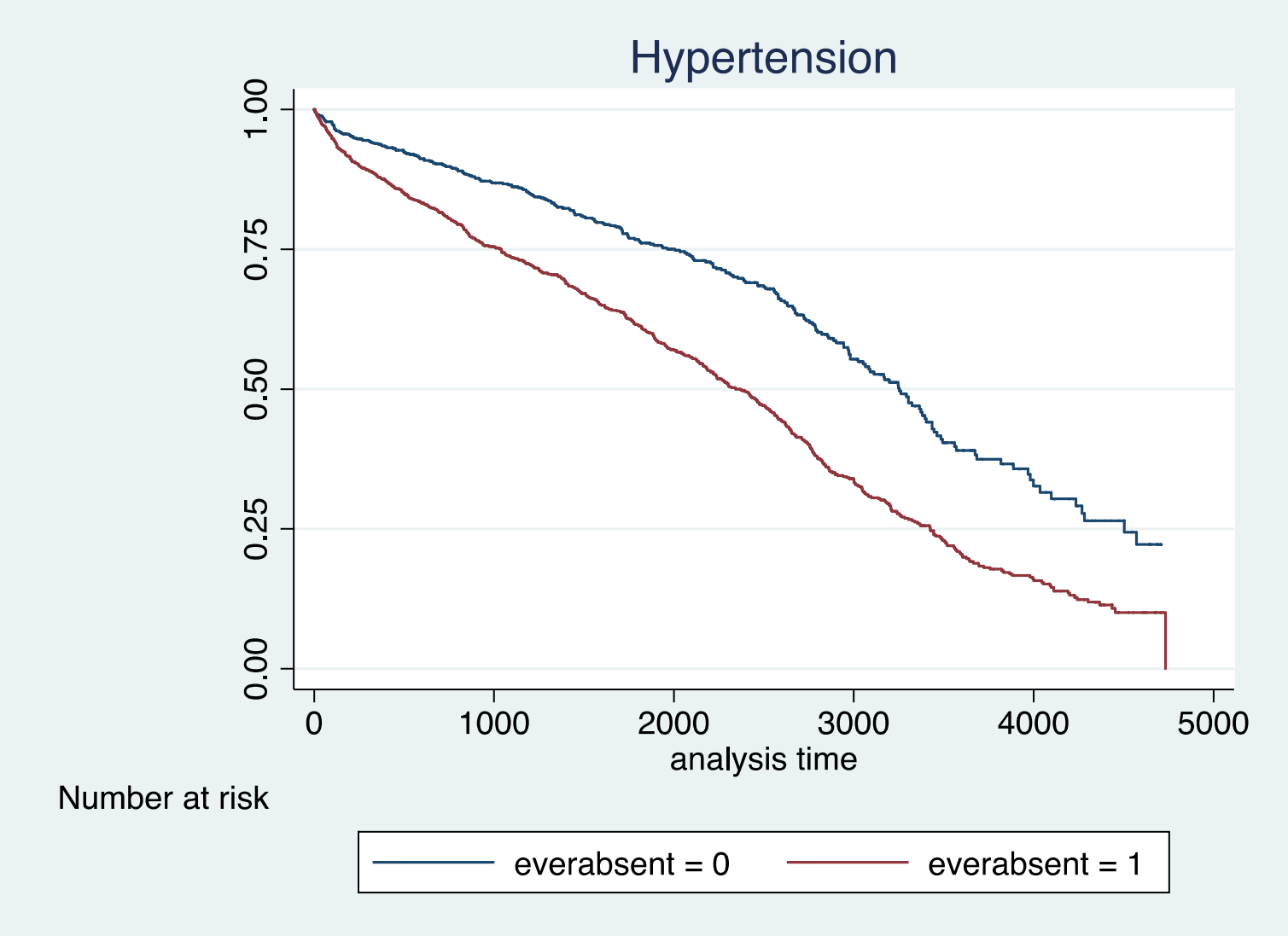

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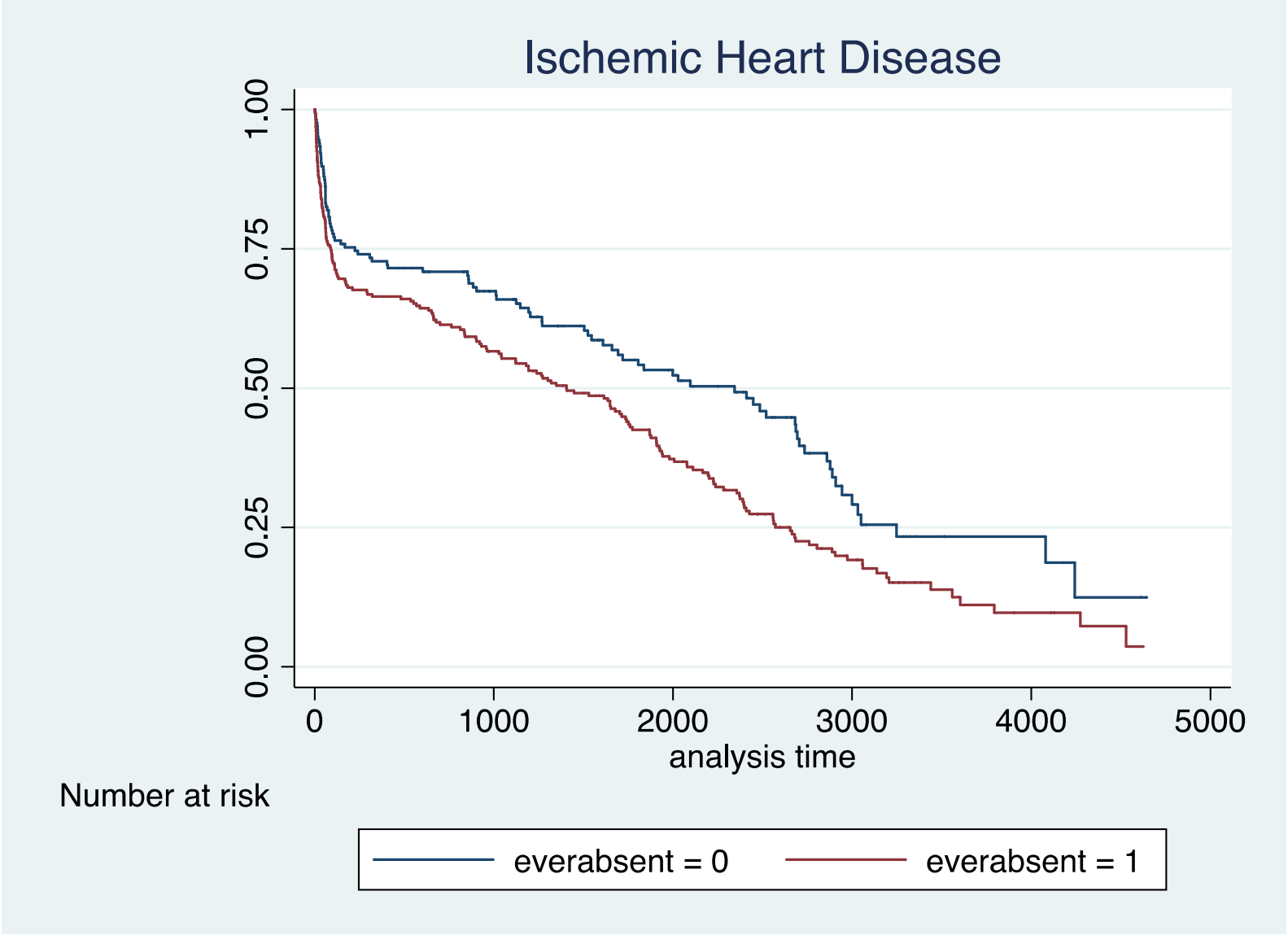
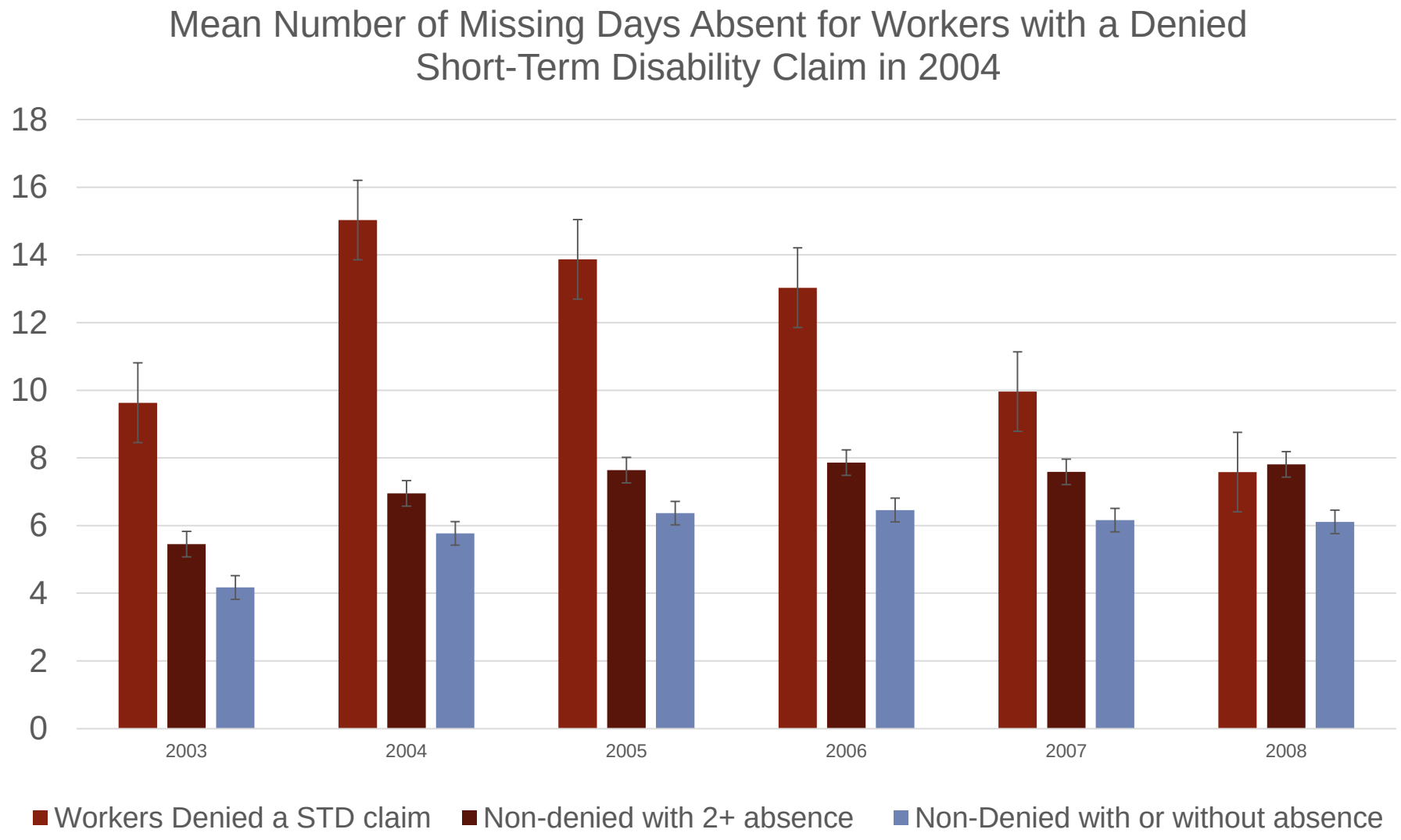


# If so, for what diseases?

| | All Diseases | Arthritis | Hypertension | Diabetes | Depression |
|---|---|---|---|---|---|
| **Ever Absent (2+ days)** | 1.2968*** | 1.215 | 1.663*** | 1.454 | 1.621 |
| **Maximum Duration of Absence** | 1.0262** | 1.02*** | 1.019** | 1.080*** | 1.04 |
| **Number of Absenteeism Spells** | 1.002 | 1.009*** | 1.002 | 0.987 | 1.019** |
| **Insurance Coverage** | 1.638*** | 2.191 | 1.332 | 1.171 | 0.316 |
| **Number of Person-Year Observations** | 13,655 | 4,891 | 8,174 | 2,409 | 939 |
| **Number of Unique Workers** | 1,593 | 710 | 818 | 275 | 121 |

# Do workers use absenteeism as a substitute for disability?



# Conclusions

- Clear differences in absenteeism for those workers with STD events
- Absenteeism is predictive of subsequent disability events
- There is limited evidence of differences in disease-specific patterns
- Absenteeism may be a substitute when disability leave is not available

# Thank you!

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