The problem of long duration claims

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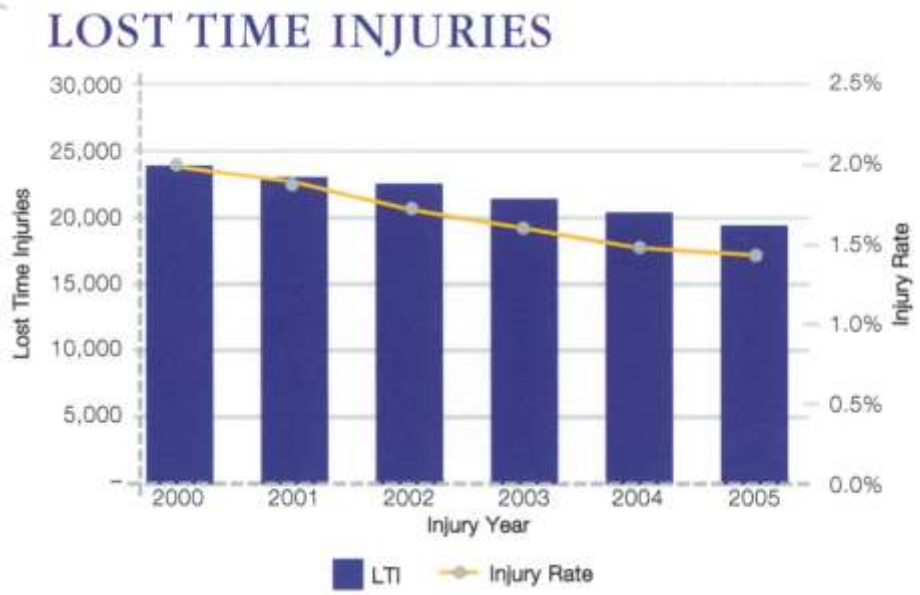
Outline

The Problem
Four Hypotheses

Our Questions
Methods
Findings to Date

Next Steps

Decreasing Claim Rate
~
Increasing Days Compensated



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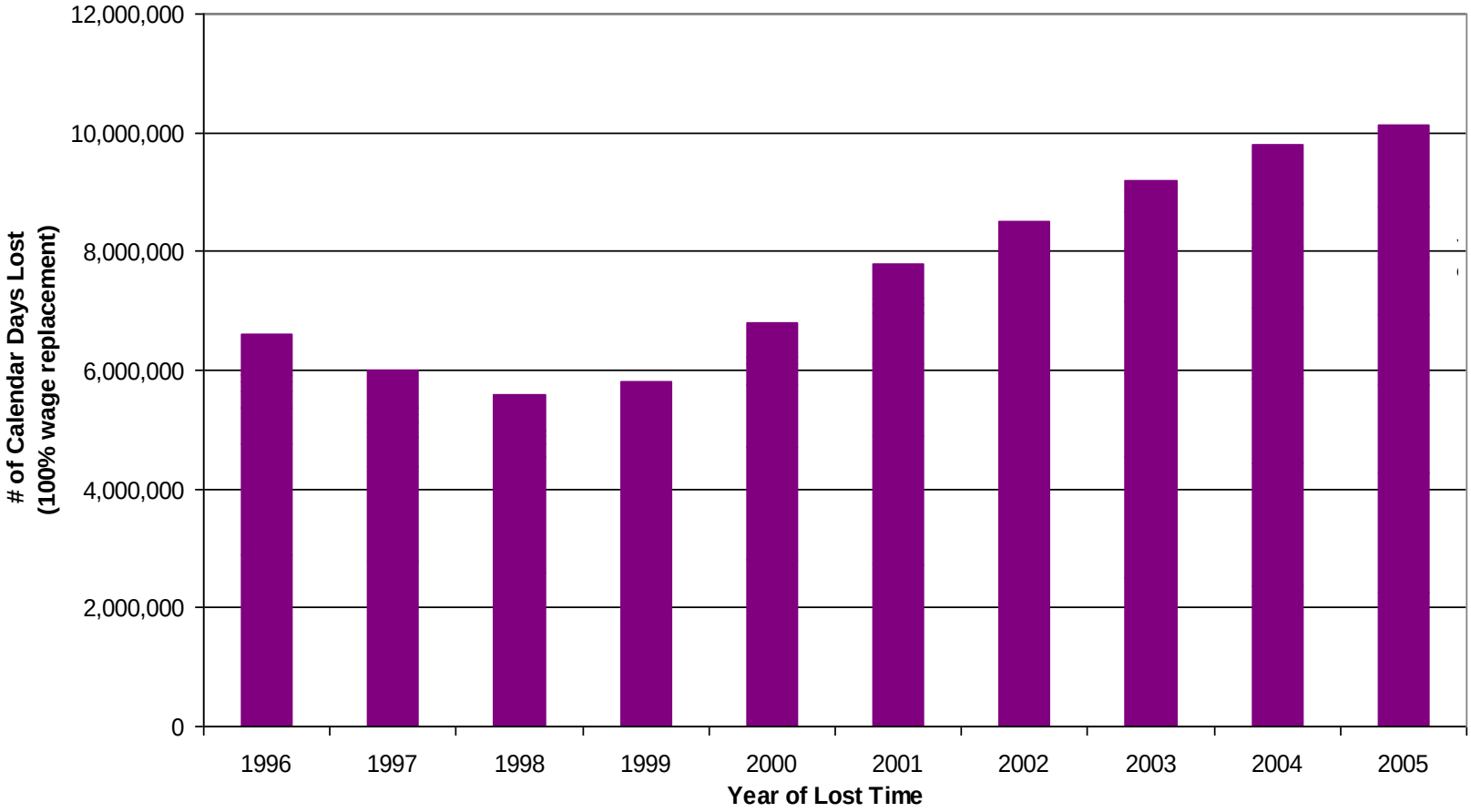
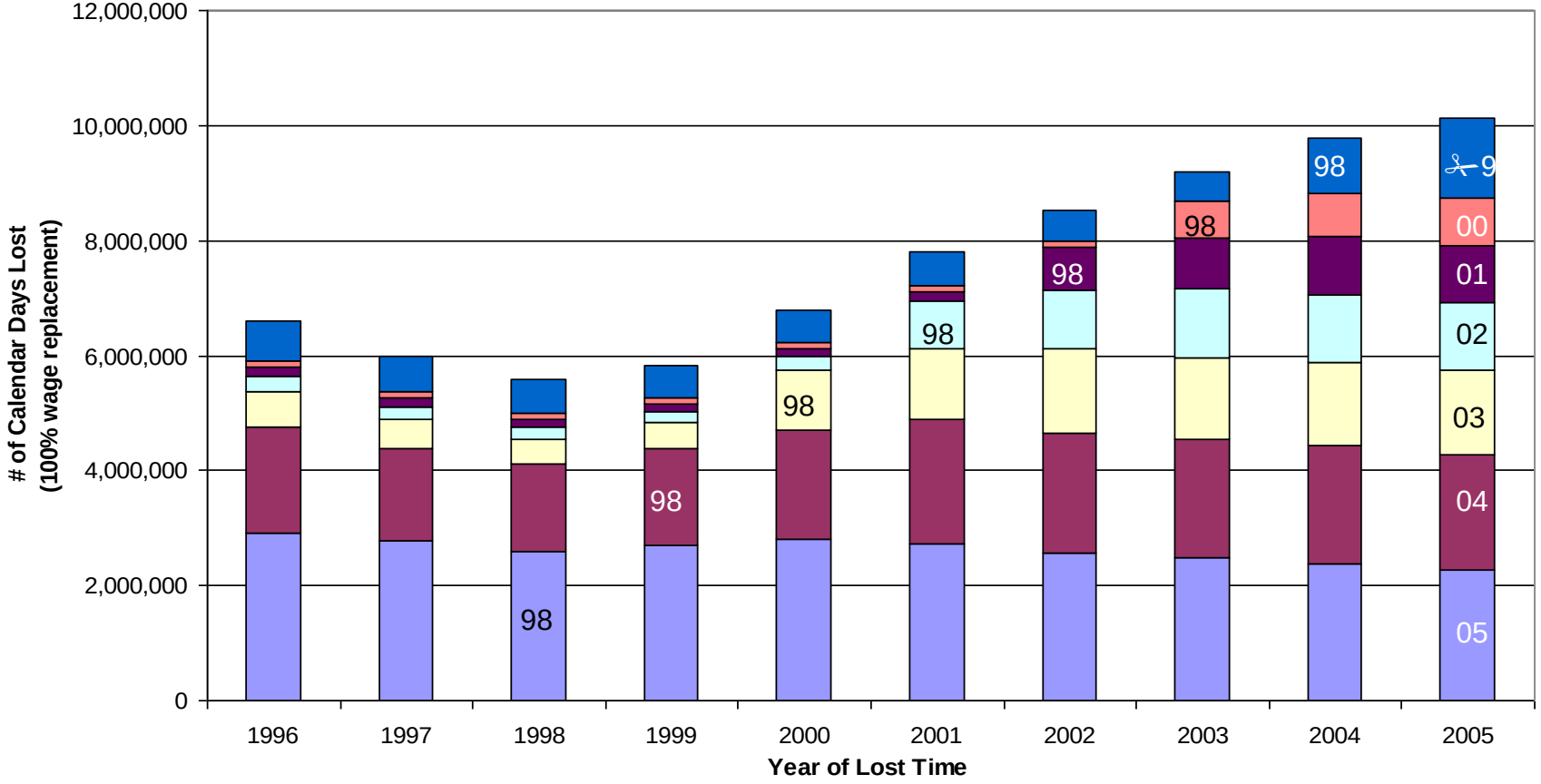
Ontario Service Safety Alliance *2005 Annual Report*

Total Annual Days Lost From All Sectors from 1996-2005



100% TT Benefits (Bill 162) and 100% LOE Benefits (Bill 99)

Total Annual Days Lost Rising in All Sectors from 1997-2005 Split by Year of Accident



'98' symbol tracks claims with date of accident in 1998
100% TT Benefits (Bill 162) and 100% LOE Benefits (Bill 99)

What Do You Think Is Happening?

Four Hypotheses

Denominators
- Increases in days compensated a phenomenon of denominator used to examine (LT claims)

Injury Severity
- Increasing severity of claims over time which explain the increases in long duration

Changing Work Environment
- Changes in economy from manufacturing to information base
- New challenges/barriers for RTW

Policy Change
- Introduction of Bill 99 in 1998 led to changes in policy and operational practices

Legislative Background

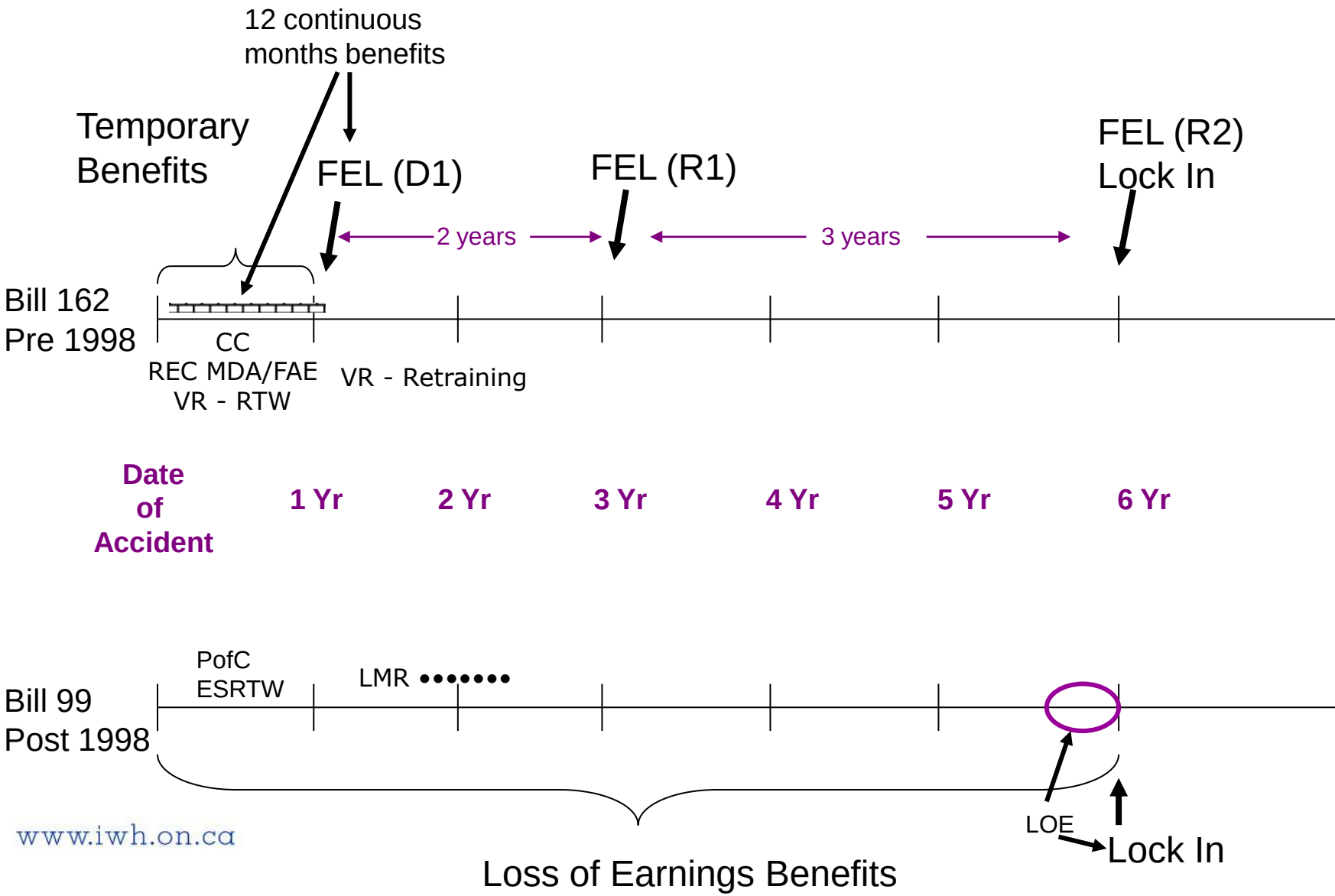
Workplace Safety & Insurance Act, January 1998
intended to reduce unfunded liability ($10.7 billion)

increased emphasis on prevention
expanded experience rating programs
shifted RTW responsibility from Workplace Safety & Insurance Board (WSIB) to employers and workers

structure of wage replacement benefits changed

outsourced Vocational Rehabilitation, renamed Labour Market Re-entry (LMR)

consolidated adjudicator role - one-person service delivery model


12 continuous months benefits
Temporary Benefits
FEL (D1)
FEL (R1)
FEL (R2) Lock In
2 years
3 years
Bill 162 Pre 1998
CC
REC MDA/FAE
VR - RTW
VR - Retraining
Date of Accident
1 Yr
2 Yr
3 Yr
4 Yr
5 Yr
6 Yr
Bill 99 Post 1998
PofC
ESRTW
LMR
LOE
Lock In
Loss of Earnings Benefits

Research Questions

Has the duration of claims increased over time?

Are more claims locking in?

Can these changes be explained by changes in injured worker attributes, injury attributes or firm attributes?

(severity, changing work environment)

What are the predictors of long duration claims?

Study Population & Sample

Accepted lost time claims

Date of accident Jan 1, 1990 to Dec 31, 2001
(this allowed six years follow-up for all claims at data extraction)

Schedule 1

Excluded fatal, serious injury and disease claims

Stratified random sample of 10% of claims per accident year

Measures

Outcomes

"locked-in" status – whether claimant becomes locked in to their benefits until retirement age, decided at ~ 6 years post-accident

"long duration" – cumulative calendar days on benefits up to 72 months post-accident

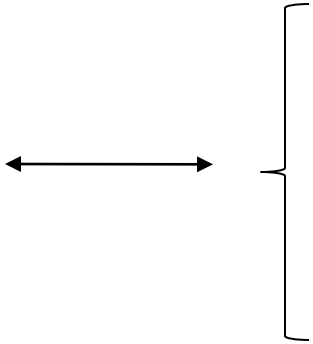
Measures

Explanatory Variables

Worker demographics

Injury Descriptors

Firm attributes



Severity

Barriers to recovery

Changing work environment

Year of accident (change in policy in 1998)

Indicators of claim process and adjudication

Analysis

How have key baseline attributes changed over time

How have “locked in” and “cumulative duration” changed over time

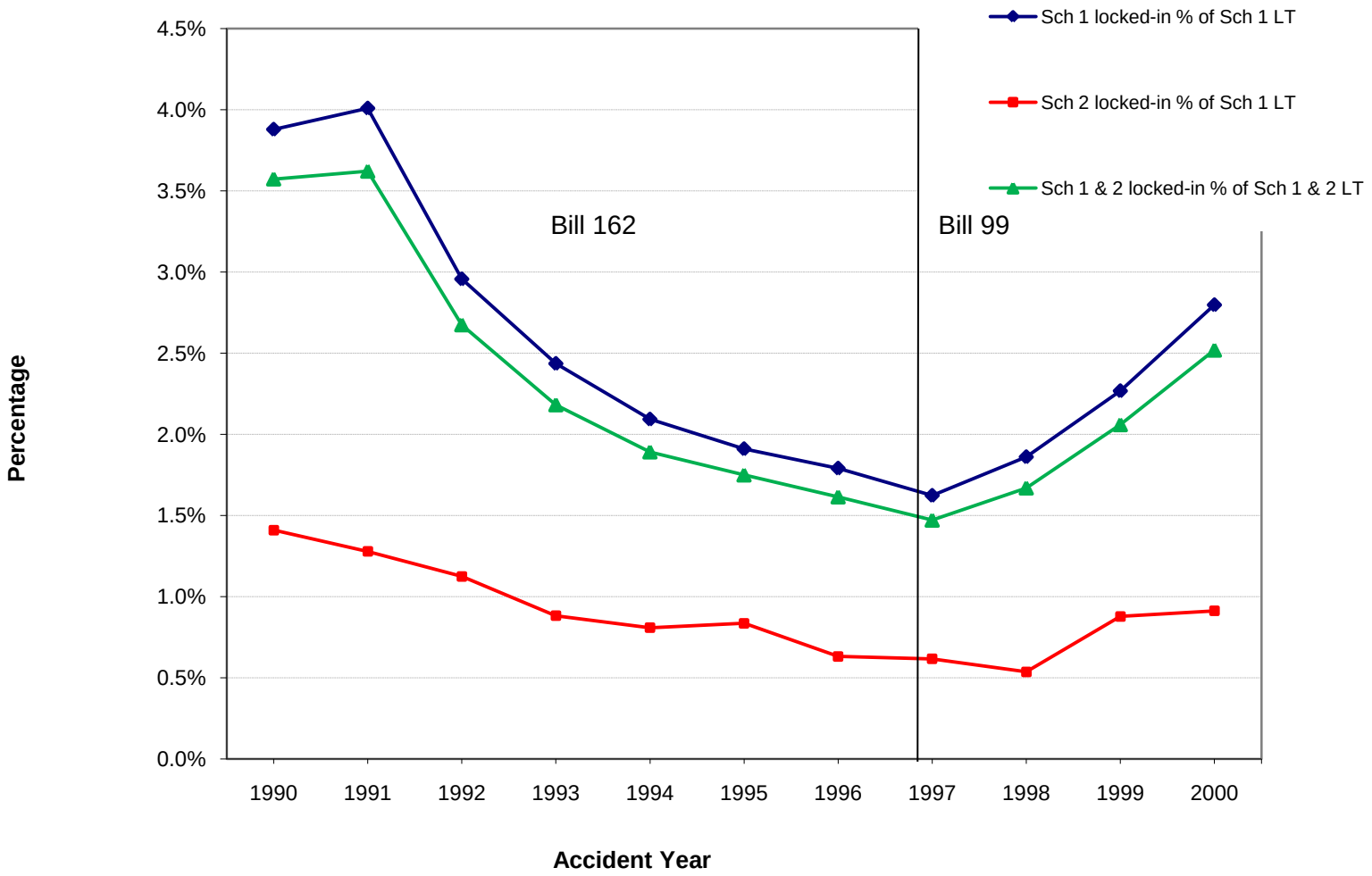
What is the proportion locking in
- by accident year
- by accident year, accounting for baseline attributes

What is mean cumulative duration of wage replacement
- by accident year
- by accident year, accounting for baseline attributes

Findings (So Far)

Description of the Sample - Outcomes

Locked-in Claim Trends as a Percentage of LT Claims



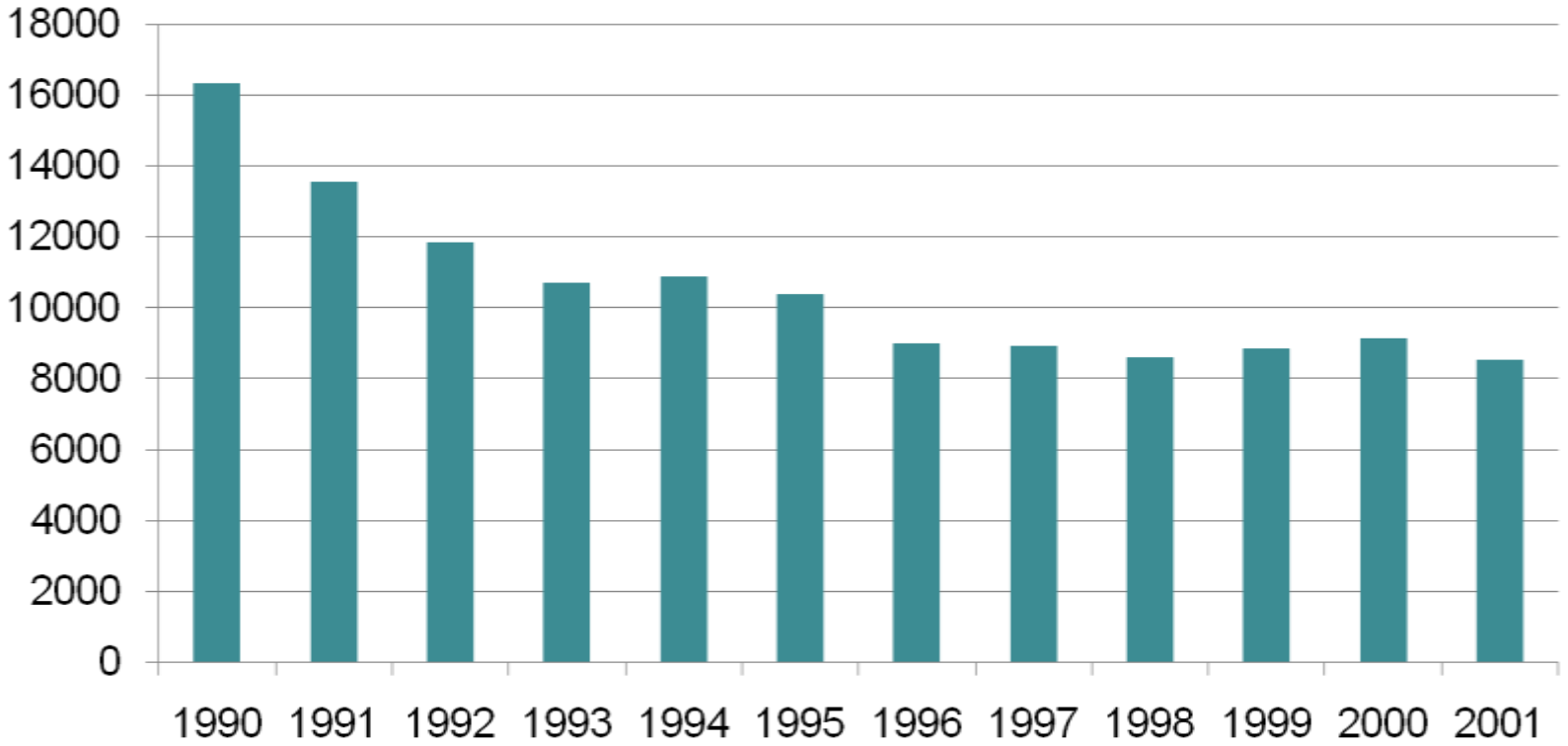
Cumulative Duration 100% Wage Replacement Accident Date to Six Years

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
5%ile	1	1	1	1	1	1	1	1	1	1	1	1
25%ile	5	5	5	5	5	4	4	4	4	4	4	4
50%ile	14	14	15	14	13	12	11	10	10	11	10	10
75%ile	56	63	63	57	49	44	42	37	37	39	38	39
90%ile	290	308	244	182	152	136	123	113	119	142	142	158
95%ile	531	492	445	398	364	312.2	281	263	288.8	412.3	511.4	641

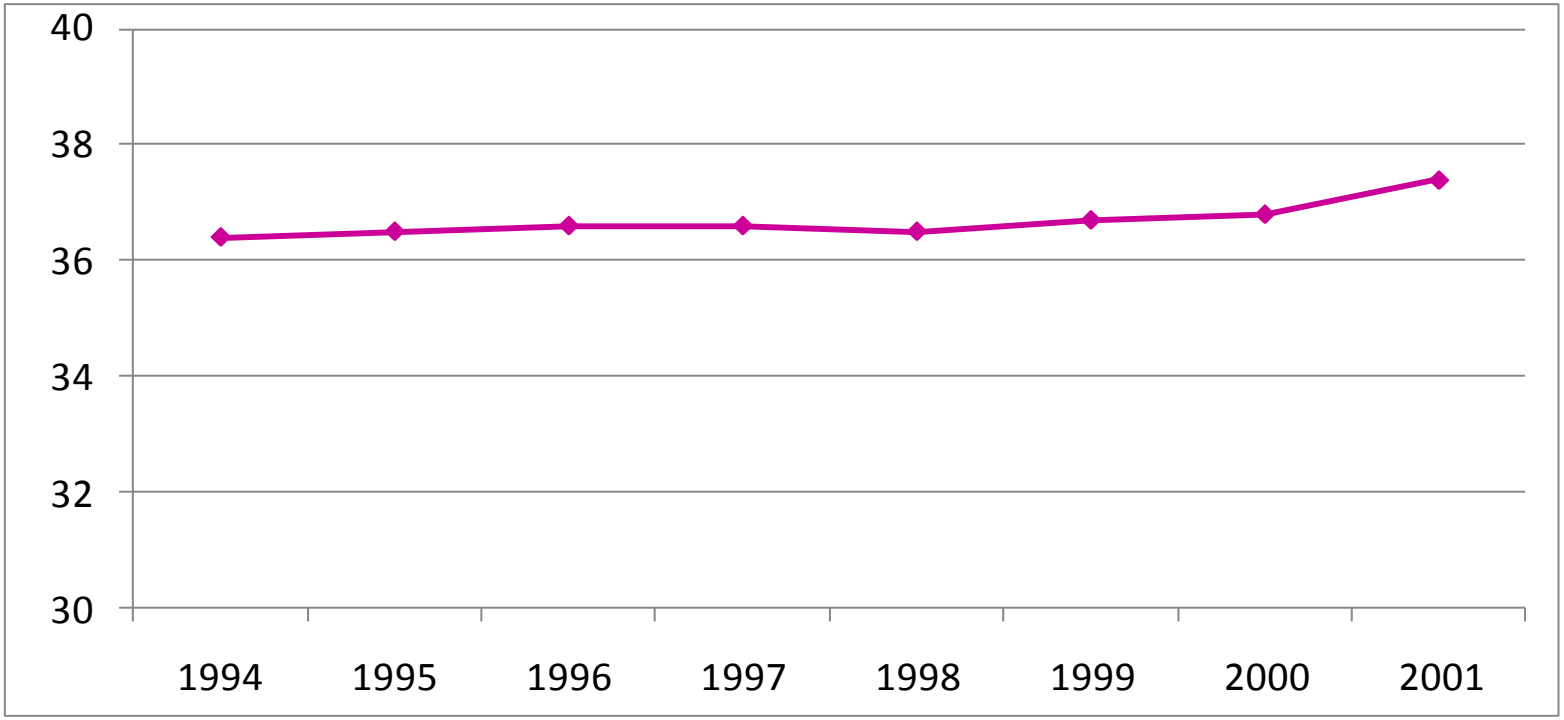
Over accident years, lower percentiles decreasing but 90%ile and 95%ile show decline to 1998 then increase

Description of the Sample

Number of Claims in Sample by Accident Year

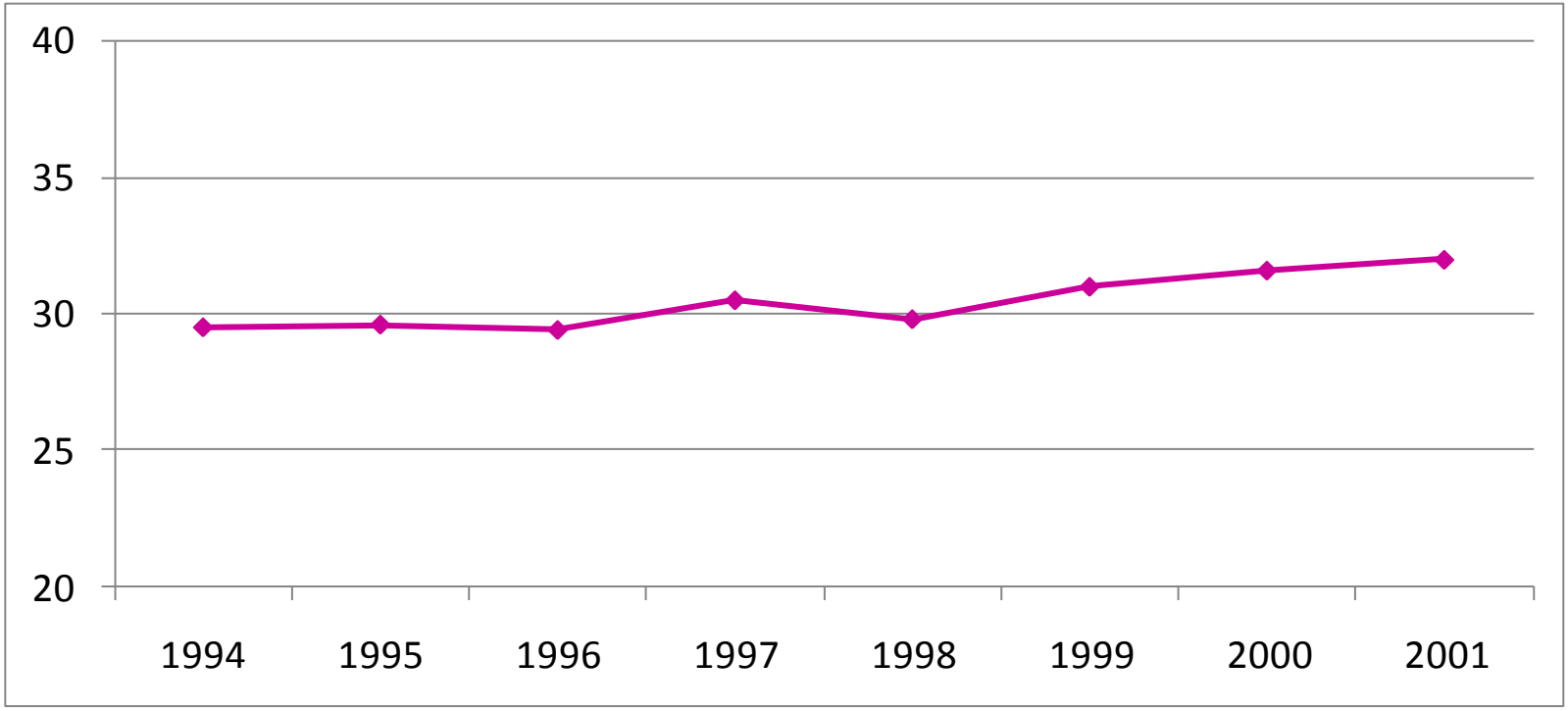


Average Age At Injury By Injury Year



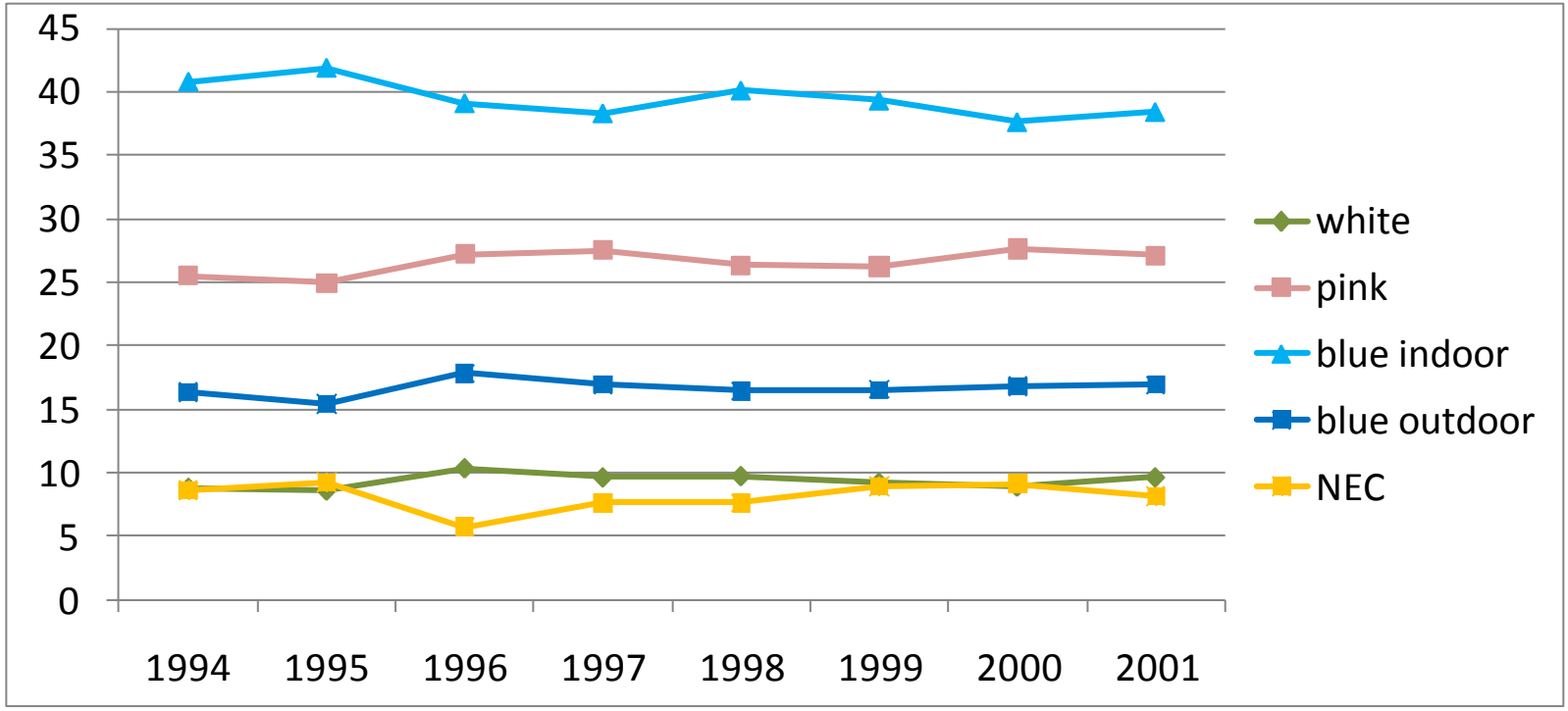
Slight steady increase in age at injury, could relate to slower recovery times

Percentage Claimants Female By Accident Year



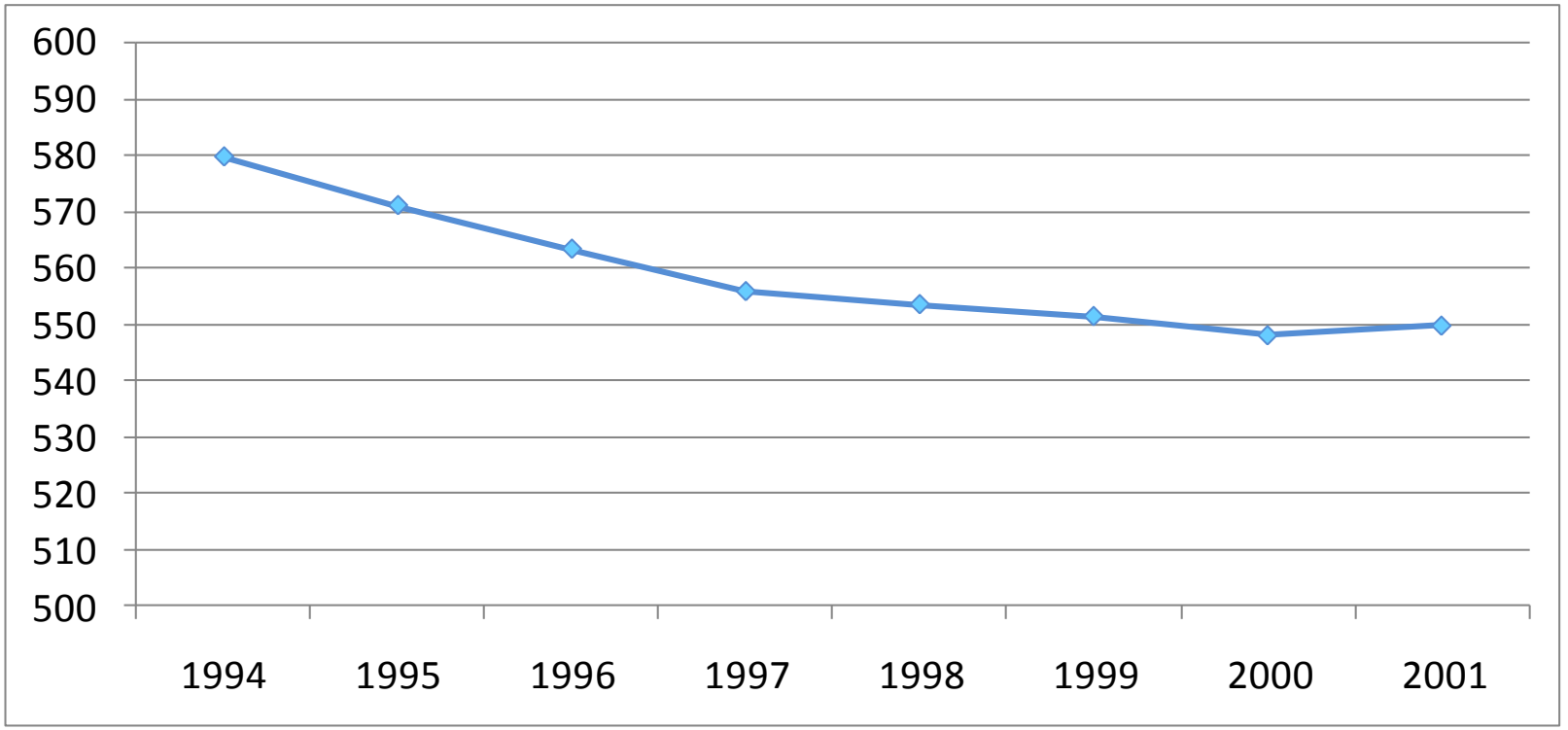
Gradual increase in % of female claimants

Occupational Group (Collar) By Accident Year



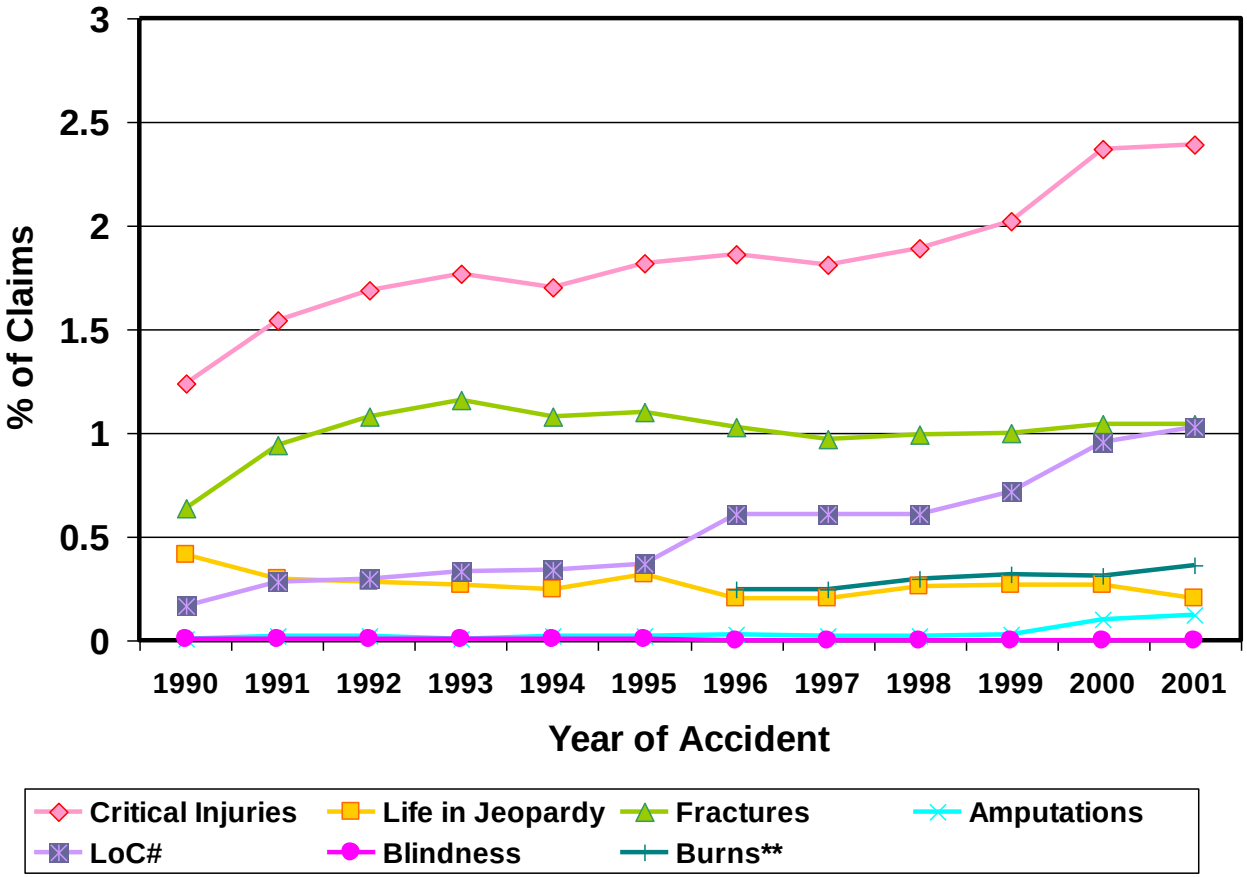
Decrease in proportion blue indoor and increase in proportion pink

Pre-Injury Weekly Wage*



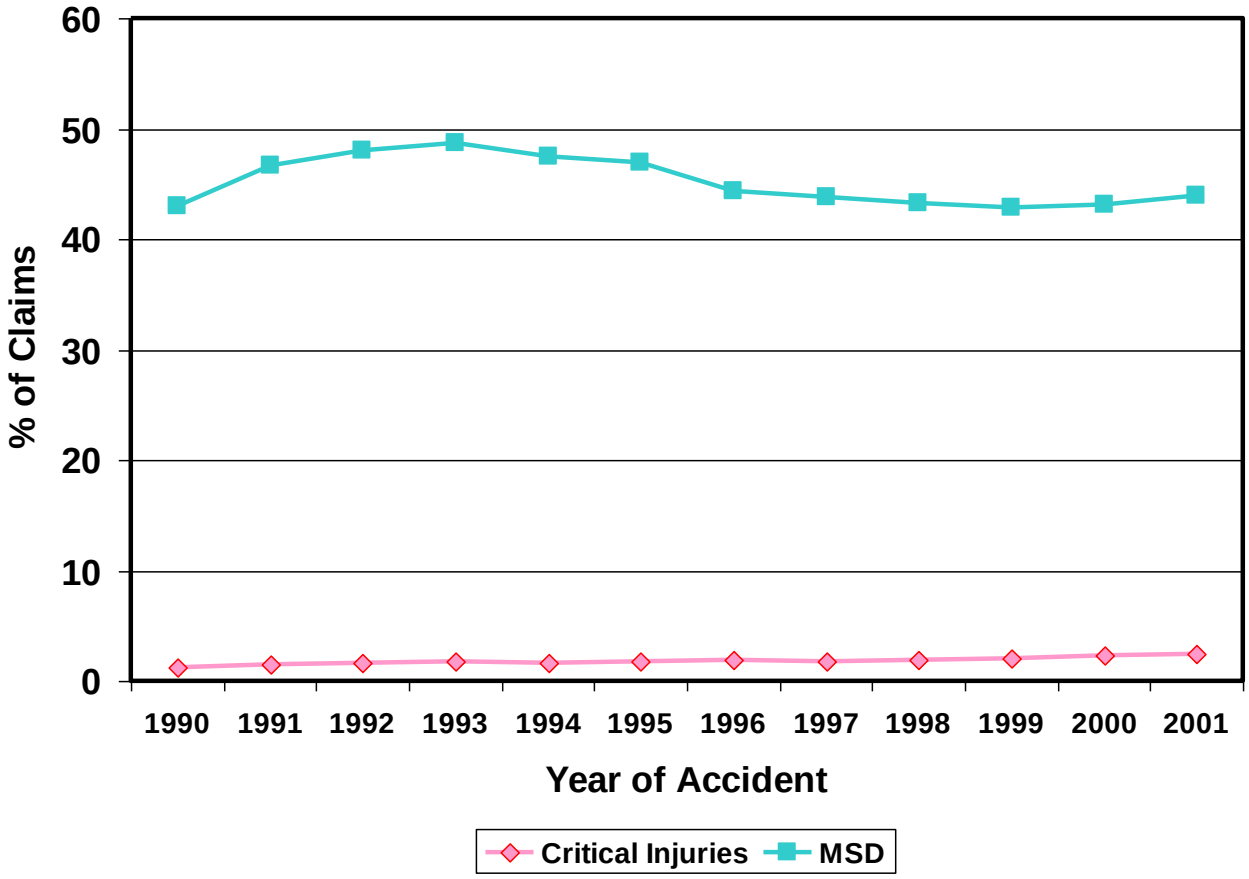
* Adjusted to 1998 Canadian Dollar

Critical Injuries By Accident Year



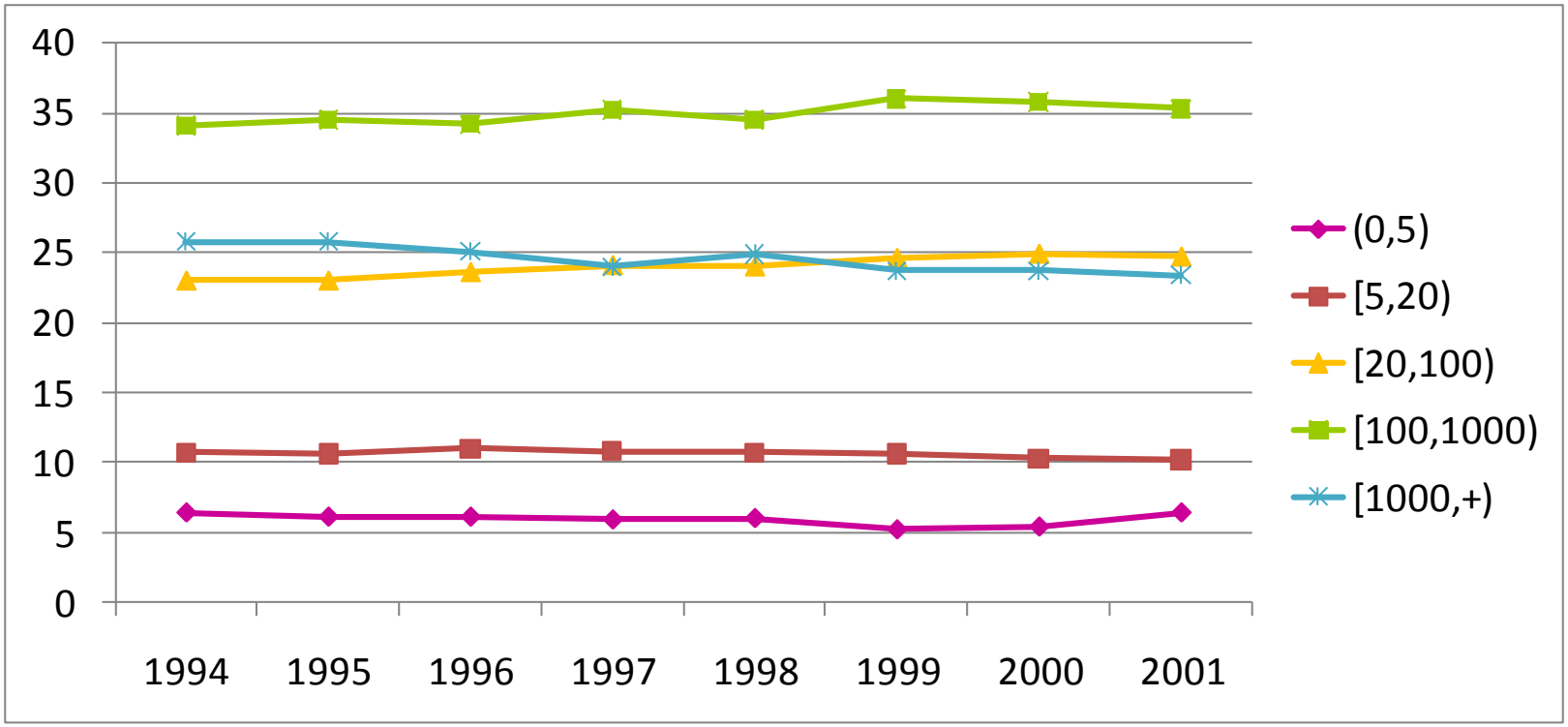
 # beware sudden jumps at 1996 (new coding system introduced)
**** issues with burns**

Musculoskeletal Disorders (MSDs*) By Accident Year

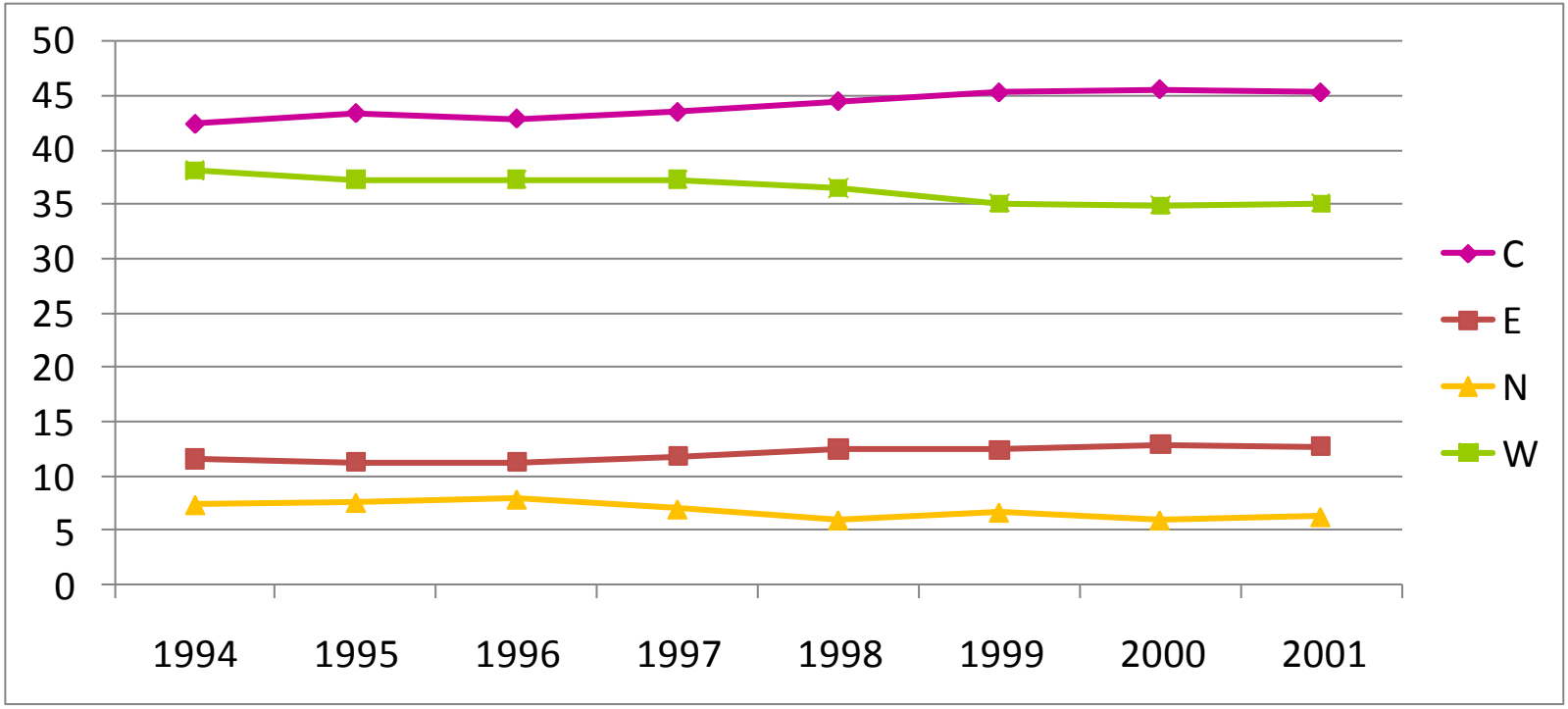


*Prevention System Definition

Firm Size By Accident Year

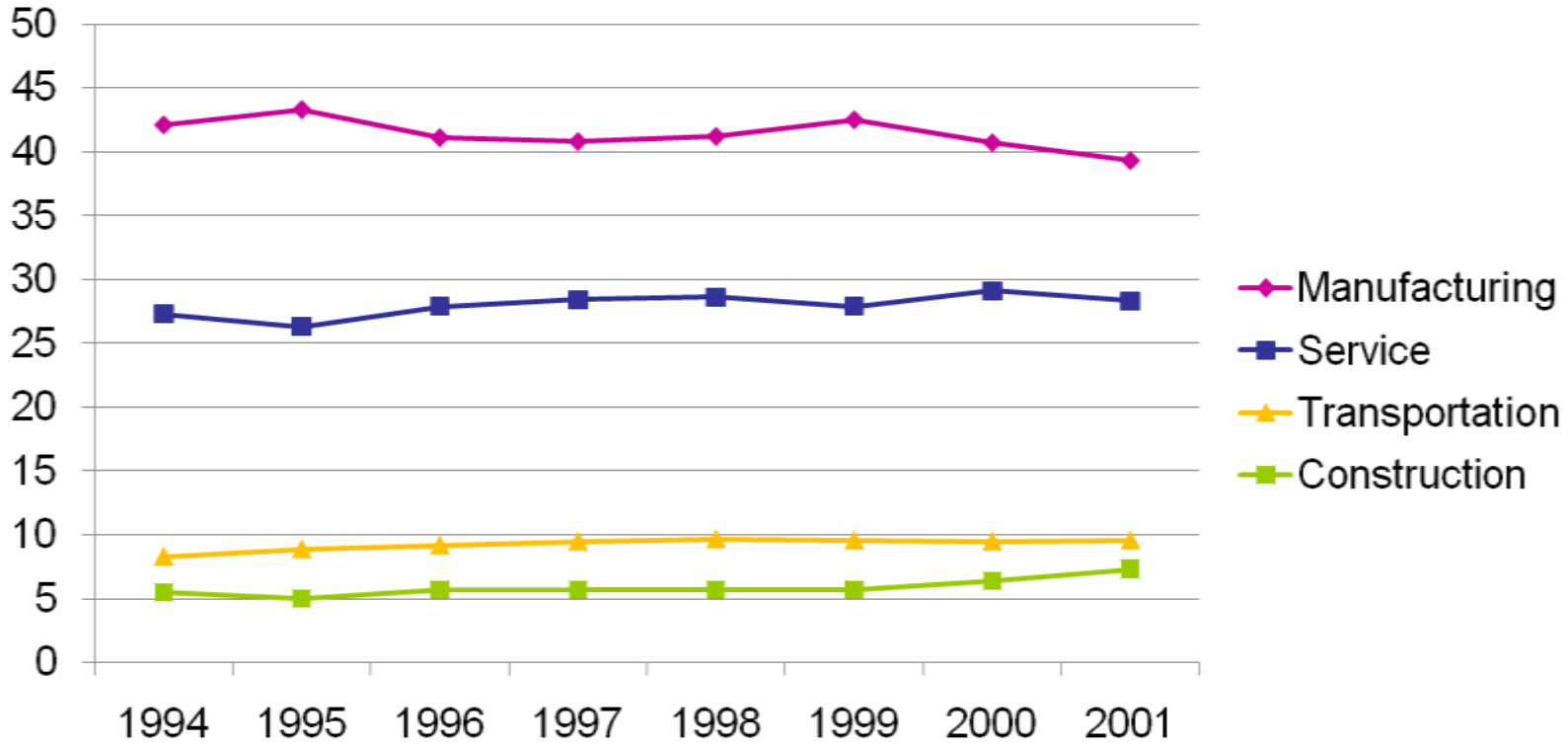


Region By Accident Year



Reduction in proportion of claims from north and west, increase from central eastern

Industrial Sector* By Accident Year



*some highlights – not complete

Summary of Changes in Baseline Attributes

Some Change in Case Mix Over Time

Increasing age at accident over time
Increasing proportion of females over time
Occupation groupings similar over time
Decreasing weekly wage

Increasing critical injuries (beware coding changes)
Fairly steady MSD

Increasing severity over time?

Increasing proportion from Central Ontario, decreasing from Western Ontario
Increasing proportion from Service Sector, decreasing from Manufacturing

Adjusting for baseline attributes

Can changes in outcomes over time be explained by these changes in injured worker attributes, injury attributes or firm attributes?

(Changing severity, or changing work environment?)

Worker Demographics:

Age, gender, occupation, pre-injury earnings

Injury characteristics

Previous claim, part of body, nature of injury

Workplace attributes

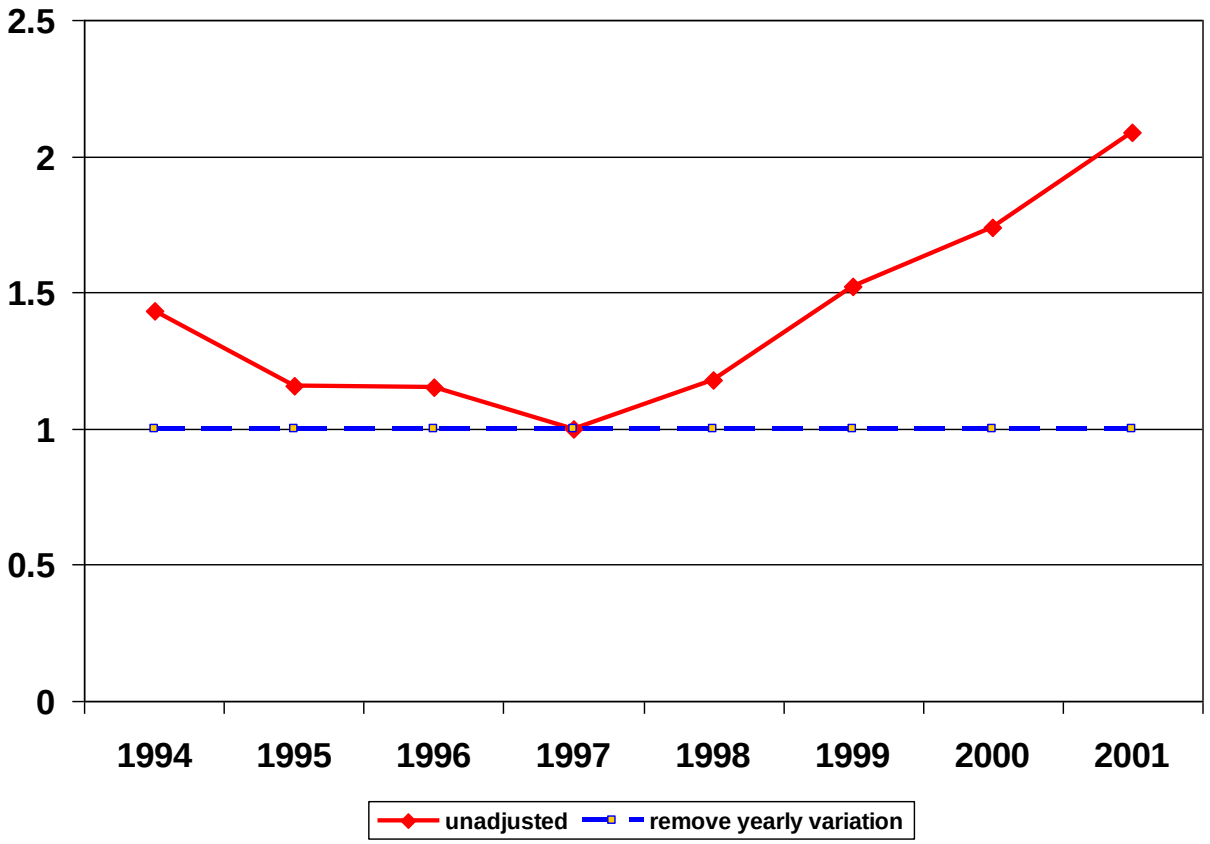
Industrial sector, firm size, geographic location

Odds Ratios for Locking In by Accident Year

Comparing the odds of locking in for each year to 1997, the reference year.

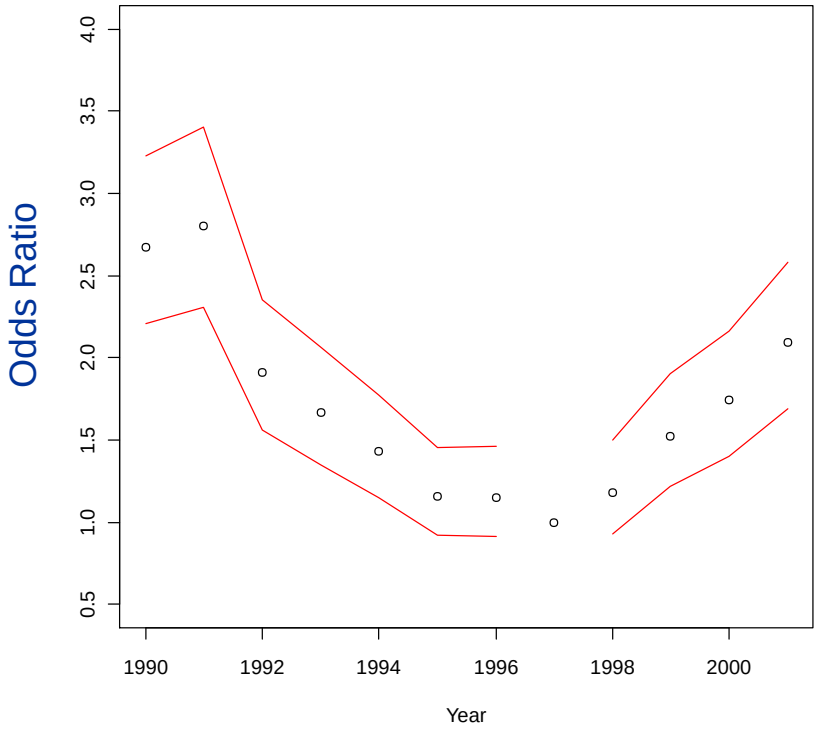
Claims from 1994 are about 1.5 times more likely to lock in than claims from 1997.

If there was no year-to-year variation, then we would see the blue line (OR=1)

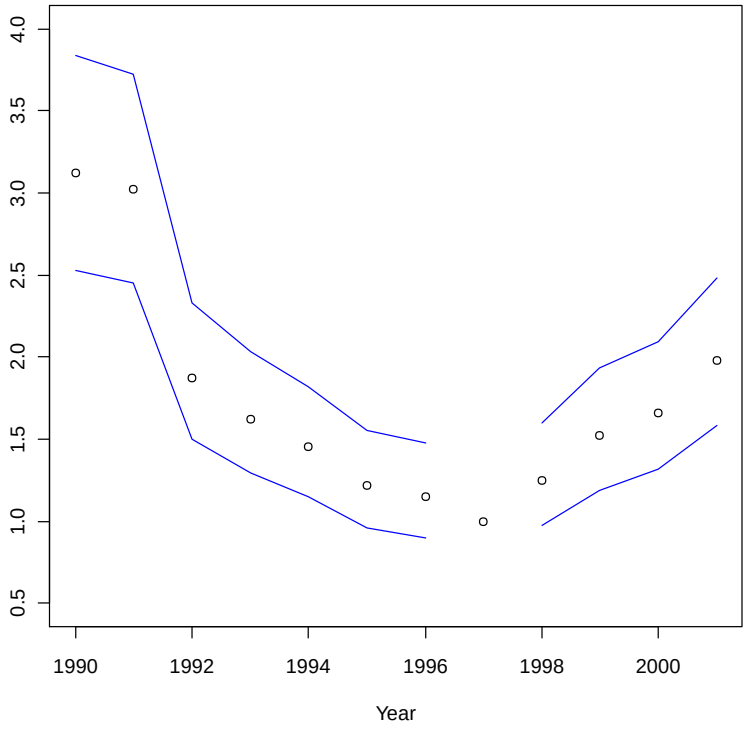


Do baseline attributes account for changes in lock-in?

Odds of locking in changes year by year (unadjusted)



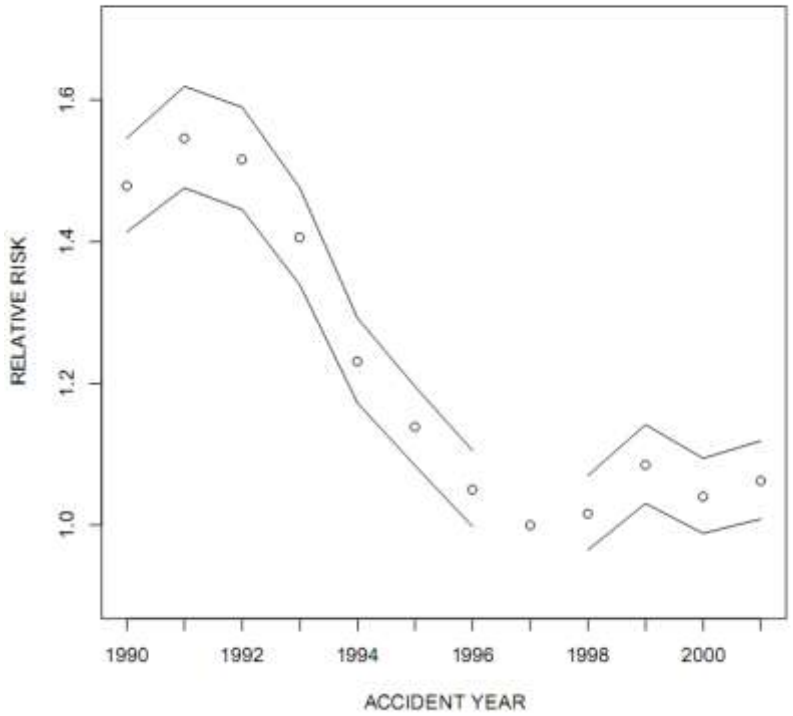
Odds of locking in changes year by year (adjusted for baseline attributes)



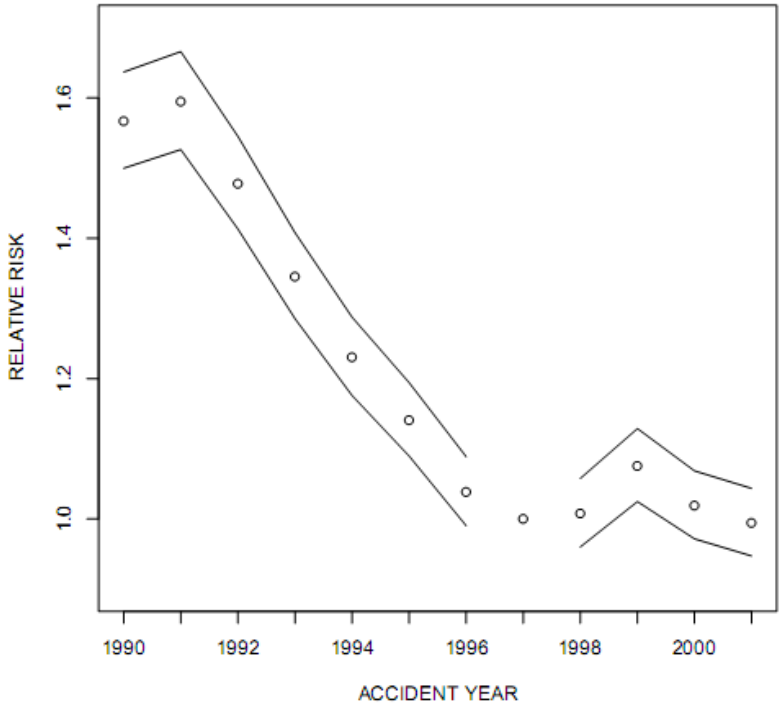
Accounting for baseline attributes does not remove the year-to-year variation

Do baseline attributes account for changes in duration?

Risk of Longer Duration (unadjusted)



Risk of Longer Duration (adjusted for baseline attributes)



Accounting for baseline attributes explains some of the later year-to-year variation

Besides year, what baseline attributes are associated with lock-in?

Increased risk of lock in with:

- Older **age** (age between 50-59 highest risk, excl. claimants could not be locked in)
- Female
- **Nature of injury**: concussion, inflammations, herniated disc
- Part of body: multiple, back, neck
- Outdoor blue collar workers
- Previous history of claims
- More earnings
- Smaller **firm size** (firm less than 5 employees highest risk)
- Outside Ontario/Water and northern regions
- Industry groups: construction, mining, pulp & paper

Besides year, what baseline attributes are associated with lock-in?

Decreased Risk of lock in with

- Younger **age** (age between 15-19 lowest risk)
- **Nature of injury**: contusions, lacerations, burns
- Part of body: lower extremity, head, trunk
- White collar workers
- Industry groups: education, agriculture, municipal

Besides year, what baseline attributes are associated with cumulative duration?

Increased risk of longer durations

- Older **age**
- Female
- Nature of injuries: Herniated disc, inflammations, ***amputation***
- Part of body: multiple, back, neck
- Outdoor blue collar workers
- Previous history of claims
- More earnings
- Smaller **firm size** (firm less than 5 employees highest risk)
- Outside Ontario/Water and northern regions
- Industry groups: construction, mining, pulp & paper

Besides year, what baseline attributes are associated with cumulative duration?

Decreased Risk of longer durations

- Younger **age**
- Nature of injury: ***hearing loss***, lacerations, burns
- Part of body: lower extremity, head, trunk
- White collar workers
- Industry groups: education, agriculture, municipal

Conclusions… So Far

Increasing proportion locked-in in recent years

Cumulative duration shows increased length in longest claims over time
decreased length in shorter claims over time

Some worker, firm, injury attributes suggest there could be increasing severity, barriers to recovery over time

However, year to year trends in lock in and cumulative duration not explained by baseline attributes of claim

Next steps….. Claims Milestones

Next steps

Can we pinpoint and quantify or qualify what changed?

Claims milestones and decision making points
e.g., adjudicative decisions, assessments etc.

Examine whether milestones reached and/or decision made (indicator)
Examine timing of milestones in course of claim (how long?)

How has the change in policy, put into practice, impacted claims outcomes?

Milestones – Key Decision Points

1. Registration of claim (delays)
2. First claim status (LT vs NLT)
3. Time until allowed (timing of decision)
4. Early health care (1st 3 months) (narcotics, physio)
5. Community Clinic Program
6. Regional Evaluation Centre Assessment
7. Second Injury Enhancement Fund
8. Later health care (next 9 months)
9. Specialty Clinic Assessments
10. Maximum Medical Recovery (timing)
11. Non Economic Loss Award (% Permanent Impairment and timing)
12. Recurrence
13. Labour Market Re-entry / Vocational Rehabilitation

Wage replacement

Appeals

Milestones – Key Decision Points

1. Registration of claim (delays)
2. ***First claim status (LT vs NLT)***
3. ***Time until allowed (timing of decision)***
4. Early health care (1st 3 months) (narcotics, physio)
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11. Non Economic Loss Award (% Permanent Impairment and timing)
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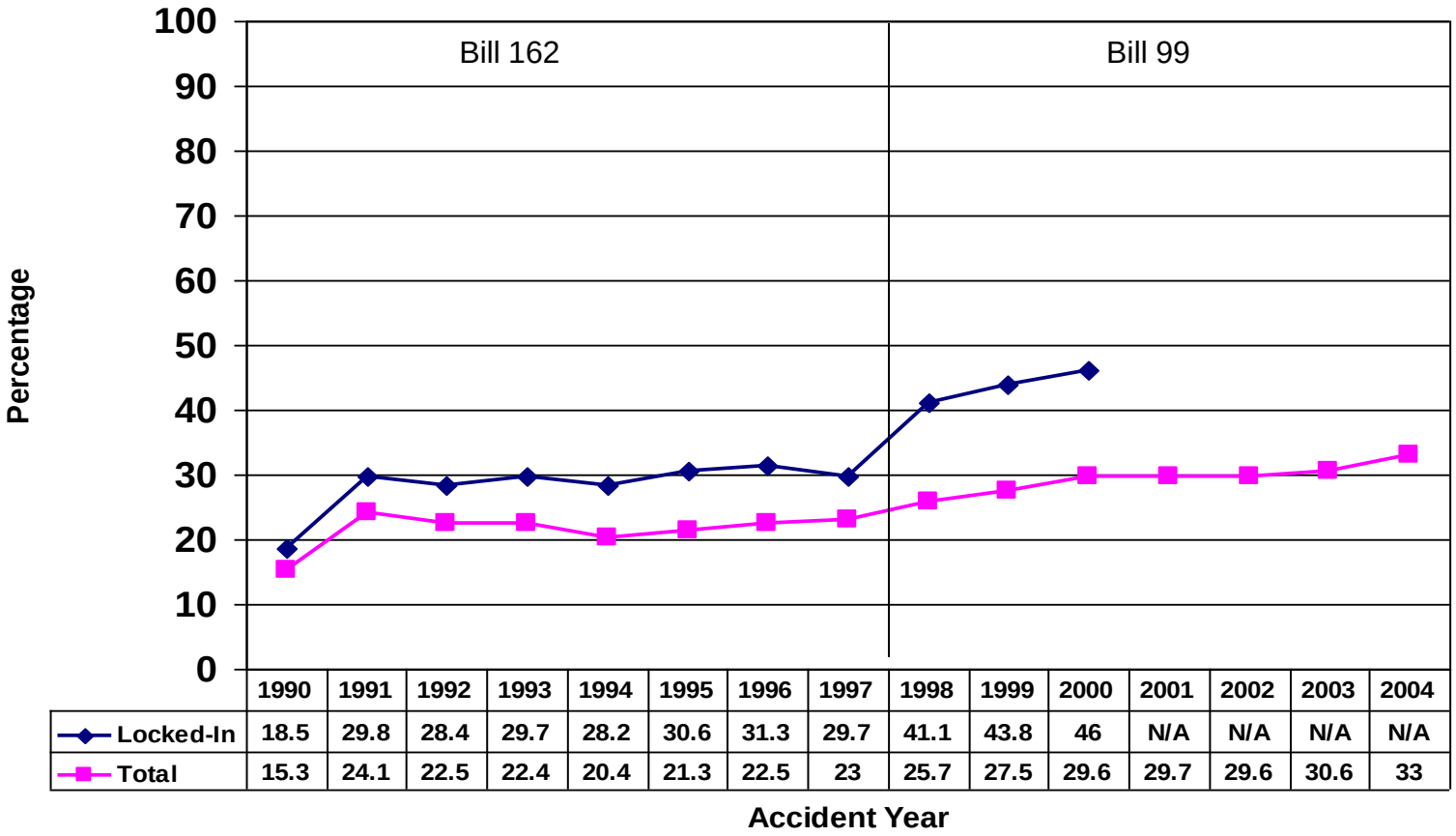
Wage replacement

Appeals

Some Examples:

Study of Locked-In Award Recipients (Schedule 1 Allowed Lost Time Claims[1])
Comparison of Locked-In Population vs. Total Population (Benefit Indicators)

Exhibit 4A: Percentage of Claims with Status Change (NLT to LT) by Accident Year

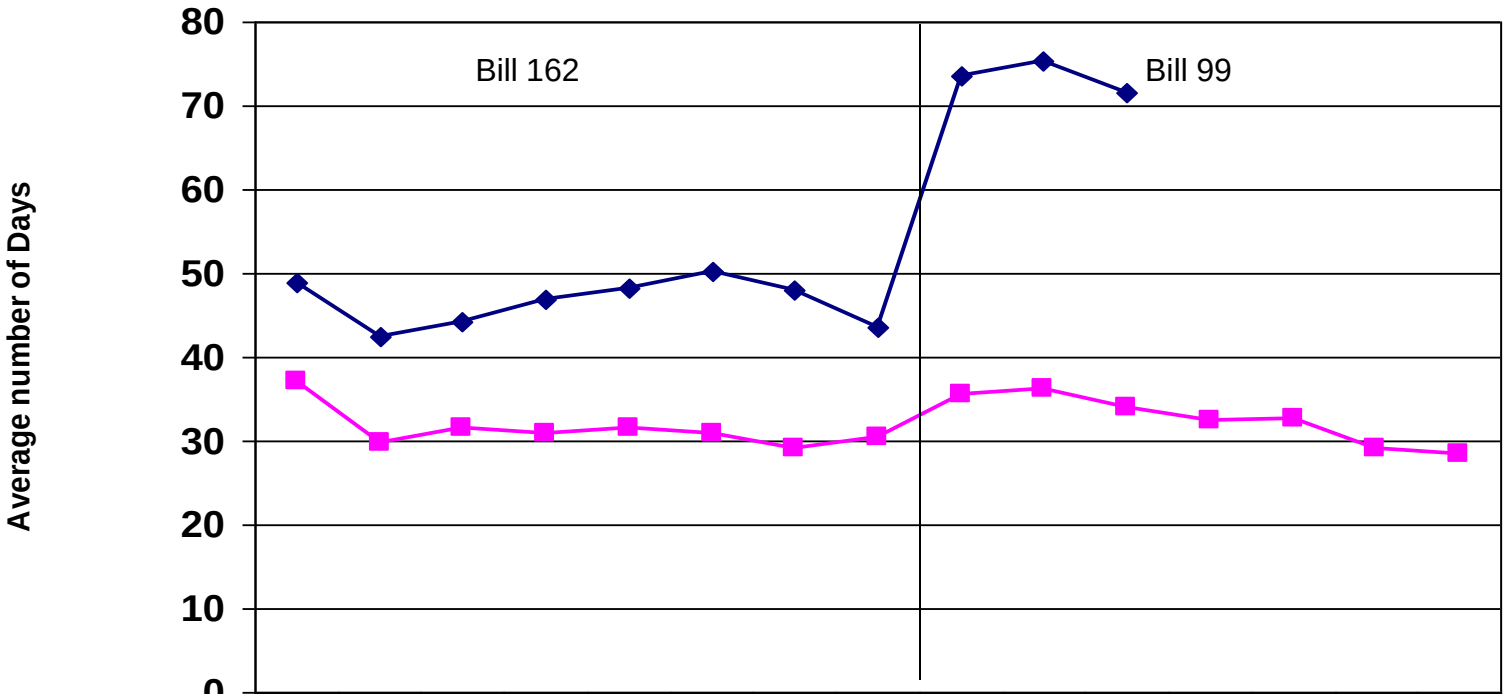


	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Locked-In	18.5	29.8	28.4	29.7	28.2	30.6	31.3	29.7	41.1	43.8	46	N/A	N/A	N/A	N/A
Total	15.3	24.1	22.5	22.4	20.4	21.3	22.5	23	25.7	27.5	29.6	29.7	29.6	30.6	33

[1]Excludes fatal, occupational disease and serious injury claims

Study of Locked-In Award Recipients (Schedule 1 Allowed Lost Time Claims[1])
Comparison of Locked-In Population vs. Total Population (Benefit Indicators)

Exhibit 5A: Average Number of Days from Date of Accident to Allowed Status by Accident Year

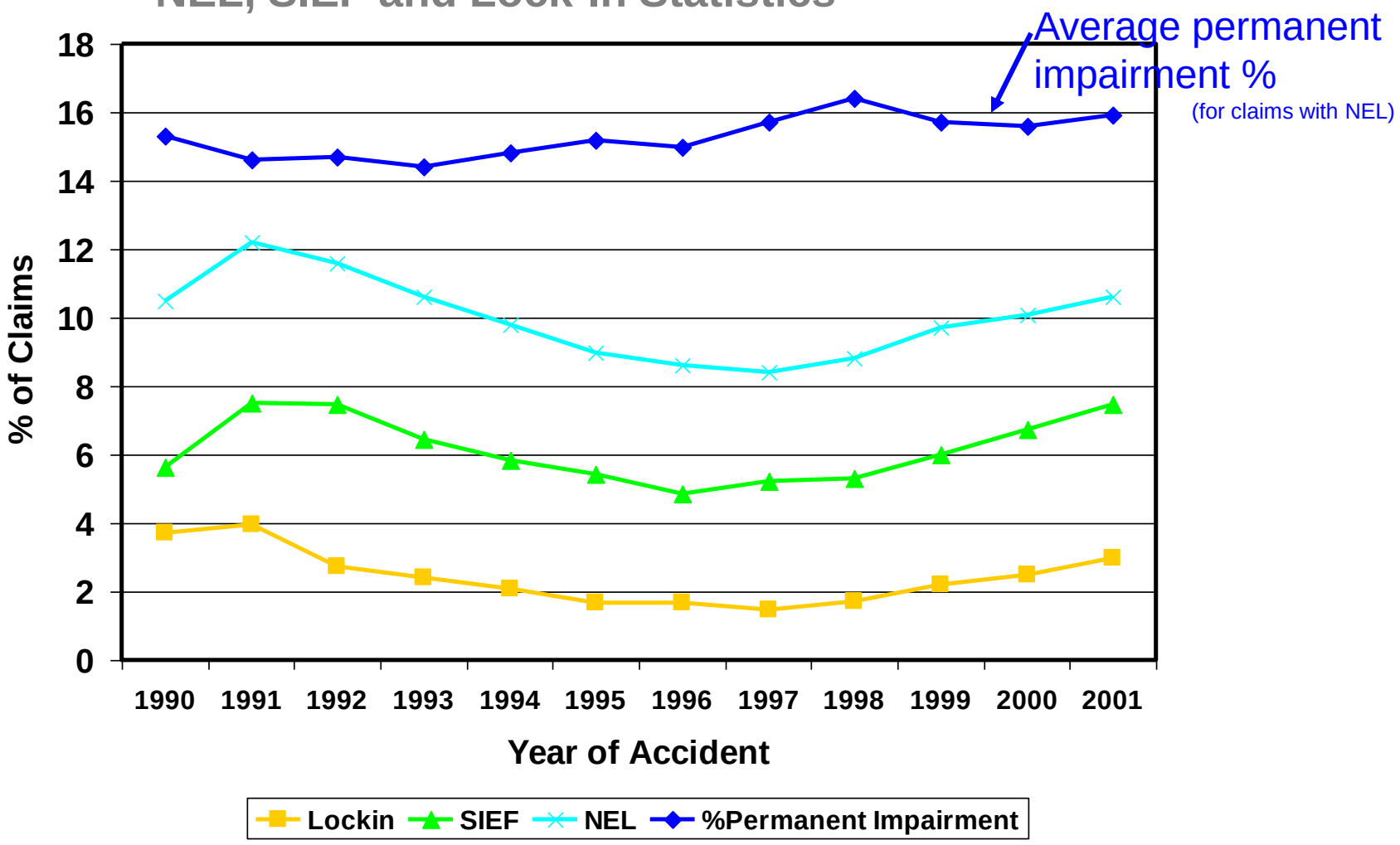


	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Locked-In	49	42.4	44.2	47	48.2	50.3	48.1	43.6	73.5	75.4	71.5	N/A	N/A	N/A	N/A
Total	37.2	29.7	31.6	31	31.6	30.9	29.2	30.5	35.6	36.3	34.1	32.5	32.7	29.2	28.4

Accident Year

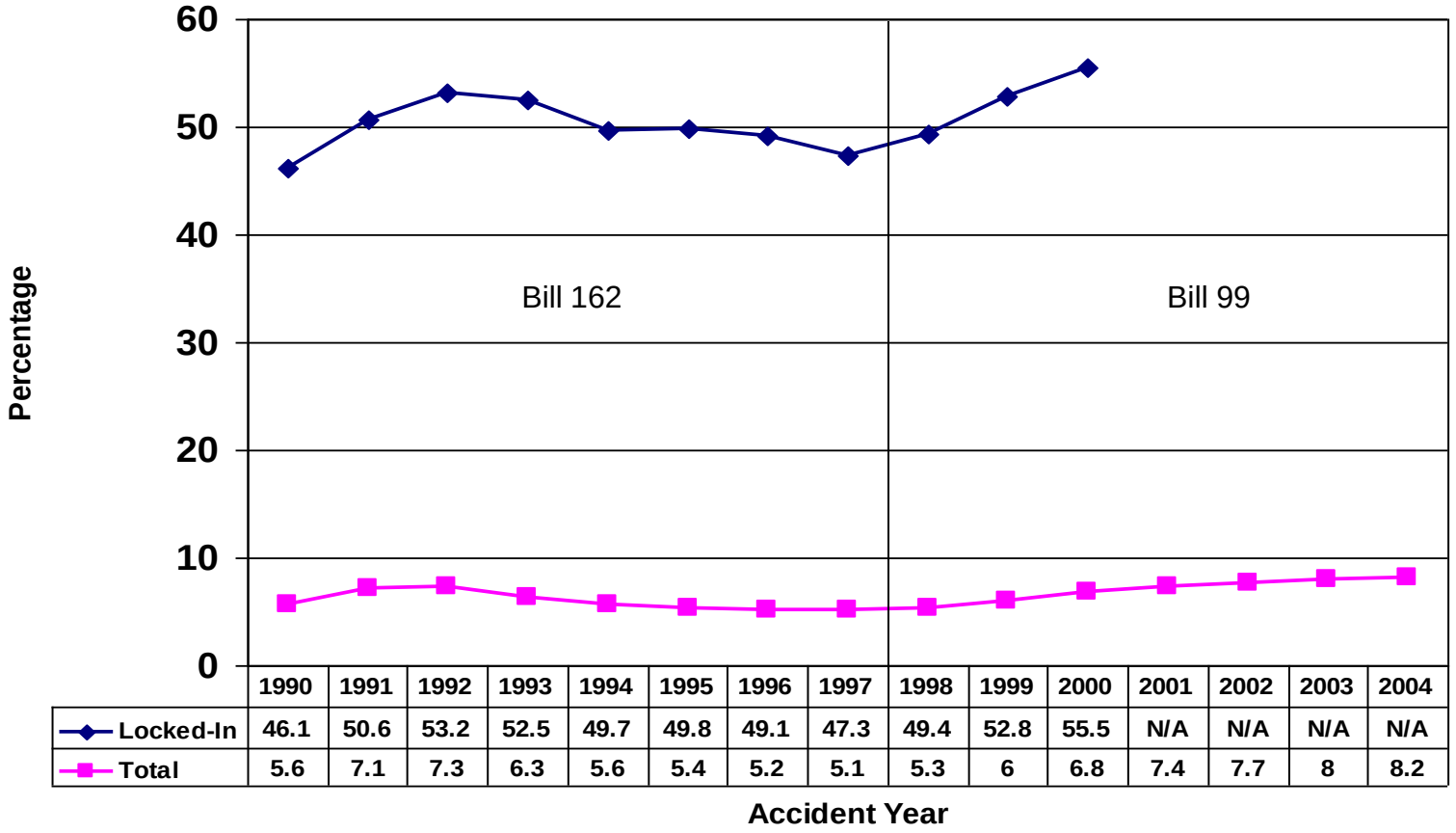
[1]Excludes fatal, occupational disease and serious injury claims

NEL, SIEF and Lock-In Statistics



Study of Locked-In Award Recipients (Schedule 1 Allowed Lost Time Claims[1])
Comparison of Locked-In Population vs. Total Population Employer Indicators)

Exhibit 5A: Percentage of Claims with SIEF* Cost Relief by Accident Year



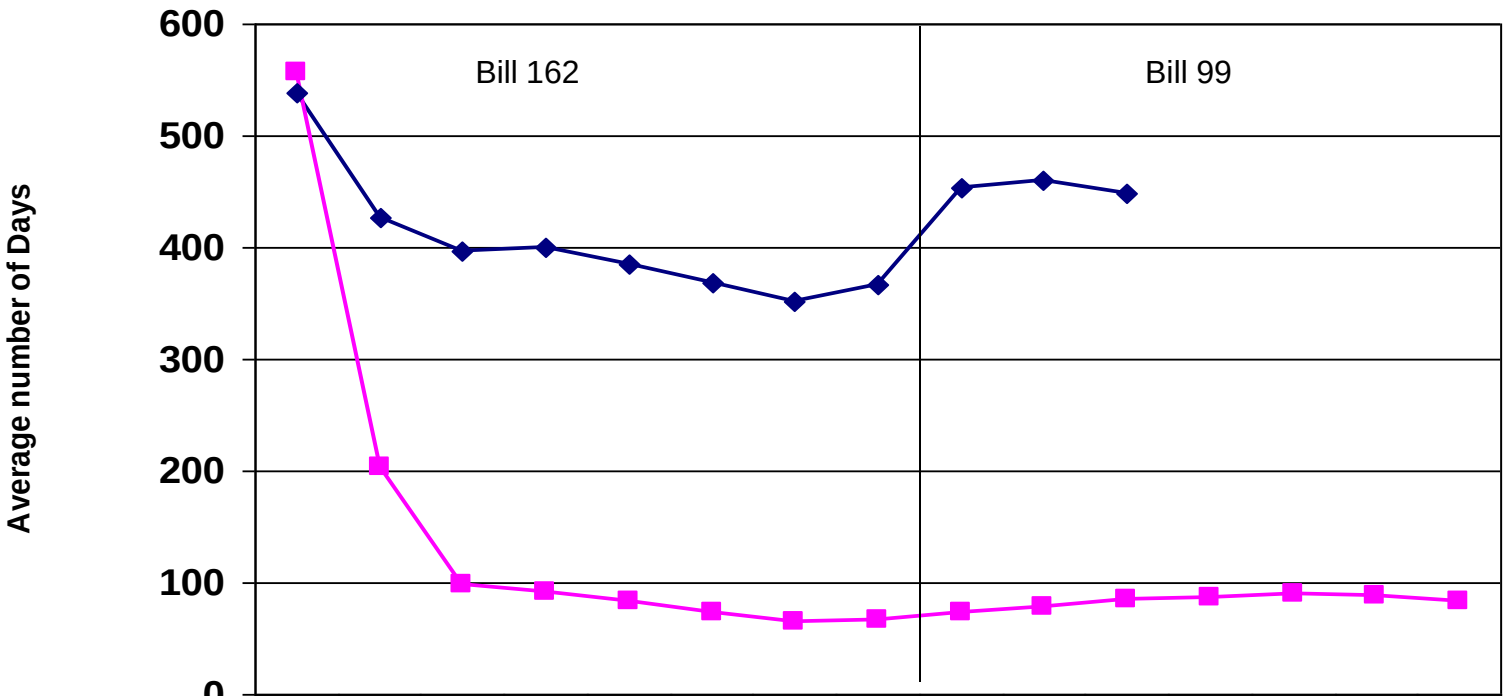
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Locked-In	46.1	50.6	53.2	52.5	49.7	49.8	49.1	47.3	49.4	52.8	55.5	N/A	N/A	N/A	N/A
Total	5.6	7.1	7.3	6.3	5.6	5.4	5.2	5.1	5.3	6	6.8	7.4	7.7	8	8.2

Accident Year

[1]Excludes fatal, occupational disease and serious injury claims
* Second Injury Enhancement Fund

Study of Locked-In Award Recipients (Schedule 1 Allowed Lost Time Claims[1])
Comparison of Locked-In Population vs. Total Population (Benefit Indicators)

Exhibit 5B: Average Number of Days from Date of Accident to MMR Achieved Date



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Locked-In	537.8	426.7	396	399.7	384.7	368.3	351.9	366.1	452.7	460.6	448.7	N/A	N/A	N/A	N/A
Total	557.1	203.1	98.4	91.7	83.2	73.1	65.3	66.6	73.7	78.4	84.2	87	90.8	89	82.6

Accident Year

[1]Excludes fatal, occupational disease and serious injury claims

Milestones – Key Decision Points

What happens to year-to-year variability in probability of locking in as we progressively take account of claims milestones

(WORK IN PROGRESS)

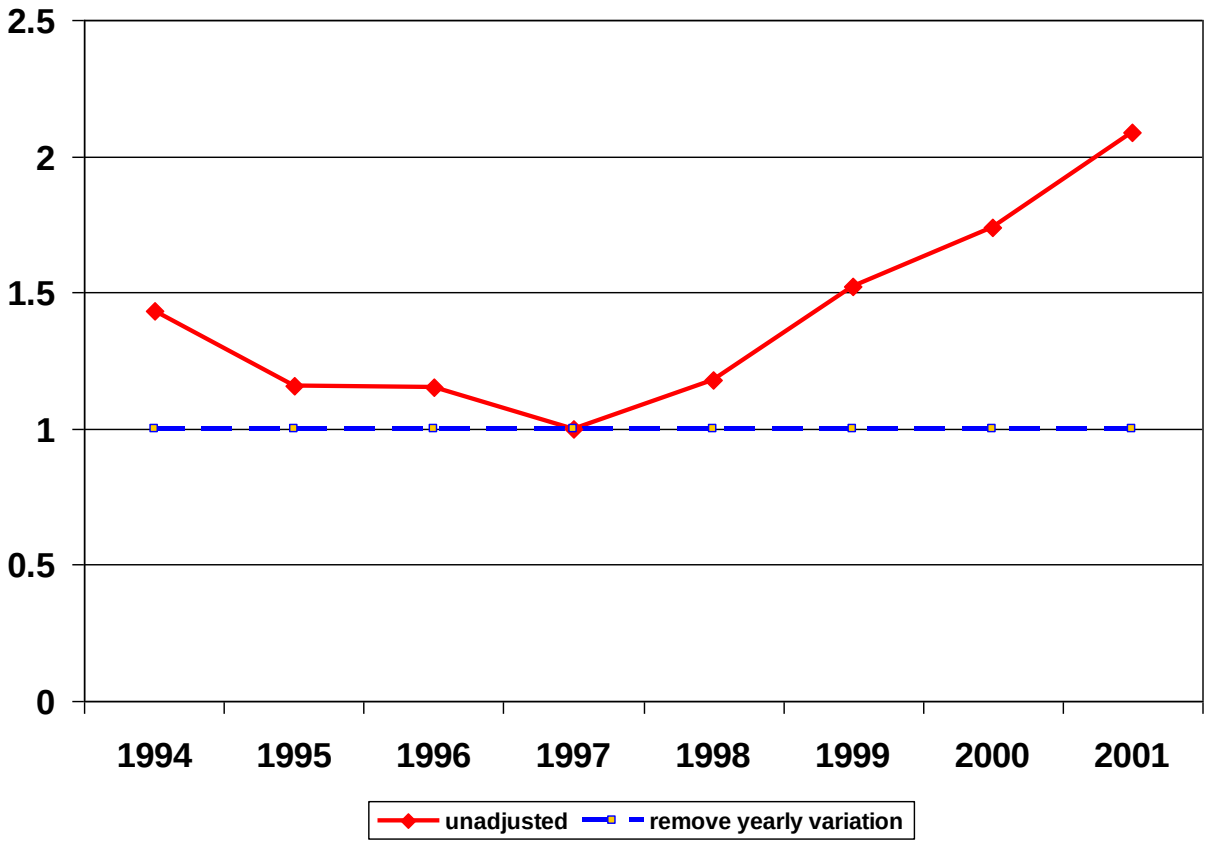
1. ***First claim status (LT vs NLT)***
2. ***Time until allowed (timing of decision)***
3. ***Second Injury Enhancement Fund***
4. ***Maximum Medical Recovery (timing)***

(showing years 1994 to 2001 only)

Odds Ratios for Locking In by Accident Year

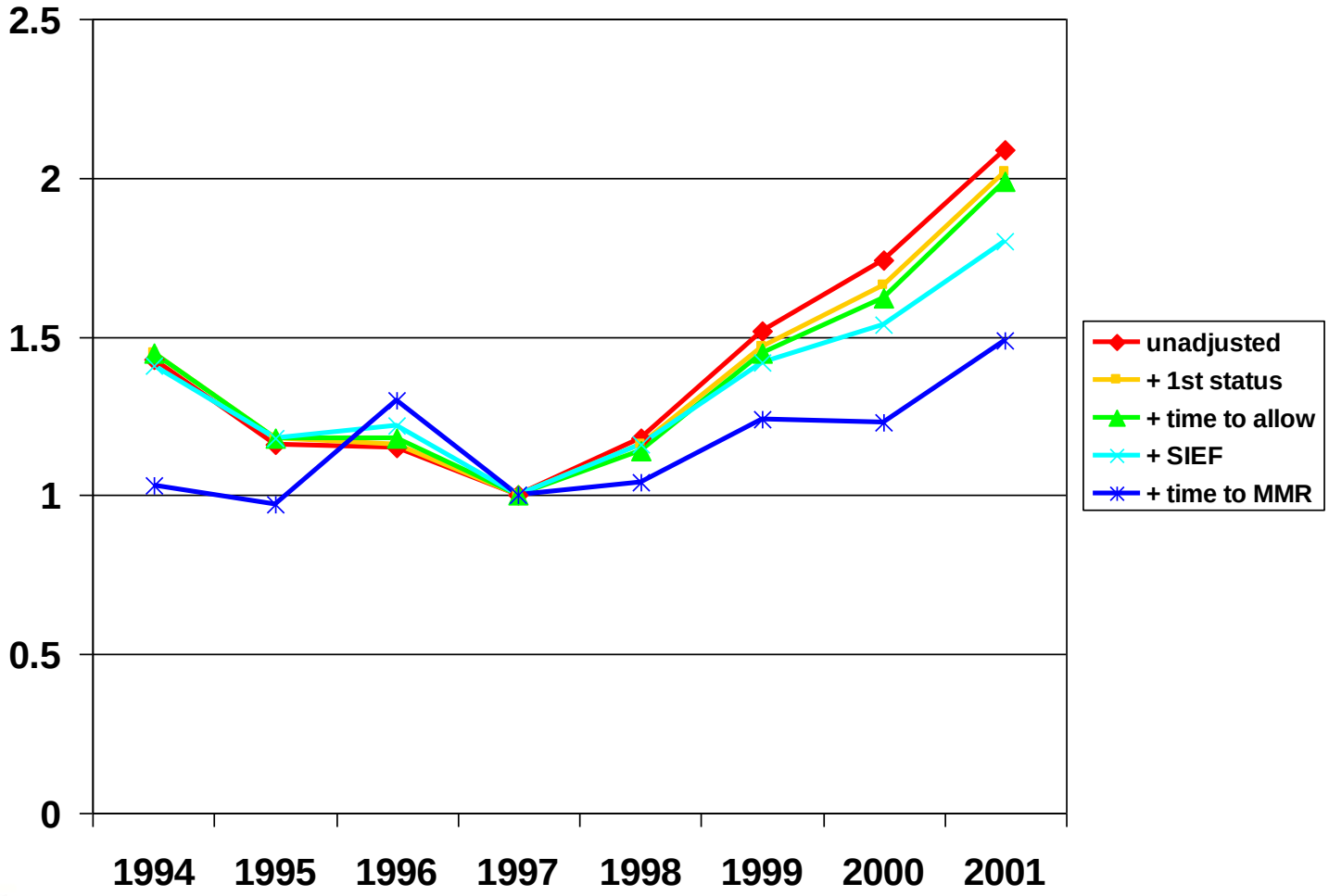
Comparing the odds of locking in for each year to 1997, the reference year.

Claims from 1994 are about 1.5 times more likely to lock in that claims from 1997 and claims from 2001 more than twice as likely to lock in as 1997.
If years were not different, we would see the blue line (OR=1)



Odds Ratios for Locking In by Accident Year

With addition of each claim milestone, the year-to-year differences, diminish a little bit, particularly after 1997



Relationship between Milestones and Claims Outcomes

Leaving With More Questions:

Some of the year-to-year differences can be accounted for by changes in claims milestones.

What do these findings mean?

Does the administrative process impact on recovery?

Or are these indicators of complicated injuries or claims?

- some indicators tied to change in benefit structure
- some indicators tied to change in adjudicator role

How do these findings compare with MacEachen et al study of complex claims?

Next Steps

Complete Claims Milestones Inventory and Investigation

Mover Stayer Model

- statistical model of the likelihood of staying on (or off) benefits in key time intervals of claim (and year-to-year variation in this)

Benefit Receipt in Windows Post Accident

- statistical models of year to year variation in benefit receipt in different windows post time (0-90 days, 90-180 days, 180-365 days etc.)

Prescription Drug Use - Narcotics

- characterizing usage over time (quantities/doses and patterns) and relationship to outcomes

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