

# Schizophrenia in a high security hospital

Outcomes beyond recidivism

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# Schizophrenia - outcome

## *Outcome*

- Heterogeneity
- Mason *et al* (1995) Characteristics of Outcome of Schizophrenia at 13 Years. *BJPsych* 167, 596-603.
  - 9% dead
  - 48% positive symptoms, 48% negative symptoms
  - 17% “complete recovery”
- Harrison *et al* (1994) Residence of incident cohort of psychotic patients after 13 years of follow up. *BMJ* 308, 813-816.
  - None in long stay psychiatric wards; prison or high security hospital; homeless
  - 90% living independently alone or with family/friends
  - 46% not in contact with psychiatric services

## *Determinants*

- Onset and early course
- Gender
- Pre-morbid functioning
- Symptoms
- Substance misuse and compliance
- Socio-cultural context
- Treatment

# Schizophrenia and violence

- Is there an association?
  - Clear but modest positive association in epidemiological studies
  - Negative association in follow-up studies
- Factors:
  - Symptoms, comorbid disorders, criminogenic factors
  - Substance misuse

# Outcome of high security hospital patients

## *Offending and readmission*

### ■ Special Hospital Studies from 1982

- Any re-offending 25-55%
- Serious re-offending 6-21%
- Readmission 20-30%

### ■ **Re-offending:** younger age at discharge, psychopathic disorder, previous convictions, non-conditional discharge

## *Other outcomes*

- **Reiss *et al.* (1996)** Young 'psychopaths' in special hospital: treatment and outcome. *BJPsych* 168, 99-104
- **Butwell *et al.* (2000)** Trends in special (high-security) hospitals 2: Residency and discharge episodes, 1986-1995. *BJPsych* 176, 260-265
- **Jamieson and Taylor (2002)** Mental disorder and perceived threat to the public: people who do not return to community living. *BJPsych* 181, 399-405

# Methodology - Sample

Patients detained at State Hospital 1992-3

N = 241



Primary diagnosis schizophrenia

N = 169

# Methodology – Baseline data 1992-3

- Case records
  - Admission circumstances
  - Demographics
  - Offending history
  - Psychiatric history
  - Family and personal history
  - Diagnosis: Feigner
  - Life-time symptoms: PSE
  - Risk data: PCL-R, VRAG, H-10 (of HCR-20)
- Interviews with patients
  - Krawieka, Montgomery-Asperg, AIMS, TAKE, Quick Test
- Interviews with nurses and RMOs

# Methodology - Follow-up data 2000-1

- Case records
  - Progress towards community
  - Legal status
  - Adverse incidents
  - Morbidity and mortality
  - Relationships and residence
  - Treatment
- Scottish Criminal Records Office (SCRO)
- Interviews with patients
  - Krawieka, BPRS, CPRS, SANS, SDAS, AIMS, TAKE, fCAN
- Interviews with nurse/social worker / carer

# Case tracking and loss

## ■ Follow-up case records:

### *Records – 90%*

- Complete 152 (11 died)
- Incomplete 17
  
- Mean follow-up 8.8 years (range 0.7 – 10)

## ■ Follow-up interviews:

### *Patients – 73%*

- Complete 116
- Missing 53 (11 dead)

### *3<sup>rd</sup> Party - 87%*

- Complete 138
- Missing 31 (11 dead)

# Admission

- Admitted from:
  - Court 43%
  - Prison 19%
  - Hospital 38%
- Legal status on admission:
  - Criminal disposal 57%
  - Prison transfer 19%
  - Civil detention 24% } 52% restricted
- Circumstances of index event:
  - Psychotic symptoms 69%
  - Alcohol 17%
  - Drugs 3%
- Admitted 1968 - 1993
  - Length of stay pre-baseline: 6.1 (0.6 – 26.3) years

# Background

## Socio-demographics

- Age 35.4 (19 -63) years
- Gender 90% male
- Marital status single 85%
- SE group I-IIIInm 16%

## Convictions

- Any 90%
- Homicide 26%
- Violence 53%
- Sexual offences 20%

## Previous psychiatric treatment:

- Any 97%
- Admission 91%
- High security 24%

# Psychiatric morbidity

- Comorbidity 65%
  - ASPD 32%
  - Alcohol dependence 26%
  - Drug dependence 29% } 41%
  - Learning disability 4%
- Positive symptoms at baseline interview
  - Delusions 56%
  - Hallucinations 30%
  - Thought disorder 15%
- Lifetime PSE symptoms pre-1993
  - Nuclear syndrome 81%

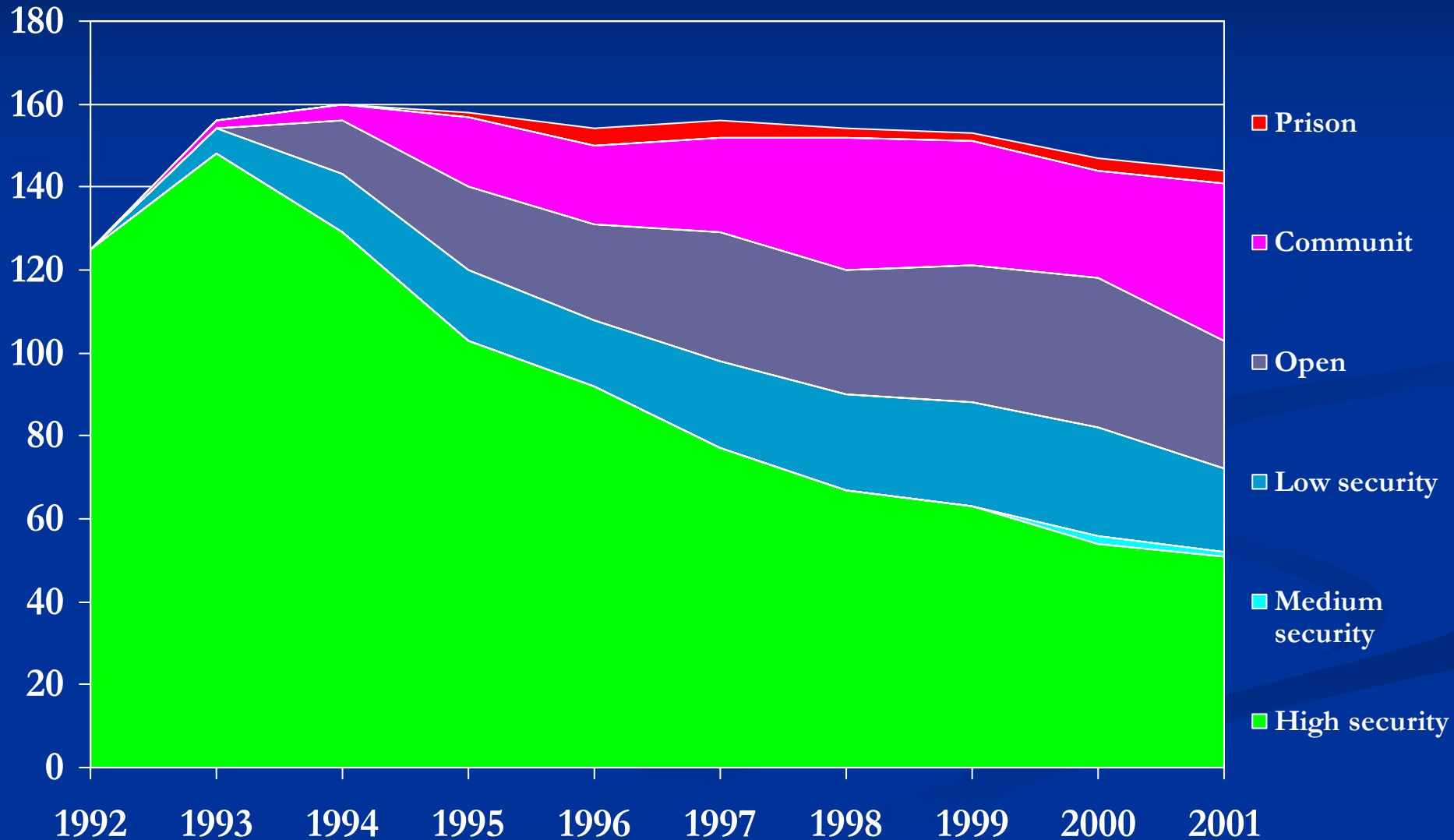
# Outcomes 1

Progress towards the community

# Progress towards community

Setting	Percentage of patients	Mean time	Range
High security hospital	100%	5 years	6 months - 10 years
Medium/low security	66%	1.6 years	1 week – 7.5 years
Open hospital	50%	3 years	1 day – 8.8 years
Community	33%	3.5 years	2 months – 7.8 years
Prison	10%	1.2 years	2 weeks – 5.3 years

# Placement year by year



# Leaving high security – reaching the community

169 high security in 1992-3

(100%)



129 left high security by end 2001

(76%)



59 reached community by end 2001

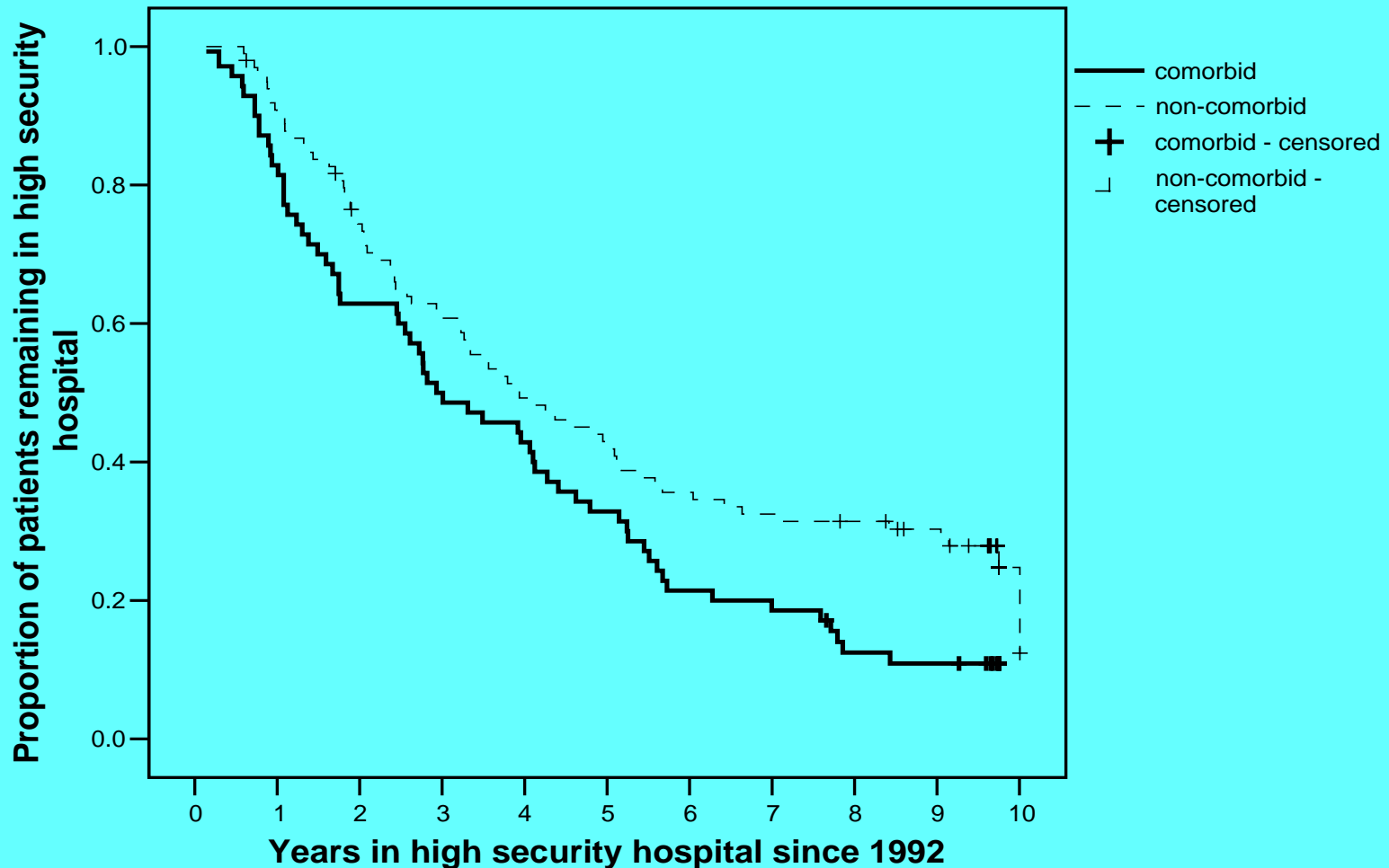
(46%)

# Determinants

- Leaving high security (83%)
  - Index offence leading to admission
  - Drug abuse
  - Ongoing positive symptoms
  - Violent incidents in high security
- Reaching community (80%)
  - Alcohol/drug dependence
  - Better social functioning in high security
  - Better contact with friends/relatives in high security
  - Ongoing positive symptoms
  - Any inappropriate sexual behaviour in hospital

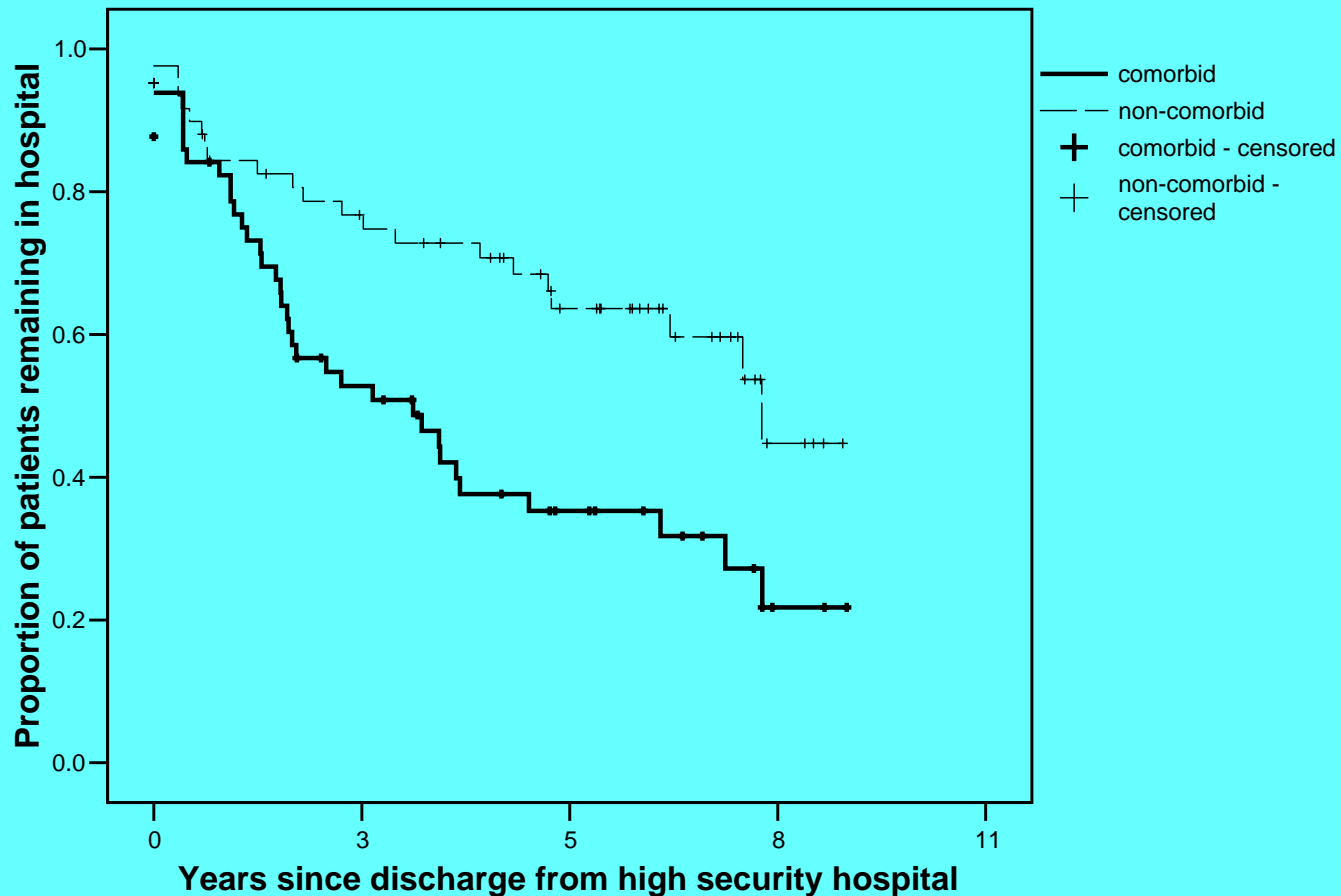
# Comorbid substance dependence

Survival curve: time until discharged from high security hospital - comparison of comorbid and non-comorbid patients



# Comorbid substance dependence

Survival curve: time from leaving high security hospital until reaching community - comparison between comorbid and non-comorbid patients.



# Some social outcomes

- Employment
  - Supported 10
  - Paid unsupported 2
- Marriage
  - Pre-admission 25
  - On admission 4 (all ended whilst in SH)
  - During follow-up 9
  - At end of study 1
- Intimate relationships
  - During study 34
  - At end of study 10

# Outcomes 2

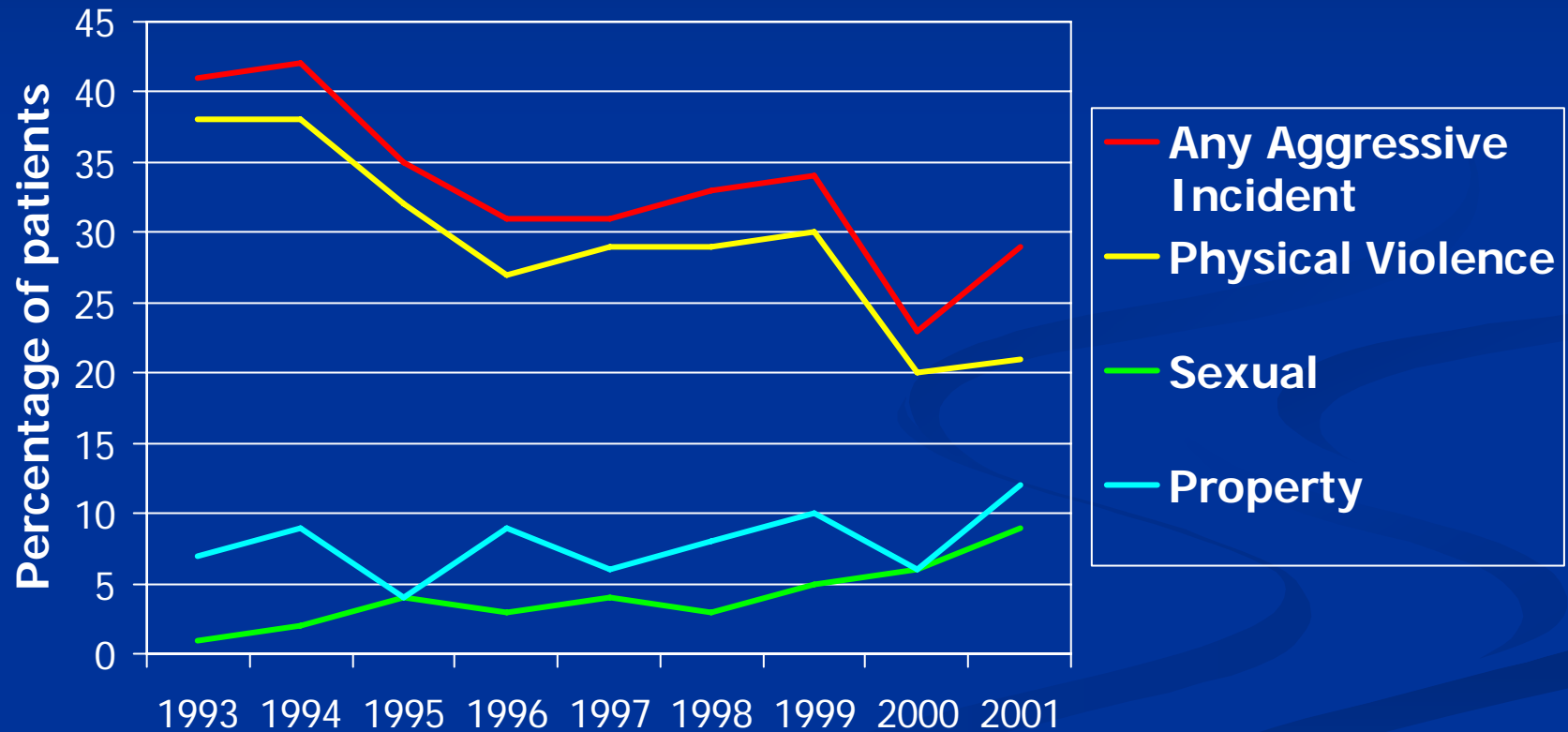
Adverse incidents

# Adverse incidents overview

	Percentage of patients with any incident	Median number per patient	Range
Any violent incident	76%	3	0 - 243
Serious violent incident	28%	0	0 - 8
Conviction	15%	0	0 - 12
Violent conviction	5%	0	0 - 4
Absconding	30%	0	0 - 19
Self-harm	33%	0	0 - 85

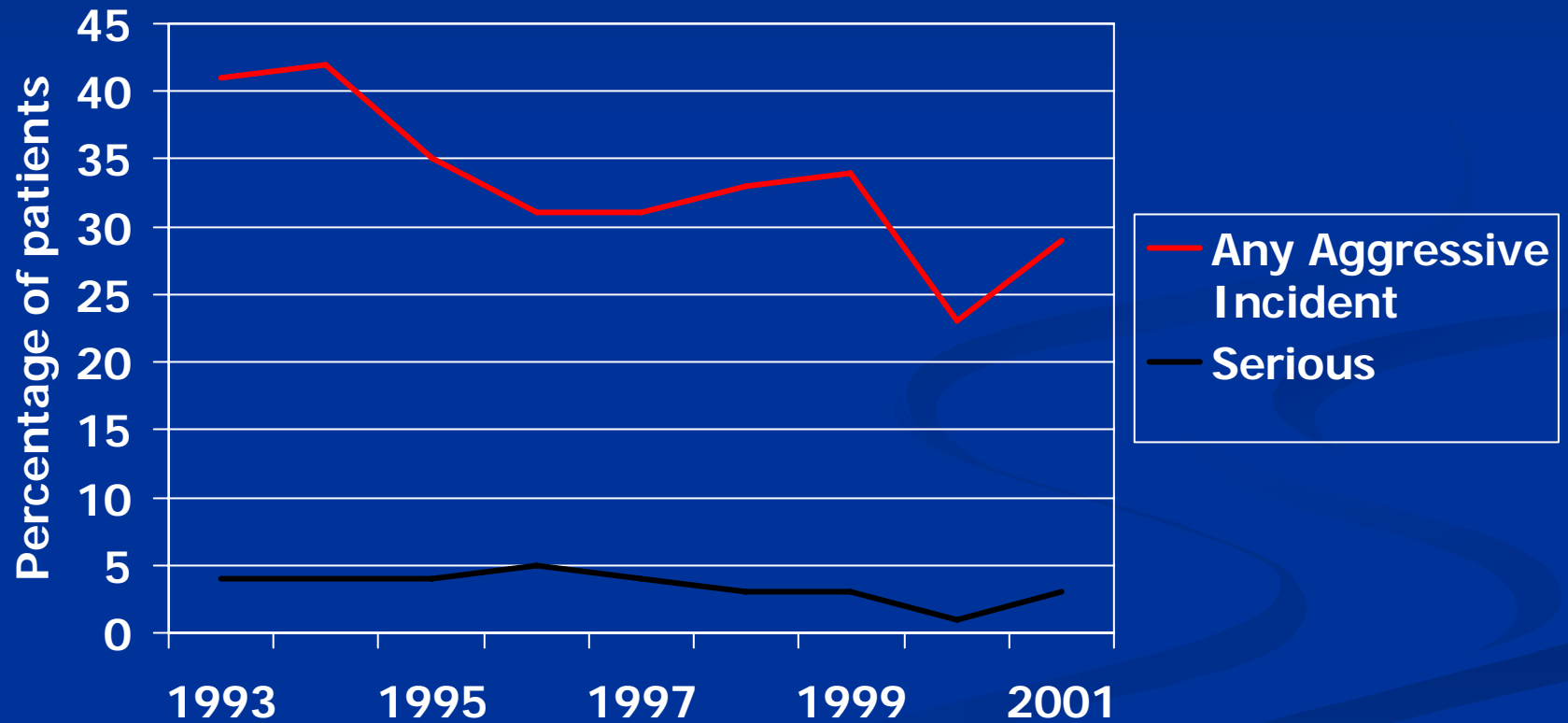
# Violent Incidents Over 10 years

## Case Note Data



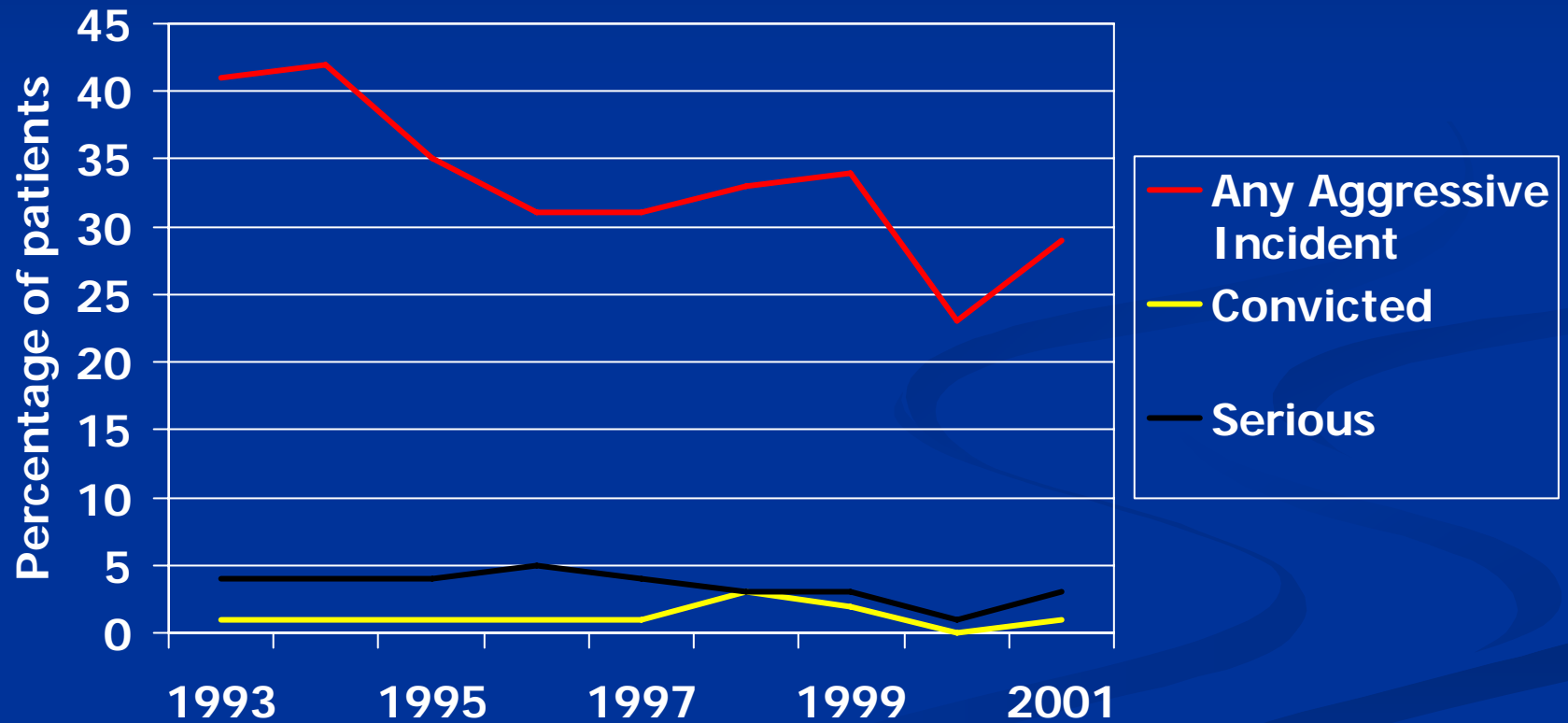
# Violent Incidents Over 10 years

Case Note Data



# Violent Incidents Over 10 years

Case Note Data



# Violence and offending

## Violent incidents

- 1823 incidents
- 64 serious incidents
  
- High security
  - 1292
- Community
  - 20 incidents (1 serious)
  
- Victims
  - Staff            776
  - Patients        739
  - Strangers      10 (1 serious)

## Offences

- 51 offences
- 15 violent offences
  
- All committed in community

# Determinants of violence and offending

## Violence

- Any (85%)
  - Civil admission due to violent behaviour
  - Previous self-harm
  - Previous violence in high security
  - DAS 'over activity'
  - Serious index offence and stranger victim
- Serious (77%)
  - Drug use in high security
  - No ground parole at baseline
  - Previous violent conviction
  - On lithium at baseline
  - Akathisia at follow-up

## Offending (92%)

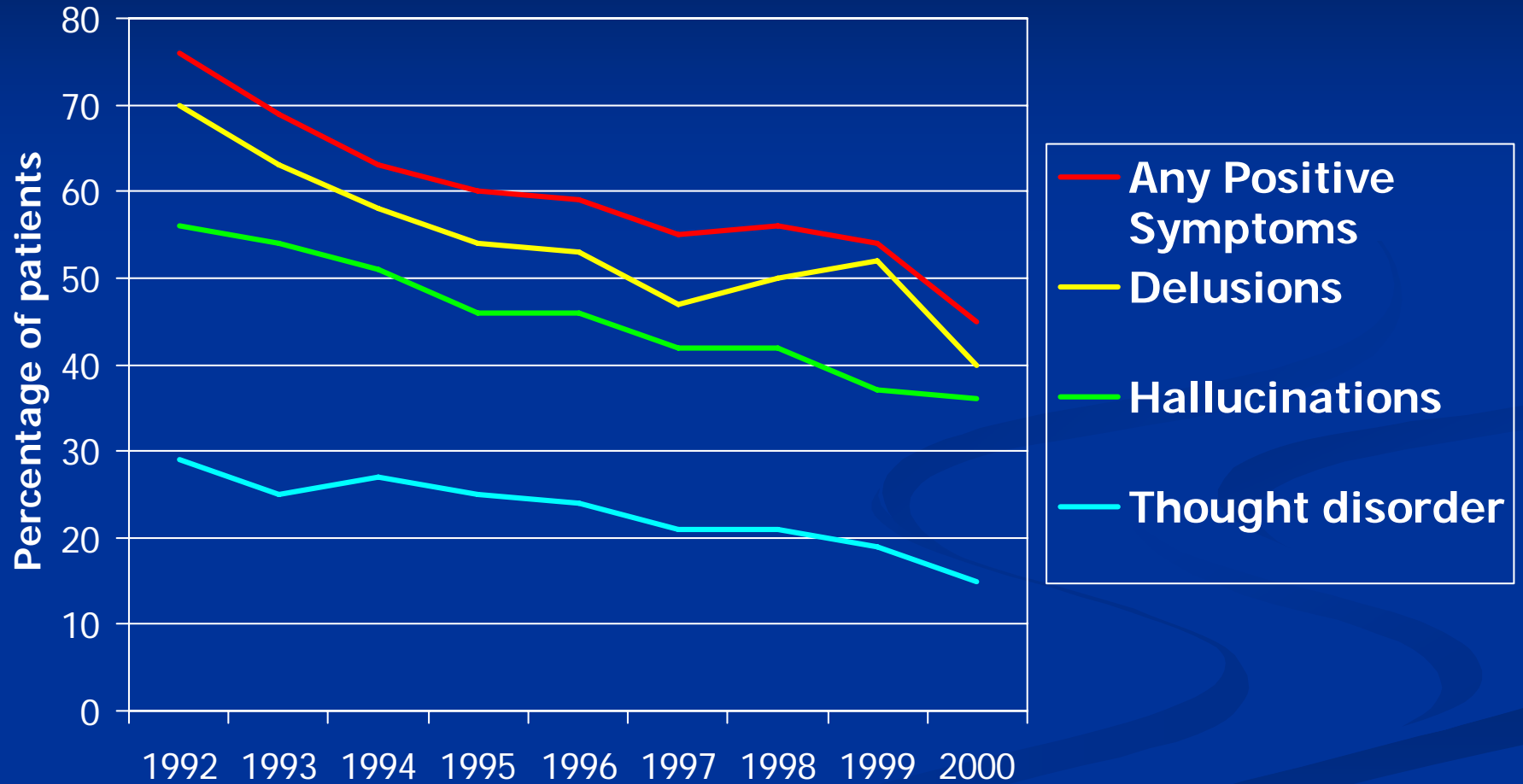
- Alcohol/drug dependence
- Better social functioning in high security
- Better contact with friends/relatives in high security
- Psychotic symptoms
- Previous sex offences
- Need for high security

# Outcomes 3

Illness and treatment

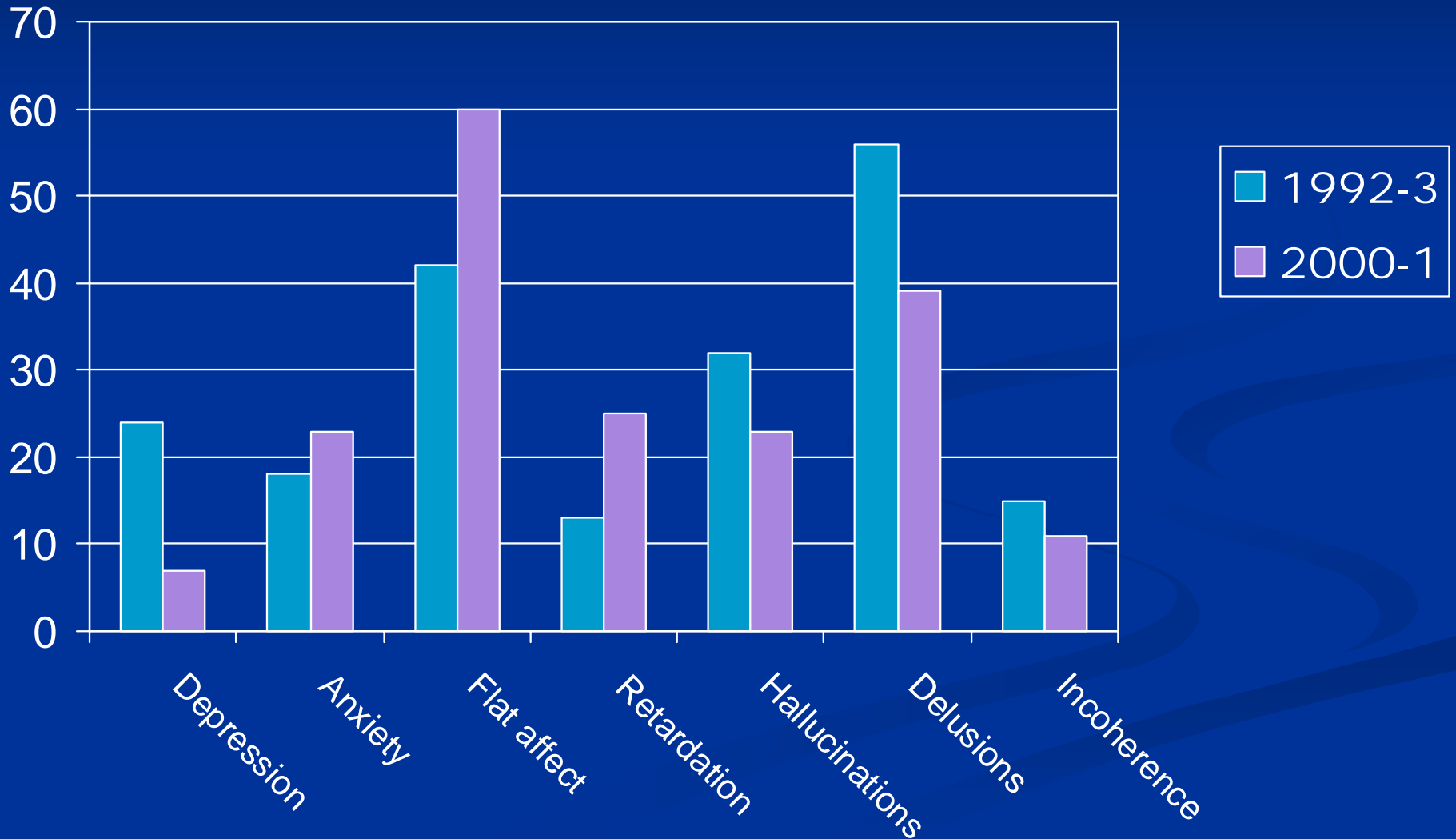
# Change in symptoms over 10 years

## Case Note Data



# Change in symptoms over 10 years

## Interview Data



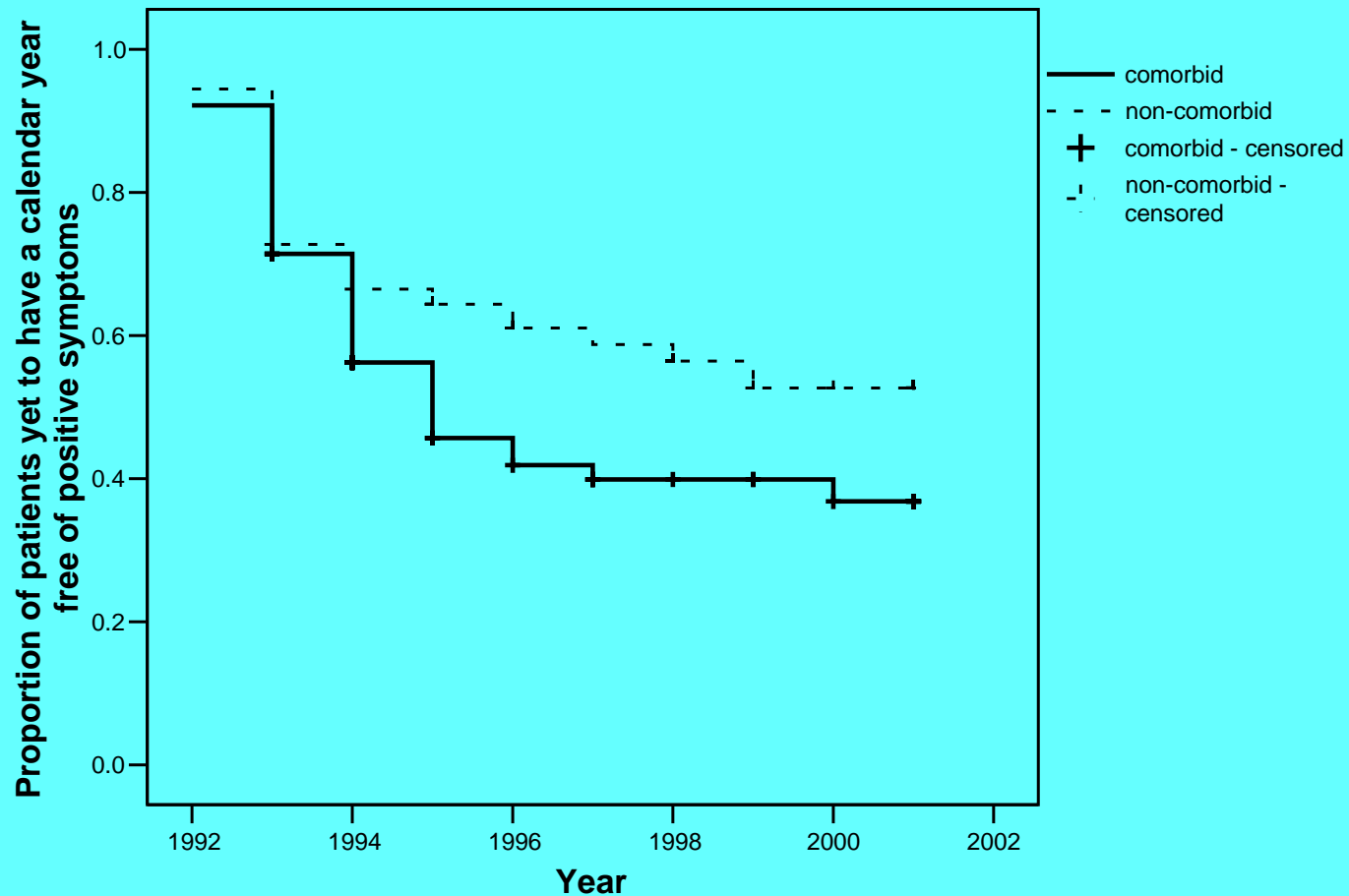
# Determinants of persistent symptoms

*Recovery from positive symptoms (74%)*

- *Severity of psychopathology at baseline*
- *Total time in hospital prior to baseline*
- *Civil admission*
- *Number of previous convictions*

# Comorbid substance dependence

Survival curve: time until achieved a calendar year without positive symptoms  
- comparison between comorbid and non-comorbid patients.



# Treatment

■ Medication	99%	■ Group CBT	8%
■ PARS	98%	■ Art therapy	7%
■ OT	75%	■ Individ. dynamic	5%
■ Other indiv. psych.	50%	■ Supported employ.	2%
■ Alcohol / drugs	20%	■ Music therapy	1%
■ Anger	20%	■ Group dynamic	0%
■ Other group	11%	■ Family therapy	0%
■ Individ. CBT	10%	■ Couples therapy	0%
■ Day hosp./centre	10%	■ Drama therapy	0%

# Limitations

- Prevalence cohort
- Partially retrospective design
- Losses to follow-up
- Case note vs. interview data
- Lack of comparison group
- Generalizability

# Implications

- Is the outcome of schizophrenia different?
  - Symptoms of illness
  - Service and social outcome
- Comorbidity
  - Alcohol / drug dependence
  - Personality disorder
- Violence and offending
  - Protecting the public from serious harm