

The clinical utility of outcome measures in forensic mental health

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Introduction

- Provides mental health services for individuals coming into contact with the criminal justice system in NSW
- Justice Health is an expanding service that currently has over 1200 employees (980 FTE) working at over 80 locations in metropolitan and regional NSW
- Works in collaborative relationships with:
 - Department of Juvenile Justice
 - Corrective Services- New South Wales
 - Attorney General's Office - Courts
 - Other Area Health Services

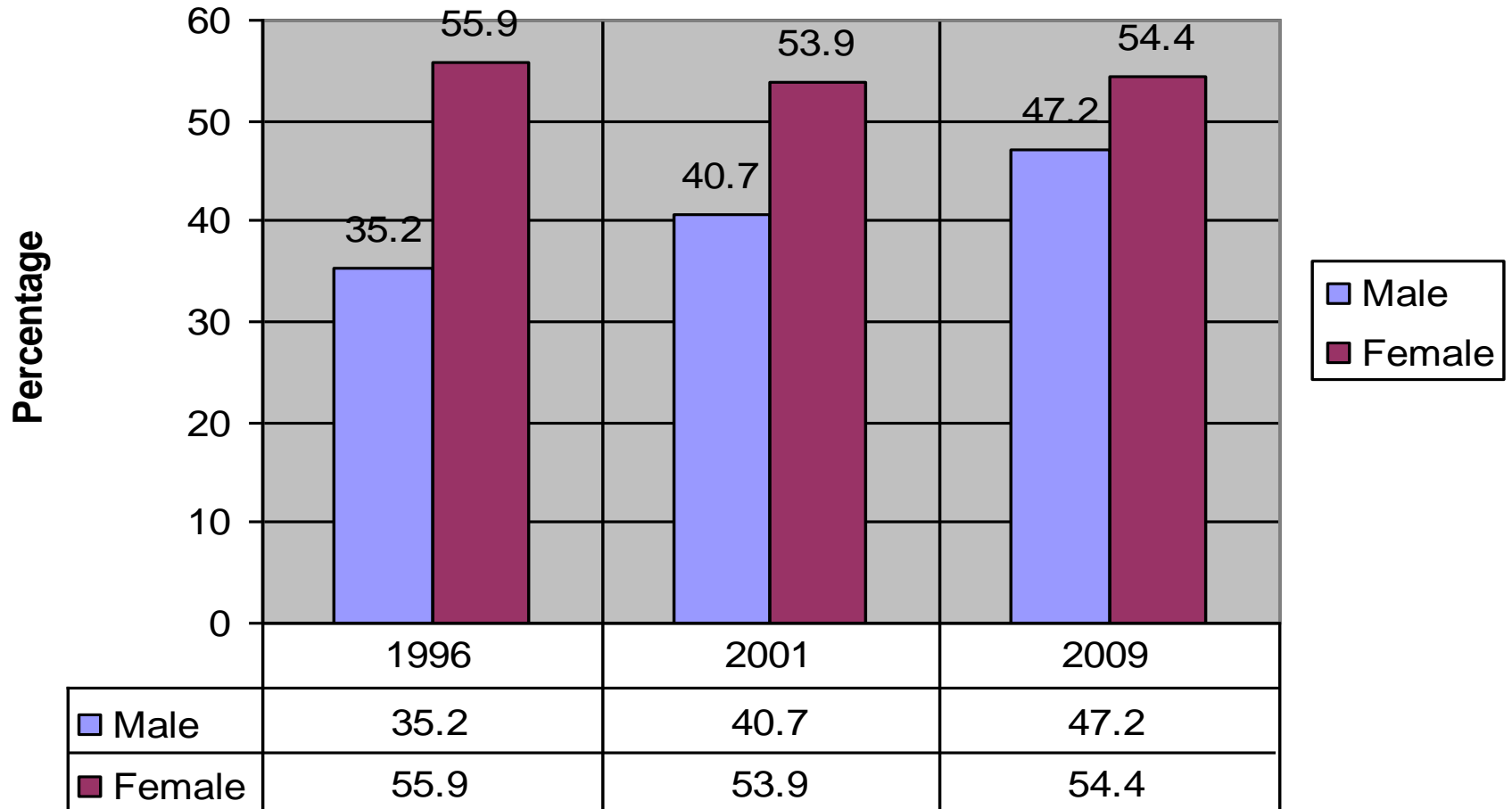
Justice Health Profile

- There are around 18,000 adults received into the NSW correctional centres per year.
- Currently there are over 10,500 adults held in custody on any one night.
- Of those adults held in custody 93% are male and 7% are female
- Of those held in custody 20 % of males and 30% females are Aboriginal and / or Torres Strait Islanders (incarceration rate is 16 times higher than non-indigenous population)
- The demand for health care in the criminal justice system is increasing. CS-NSW (2009) reports that since 1999, in the adult correctional system there has been an increase in the full-time inmate population of over 50 per cent.
- Over the past 5 years there has been on average a 5.5% per annum increase in the inmate population (5% male, 13% female). This equates to an overall increase of around 500 full-time inmates per year (or one medium size gaol)

Justice Health Profile

- The average age of incarcerated individuals is 33 years for males and 31 years for females
- CS NSW (2009) reports that in 2008–2009 there were 165,070 movements of inmates. Which presents major difficulties with regard to continuity of care
- There are around 30% on remand and 70% sentenced. Of these:
 - 30% are in custody less for than six months
 - 16% are in custody 6-12 months
 - 18% are in custody 1-2 years
 - 36% are in custody longer than 2 years

Number of incarcerated individuals reporting having ever been assessed or treated by a doctor or psychiatrists for an emotional or mental health problem



NSW inmate Health Survey 2009 – Self-reported mental health conditions

n=985	Men (%)	Women (%)	Total (%)
Depression	33.1	44.8	35.4
Anxiety	22.3	33.9	24.6
Drug dependence	20.2	25.2	21.3
Alcohol dependence	12.8	10.0	12.2
ADD/ADHD	11.8	3.1	10.1
Manic depressive psychosis	8.3	12.6	9.2
Schizophrenia	8.8	8.9	8.8
Other	7.9	12.6	8.8
None of the above	52.8	45.6	51.4

Adult Services

10 Police Cell Complexes

32 Adult Correctional Centre's

11 periodic Detention Centre's

Court Liaison Service in 21 Adult Local Court Complexes

Adult Drug Court Program

Post-Release Treatment Scheme

Male and female Mental Health Screening Units (56 beds)

Mental Health Accommodation Unit

Long Bay Prison Hospital (40 beds)

The Forensic Hospital (135 beds)

Connections Program

Community Forensic Mental Health Service

Adolescent Services

- 8 Juvenile Justice Centres
- 1 Juvenile Correctional Centre
- Adolescent Community and Court Team in 5 Children's Courts
- Adolescent Community Integration Team



Outcome Measures

- In Justice Health collection of outcome measures was commenced in 2002 as part of the NSW Health Mental Health Outcomes Assessment Tool (MH-OAT) initiative
- This initiative involved the standardisation of mental health clinical documentation across the state and collection of a suite of standard outcome measures
- The outcome measures for adults and older people included the HoNOS, Kessler-10 and Life Skills Profile. For adolescents it included the HoNOSCA, Strengths and Difficulties Questionnaire, CGAS and ICD-10 Factors influencing Health Status

Outcome Measures

- In Justice Health the outcome measures are recorded in a stand alone database
- Since 2002 this database has been registering around 3,000 new patients per year. It currently has just under 30,000 patients registered
- The database has just under 36, 000 sets of outcome measures recorded from all service settings
- In 2009-10 over 77, 000 hours of direct or indirect patient related activities were recorded from non-inpatient services

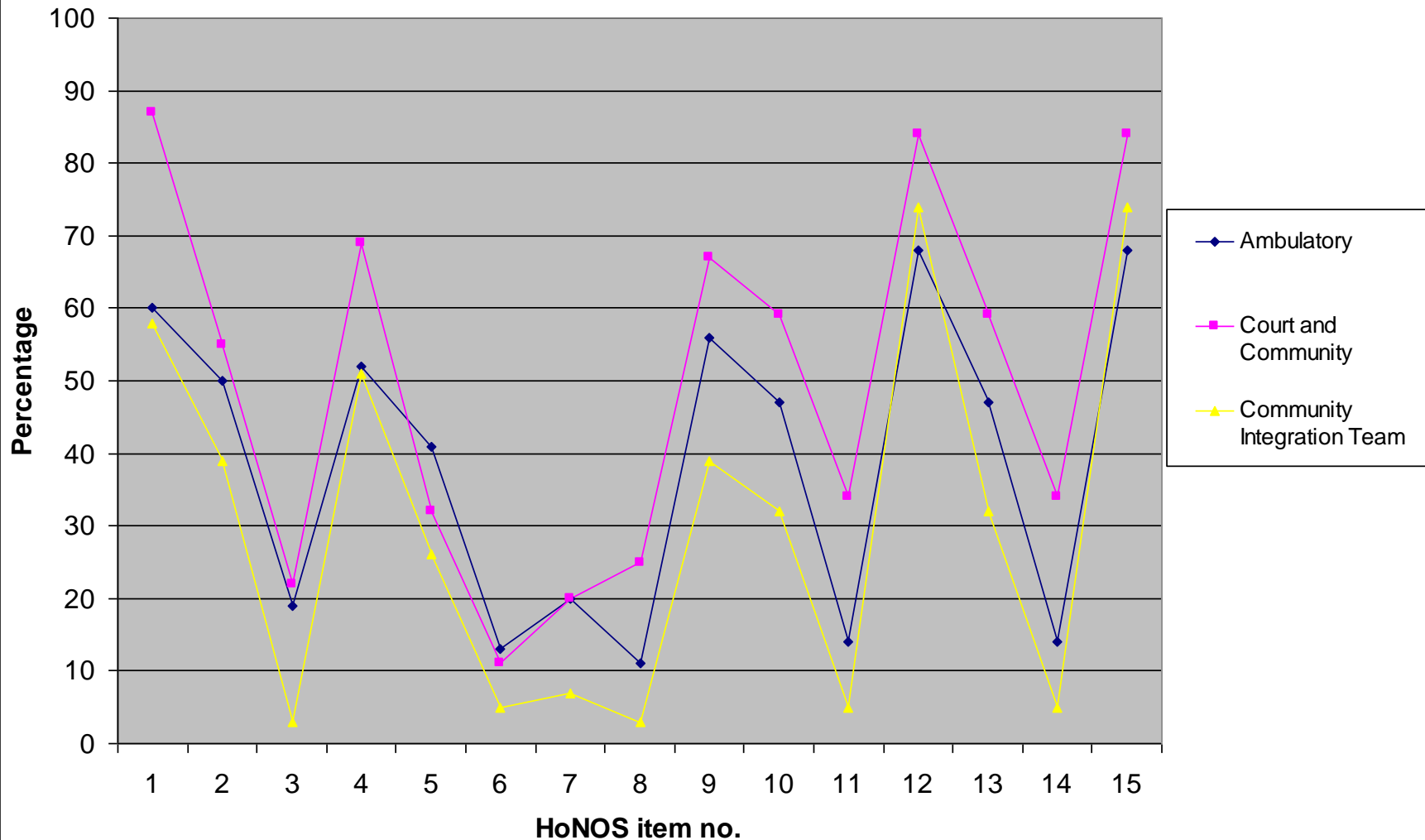
Outcome Measures

- The information gathered in the database has provided an information rich source regarding consumers of the service
- Justice Health uses this information to benchmark with other forensic mental health services

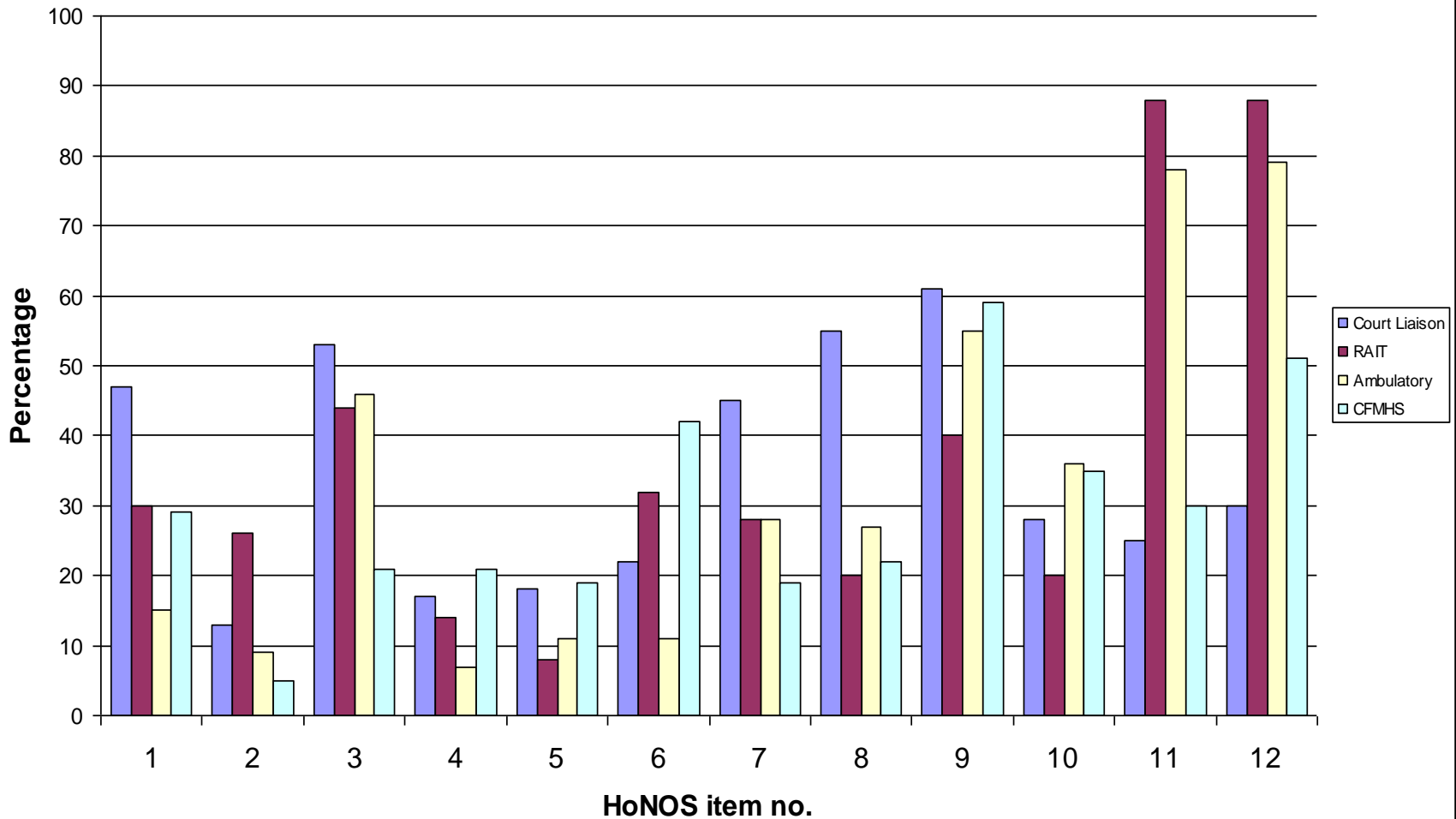
Clinical utility of outcome measures

- Service profiles

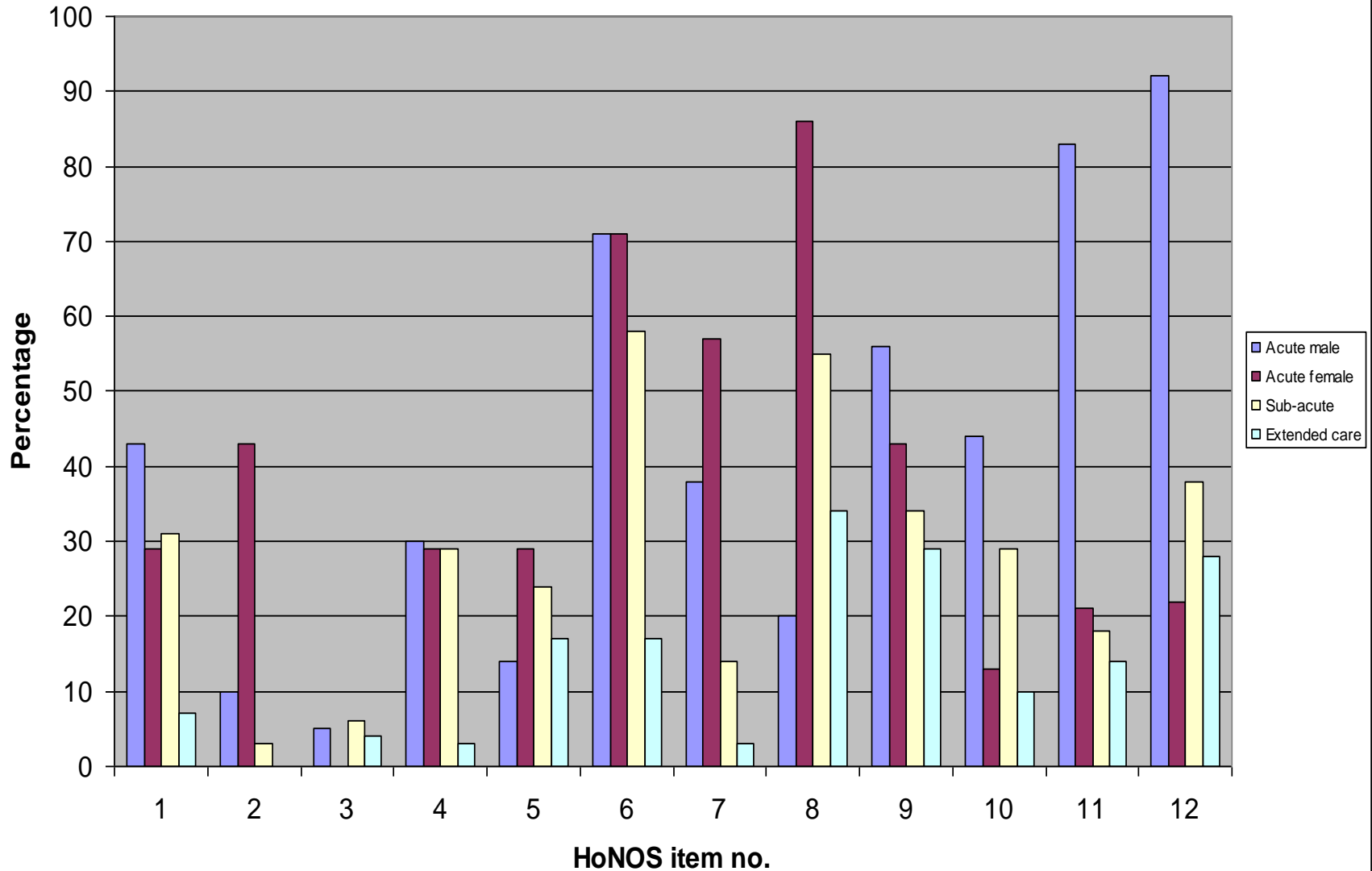
Justice Health: A comparison of percentage clinically significant scores (2 or more) for adolescent mental health services



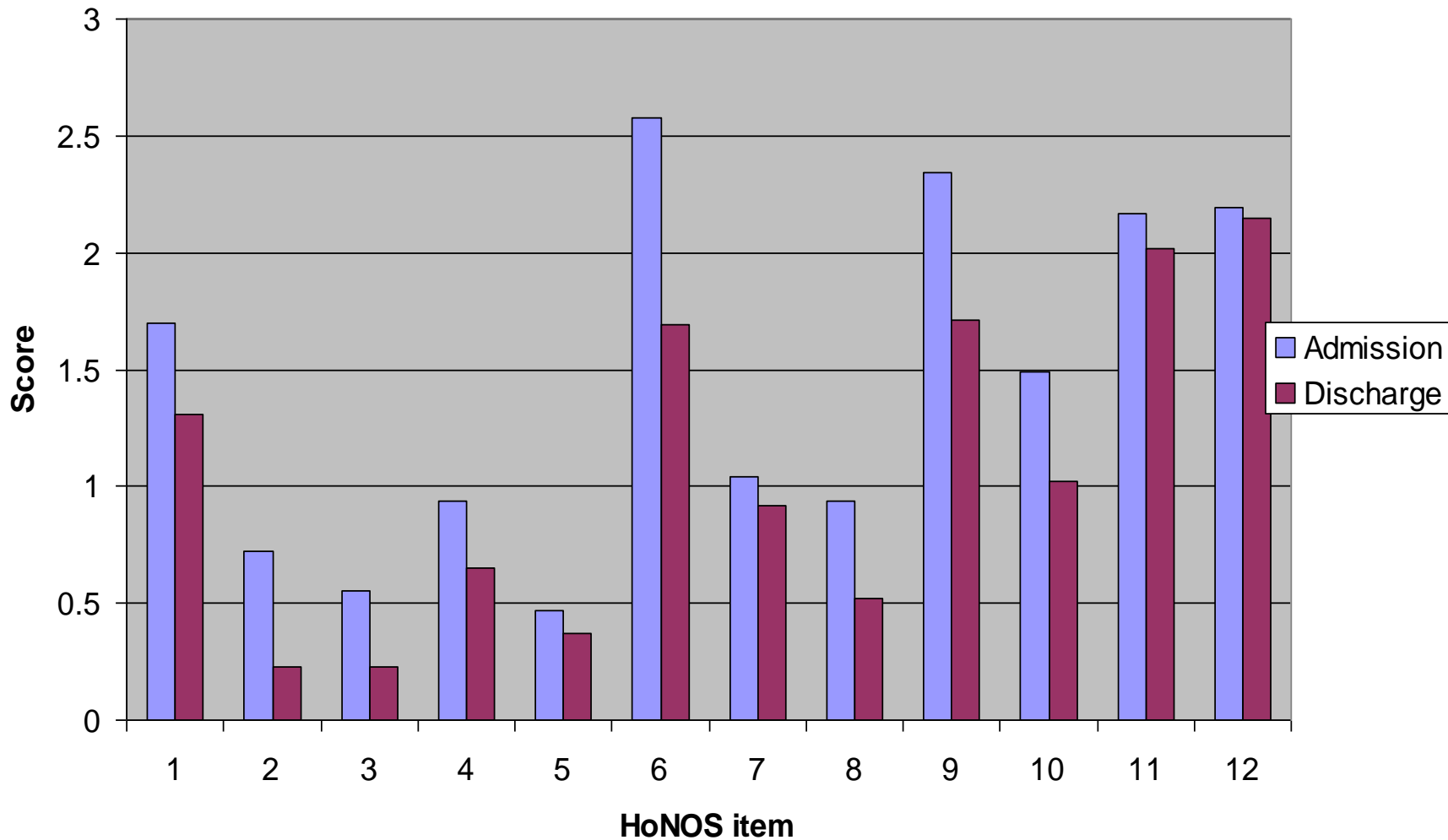
Justice Health: A comparison of percentage clinically significant scores (2 or more) for Court Liaison, RAIT, Prison ambulatory and the CFMHS



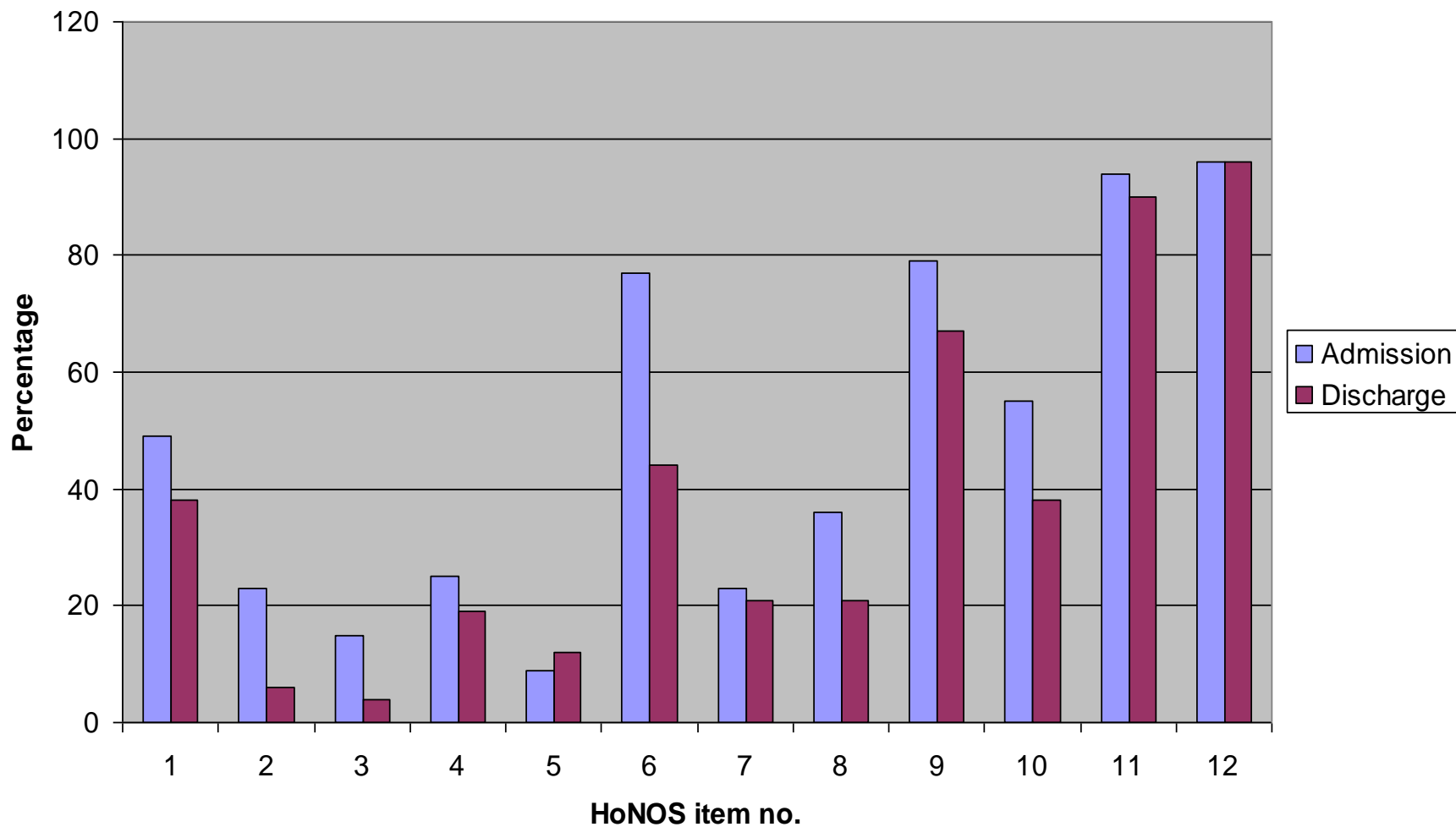
Justice Health: A comparison of percentage clinically significant scores (2 or more) for forensic inpatient services



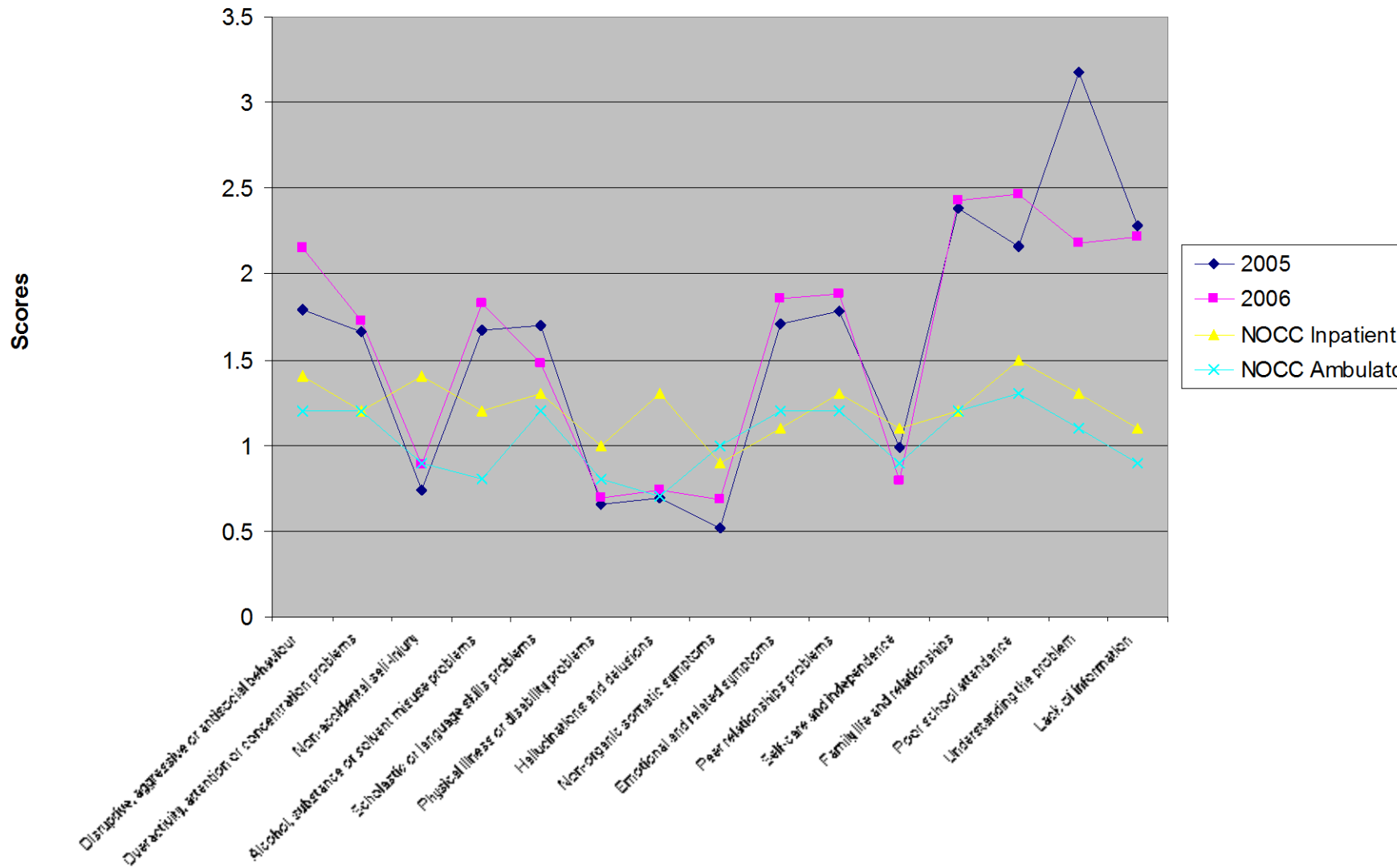
Justice Health: Mean admission and discharge HoNOS scores for inpatient services 2008-09



Justice Health: Percentage of clinically significant HoNOS scores (2 or more) on admission and discharge to inpatient services 2008-09



Justice Health: Comparison of mean HoNOSCA item scores with the NOCC inpatient and ambulatory mean scores



ICD-10 Factors Influencing Health Status (FIHS) and Contact with Health Services

% YES Responses	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7
NOCC Inpatient	40	70	69	83	62	38	18
NOCC Amb	24	51	50	68	40	16	8
2005 n = 197	66.3	82.9	90.4	88.8	87.1	92.6	97.8
2006 n = 267	79.1	88.9	92.3	90.7	97.2	97.8	97.5
2007 n = 170	79.4	92.0	94.1	95.6	91.1	95.4	96.4

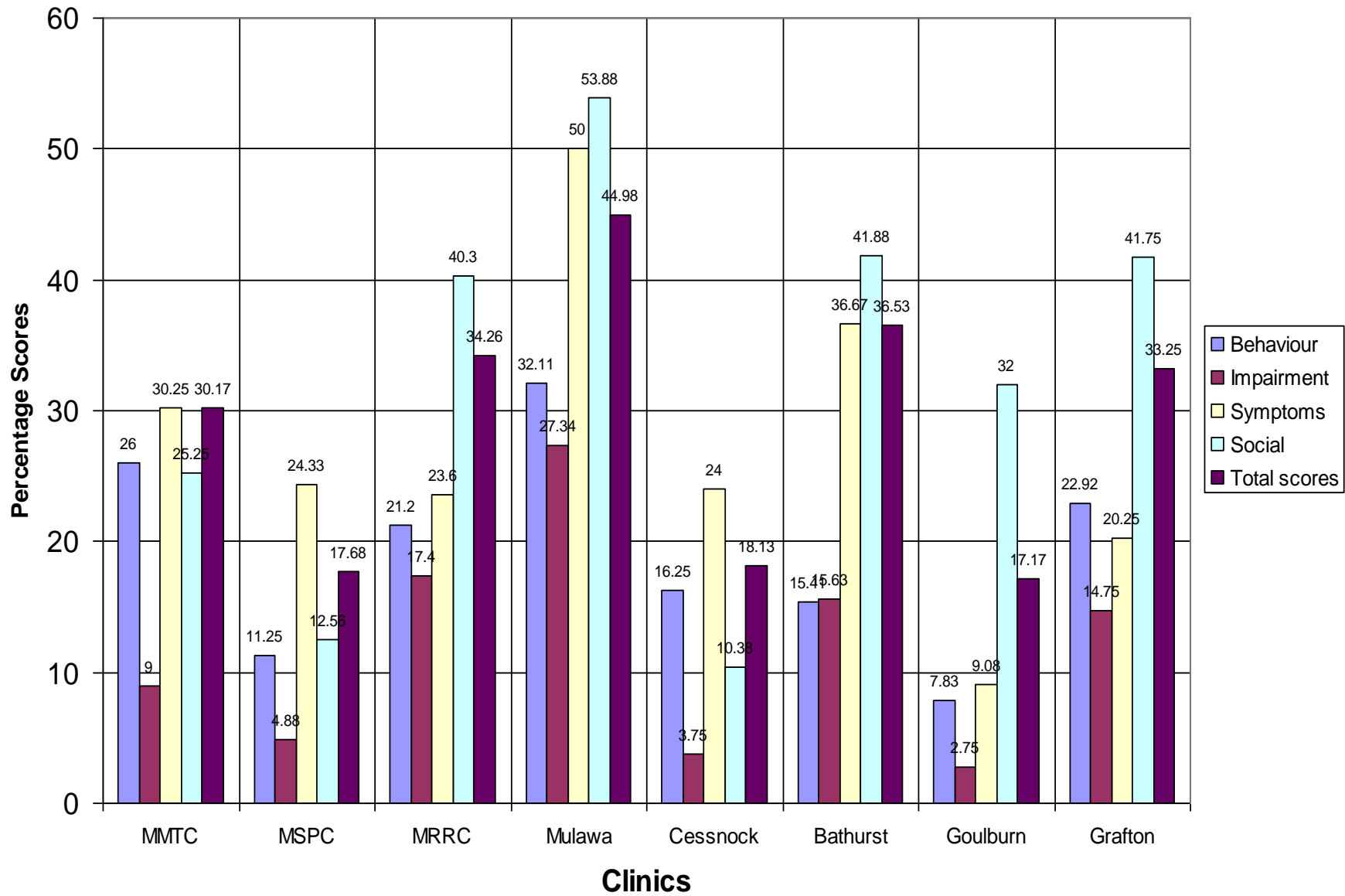
Strengths and difficulties questionnaire (SDQ)

	Assessment	Review or Discharge
PARENT	n = 12/70	n = 29/98
Total Difficulties Score	19.3 **	20.4 **
Emotional Symptoms Score	3.8*	3.7*
Conduct Problem Score	5.3 **	5.9 **
Hyperactivity score	6.5 *	7.0 **
Peer problem Score	3.8 *	3.9 *
Prosocial Behaviour Score	6.4	5.9*
SELF COMPLETED	n = 51/70	n = 62/98
Total Difficulties Score	14.2	16.7
Emotional Symptoms Score	2.5	6.2
Conduct Problem Score	4.6 *	7.7**
Hyperactivity score	4.6	8.1**
Peer problem Score	2.4	6.4*
Prosocial Behaviour Score	6.5	9.7

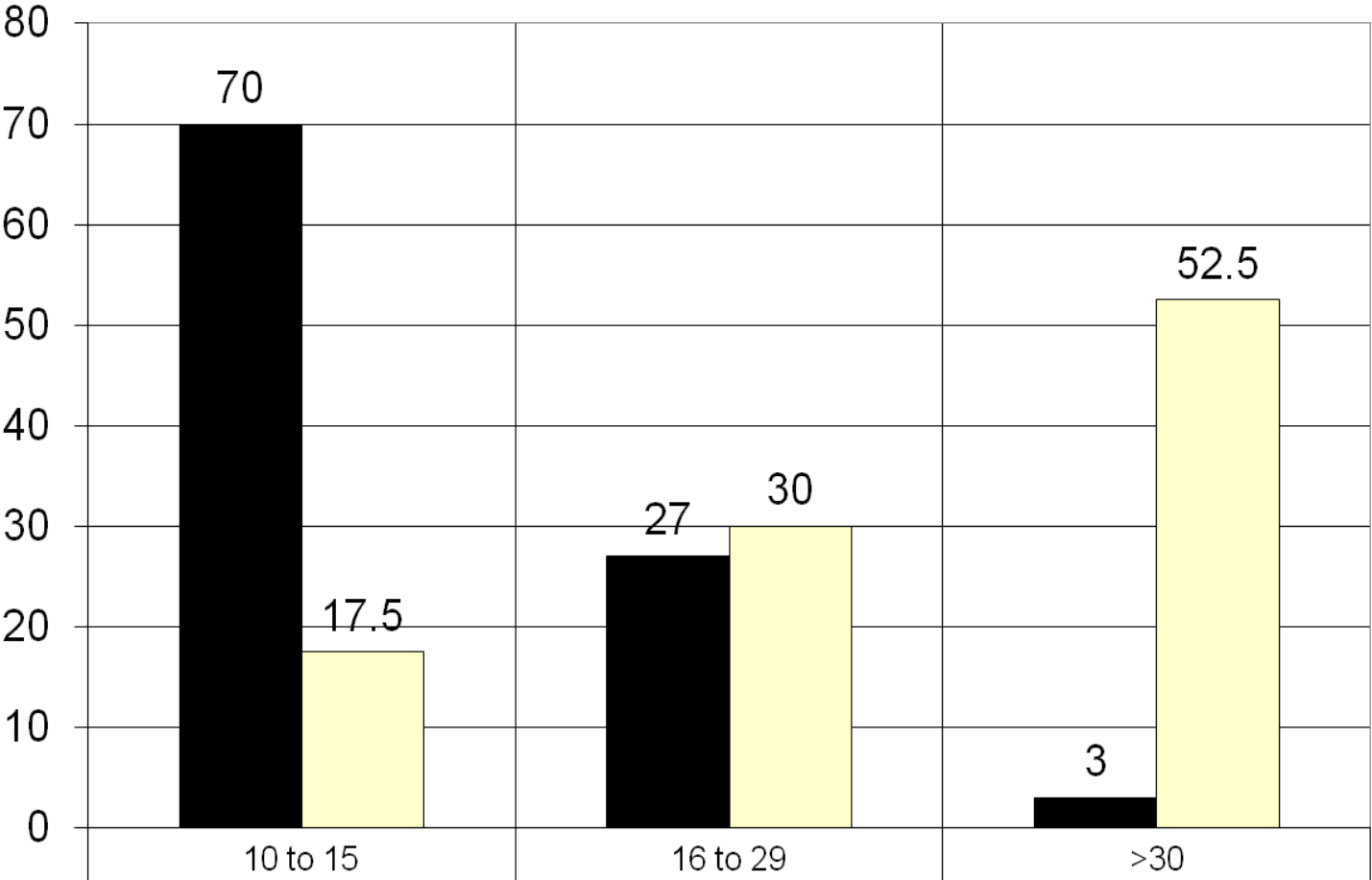
Clinical utility of outcome measures

- Female services

Percentage HoNOS Subscale scores for patients in ambulatory settings

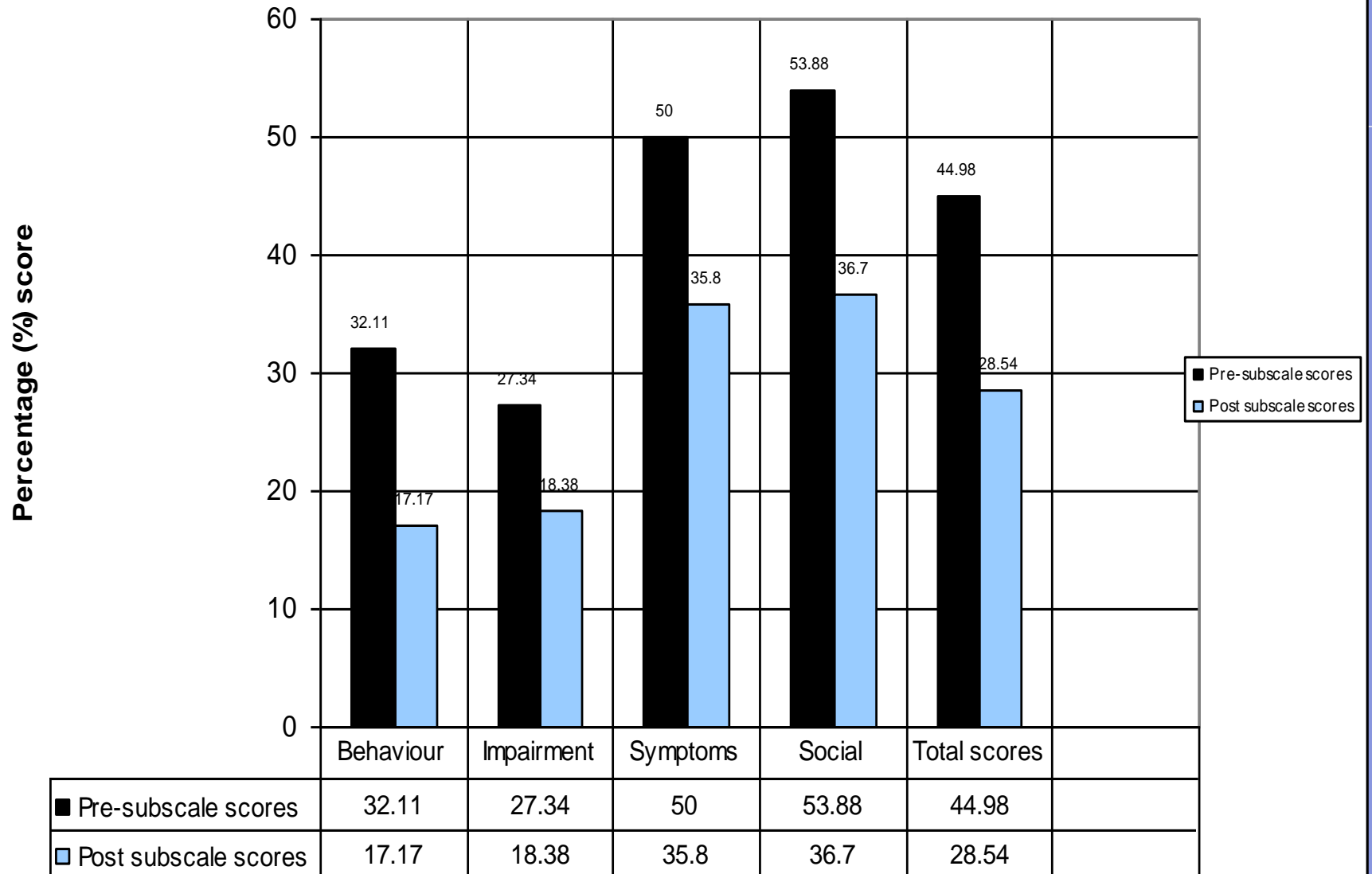


Justice Health: Comparison of mean Kessler-10 scores between inmates referred to mental health services at the Mulawa CC and the general community

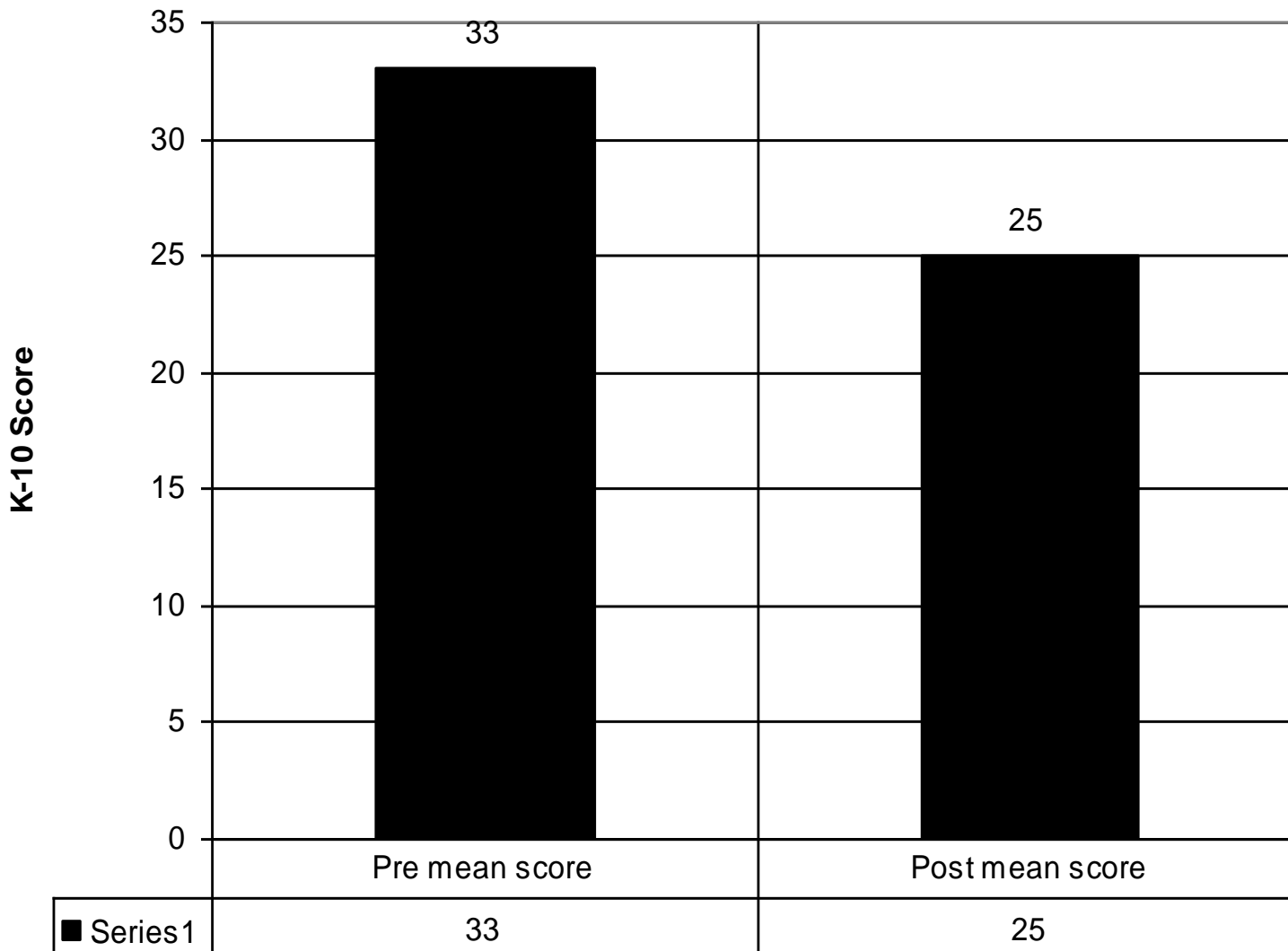


■ General populaton	70	27	3
■ Mulawa CC	17.5	30	52.5

Justice Health: HoNOS Subscale scores for Mulawa Correctional Centre pre and post the introduction of B Ward East



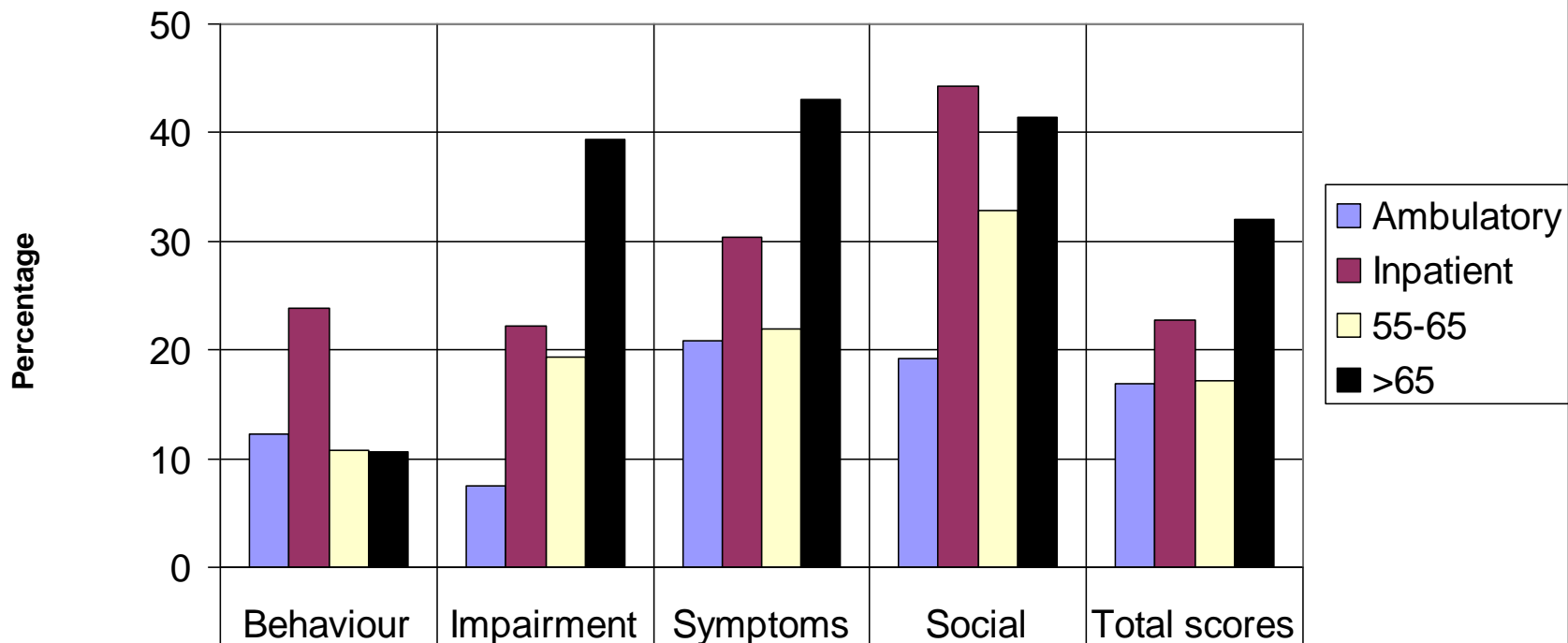
Justice Health: Kessler-10 mean scores for Mulawa Correctional Centre pre and post the introduction of B Ward East



Clinical utility of outcome measures

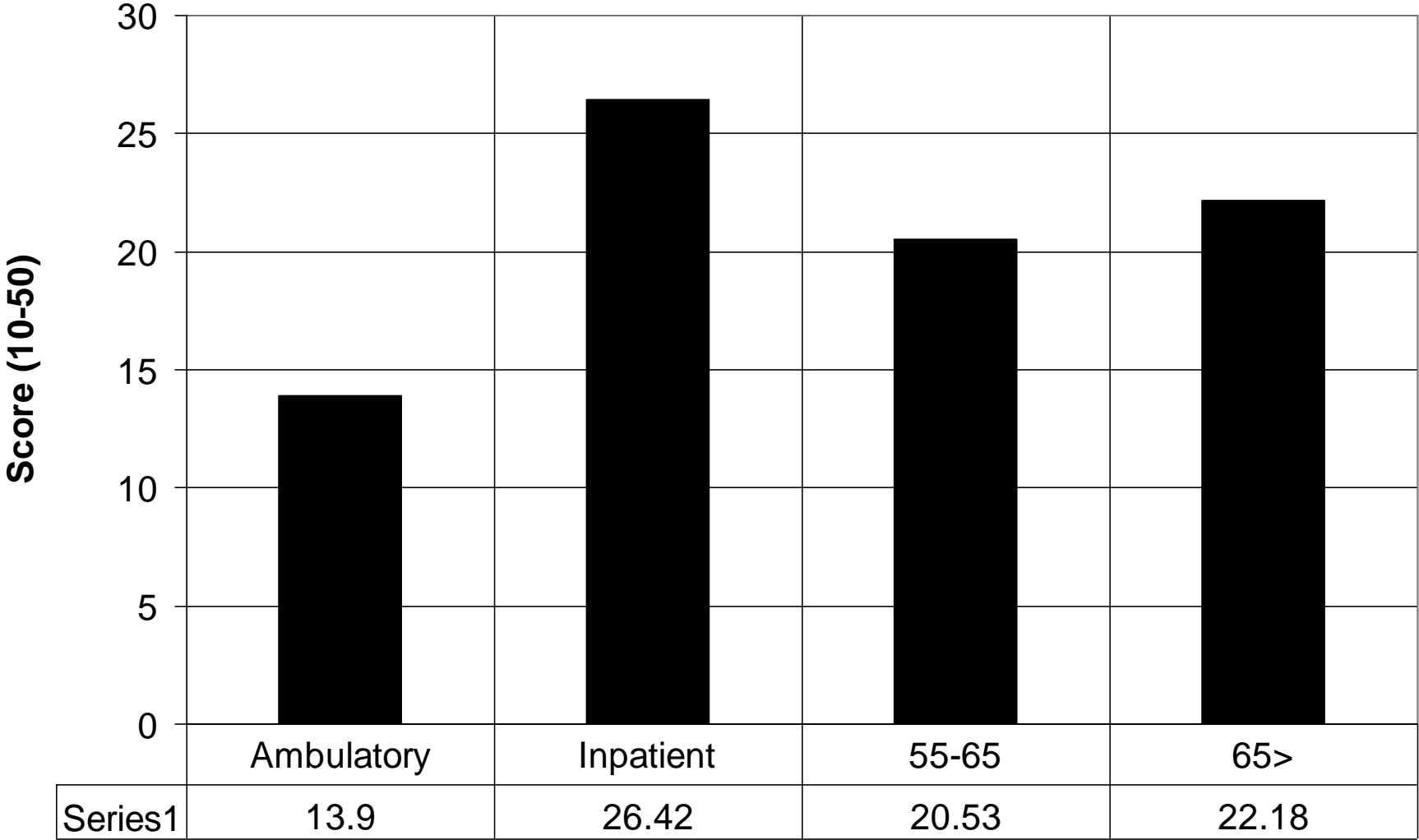
- Profiles of specific patient groups

Comparison of mean HoNOS subscale percentage scores for all ambulatory and inpatient, individuals aged 55-65 and individuals aged 65 and over

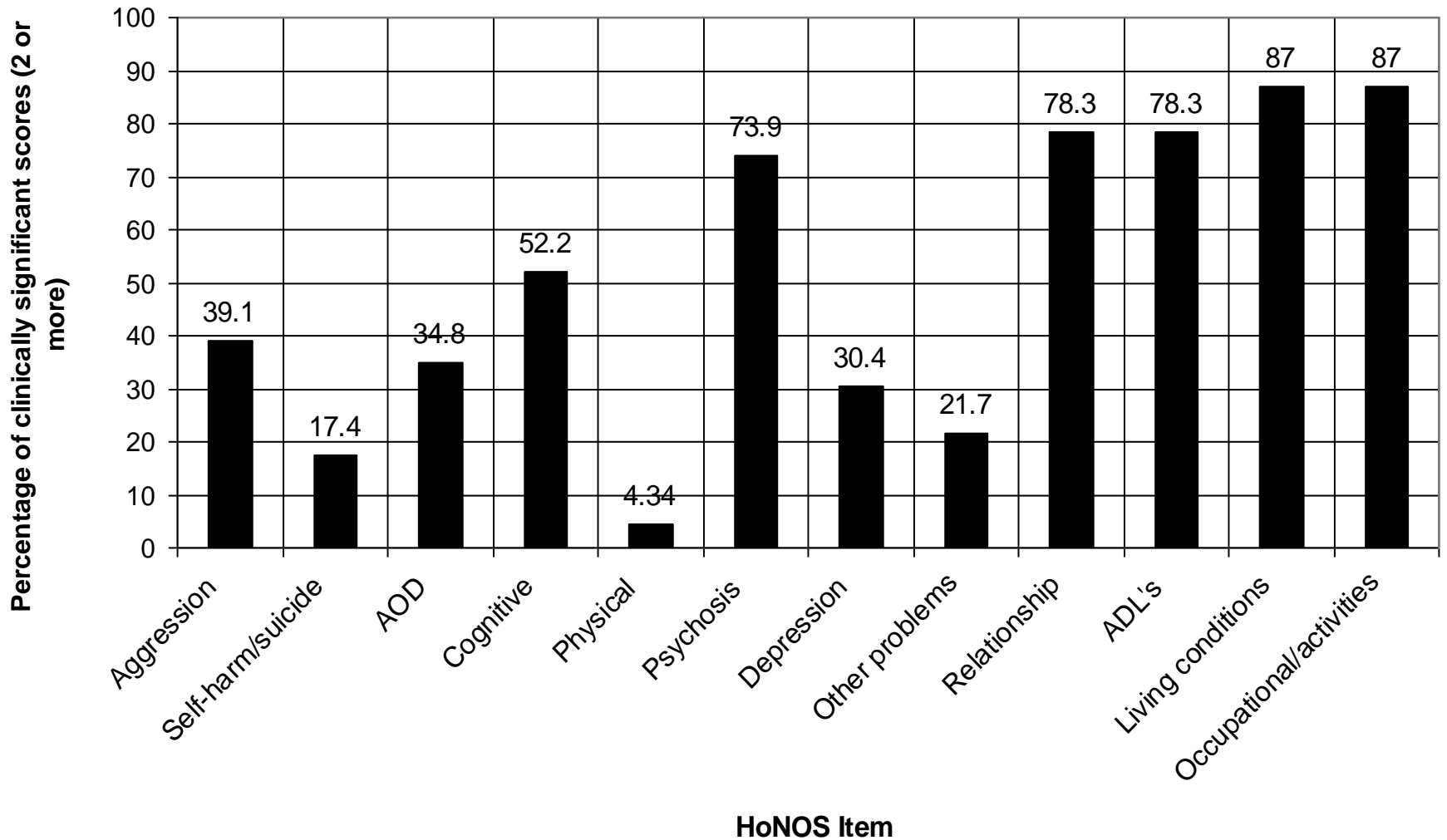


■ Ambulatory	12.2	7.5	20.8	19.2	16.9
■ Inpatient	23.9	22.2	30.4	44.3	22.7
■ 55-65	10.7	19.4	21.9	32.8	17.2
■ >65	10.6	39.4	43	41.4	32

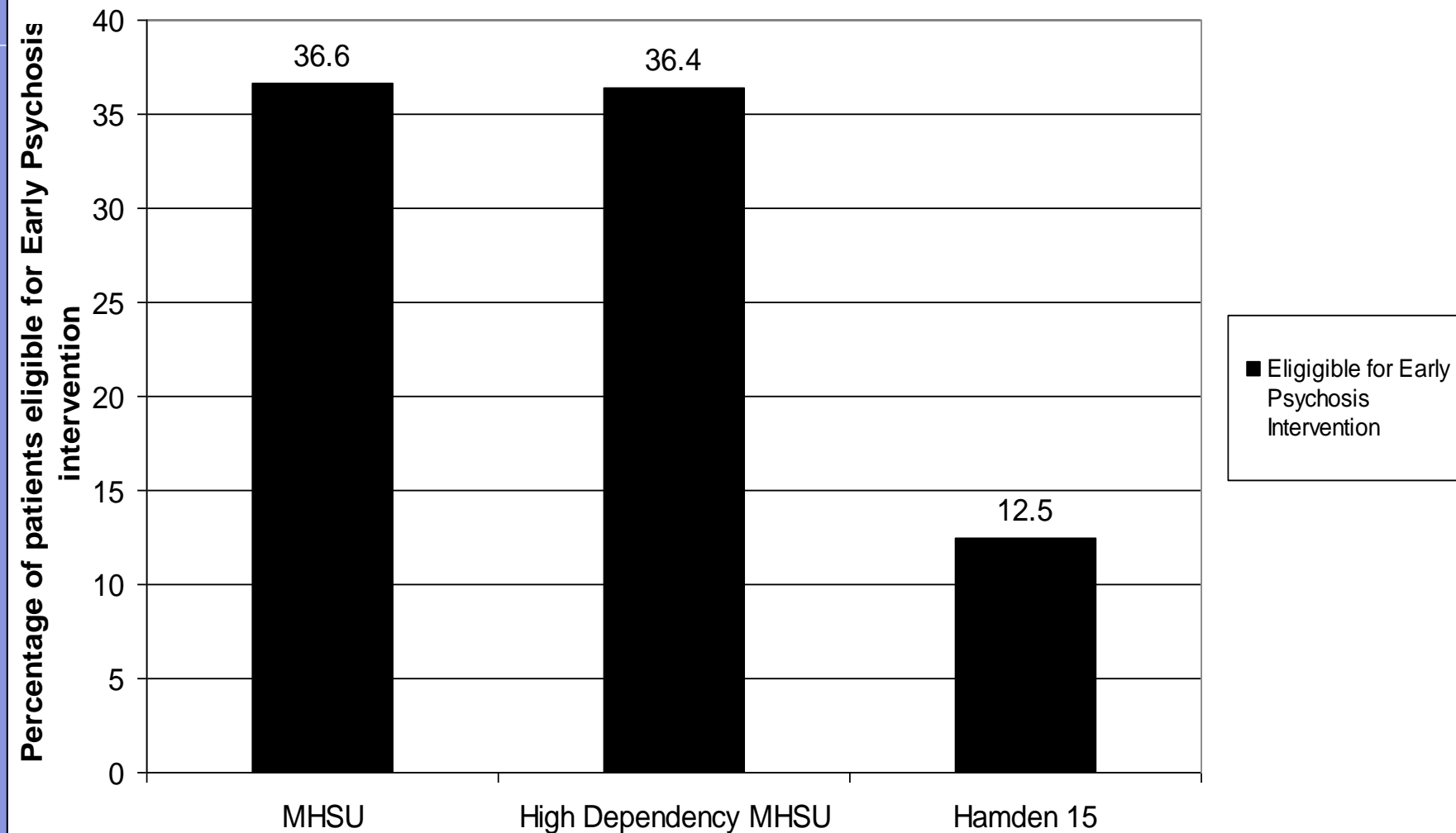
Comparison of mean Kessler-10 scores for ambulatory, inpatient, individuals aged 55-65 and 65 years or older



Justice Health: Percentage of clinically significant HoNOS scores (2 or more) on admission to acute forensic inpatient services for patients that are later identified as aggressors in clinical incidents



Justice Health: Percentage of patients eligible for Early Psychosis Intervention in the MHSU, MHSU High Dependency Unit and Hamden 15 at the MRRC



Clinical utility of outcome measures

- Specific projects 'Polypharmacy project'

Current psychotropic information

- Complete regular psychotropic audits in 28 of the 32 adult correctional centres
- Of 9844 inmates in these 28 centres:
 - 2336 (23.7%) prescribed psychotropic medications
 - 1096 (11.1%) prescribed antipsychotic medications
 - 1661 (16.9%) prescribed antidepressant medications
 - 213 (2.2%) prescribed mood stabiliser medications

Current antipsychotic information

- Of 1096 inmates prescribed antipsychotic medications:
 - 94 (8.6%) are prescribed typical antipsychotic medications
 - 124 (11.3%) are prescribed an antipsychotic depot medication
 - 163 (14.9%) are prescribed two or more antipsychotic medications
 - Of these 84 (7.7%) are prescribed an oral and depot antipsychotic medication and 79 (7.2%) are prescribed two different oral antipsychotic medications

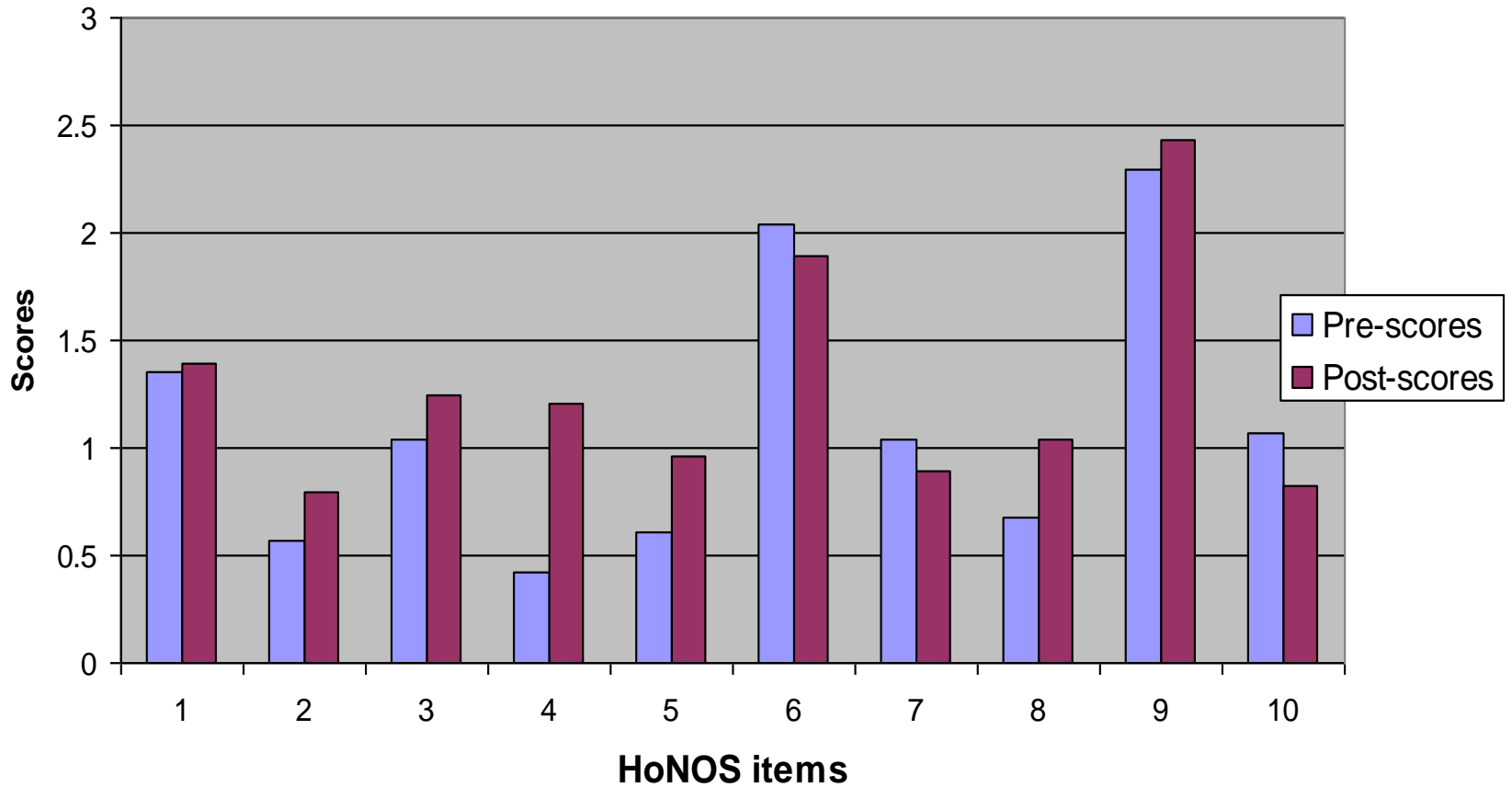
Antipsychotic polypharmacy literature review

- Taylor (2010) reports:
 - Polypharmacy is usually employed where single drugs are considered insufficiently effective
 - Antipsychotic polypharmacy is widespread
 - Some polypharmacy is rational and evidence based, some neither
 - The practice is not grounded on a solid clinical evidence-base and is very probably dangerous

Audit results

Number of antipsychotic medications prescribed	Number of patients
Two	38
Three	7
Four	2

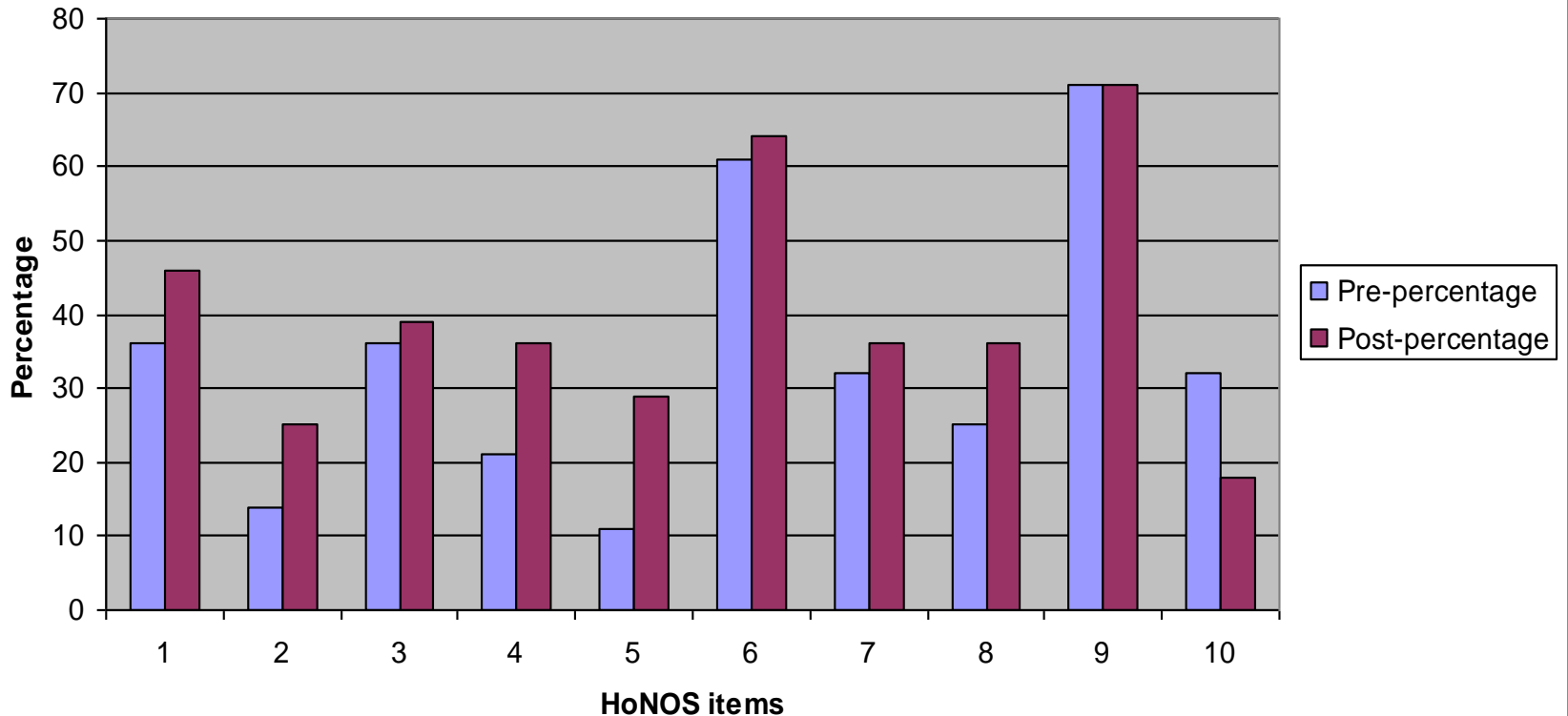
HoNOS item scores pre and post commencement of antipsychotic polypharmacy (matched pairs)



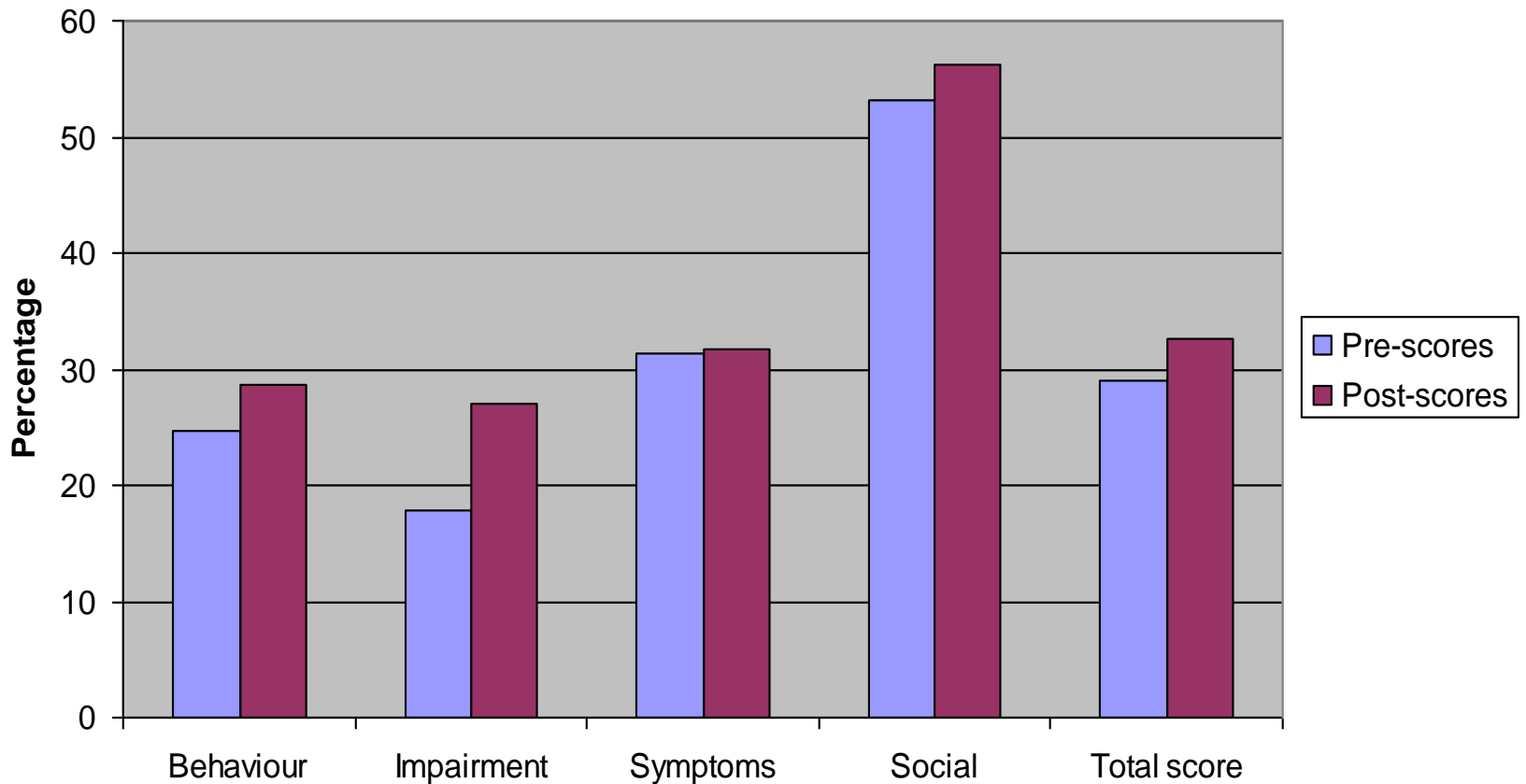
Audit results

- Matched pair data
- Of the 28 matched pairs:
- 15 (53.6%) scores increased
- 1 (3.6%) scores remained unchanged
- 12 (42.8%) scores decreased
- Pre-mean total scores = 11.8
- Post-mean total scores = 13.4

Percentage of HoNOS scores 2 or more (clinically significant) pre and post the commencement of antipsychotic polypharmacy (matched pairs)



Percentage HoNOS subscale scores pre and post commencement of antipsychotic polypharmacy (matched pairs)



Recommendations from findings

- Need to complete the antipsychotic polypharmacy audit in all our inpatient settings
- Need to improve the collection and clinical utilisation of outcome measures
- The mandatory collection of outcome measures provides an opportunity to monitor the effectiveness of antipsychotic polypharmacy
- Need to look at other outcome measures being collected including the Kessler-10 and Life Skills Profile to see how these may inform the clinical practice antipsychotic polypharmacy
- Need to ensure that patients receiving antipsychotic polypharmacy are prioritised for regular metabolic monitoring
- Need to benchmark polypharmacy with other forensic services
- Need to develop clear policies, procedures and guidelines regarding the utilisation of antipsychotic polypharmacy
- More research is required to provide a clearer picture on the effects of antipsychotic polypharmacy. What is good and what is bad polypharmacy?

Clinical utility of outcome measures

- There are a number of challenges in the utilisation of mental health outcome measures including:
 - Getting clinicians to collect the data - governance
 - Data quality – that requires constant auditing
 - Clinical utilisation of the data collected – evidence-based practice – no good collecting data if it is not going to be used on individual patients
 - Relevance of current outcome measures
- However, as can be seen there are infinite ways outcome measures can be utilised to improve service provision

Thank-you
Any Questions?

