Structure of Forensic Psychiatric Services in Ireland

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Structure of F

Co

Republic of Ireland: 4.7 million people

- 2791 inpatient beds (2016 IMHS Report)
  - Hospitalisation rate 59/100,000
  - 1827 public beds (2014)
- 3958 prisoners (23.10.17)
  - Imprisonment rate 84/100,000
- 90 Forensic Beds
- Forensic bed rate 2/100,000
- Central Mental Hospital , Dundrum (1850)
- New hospital to open in 2019 (170 beds)

Pathways into Forensic Services

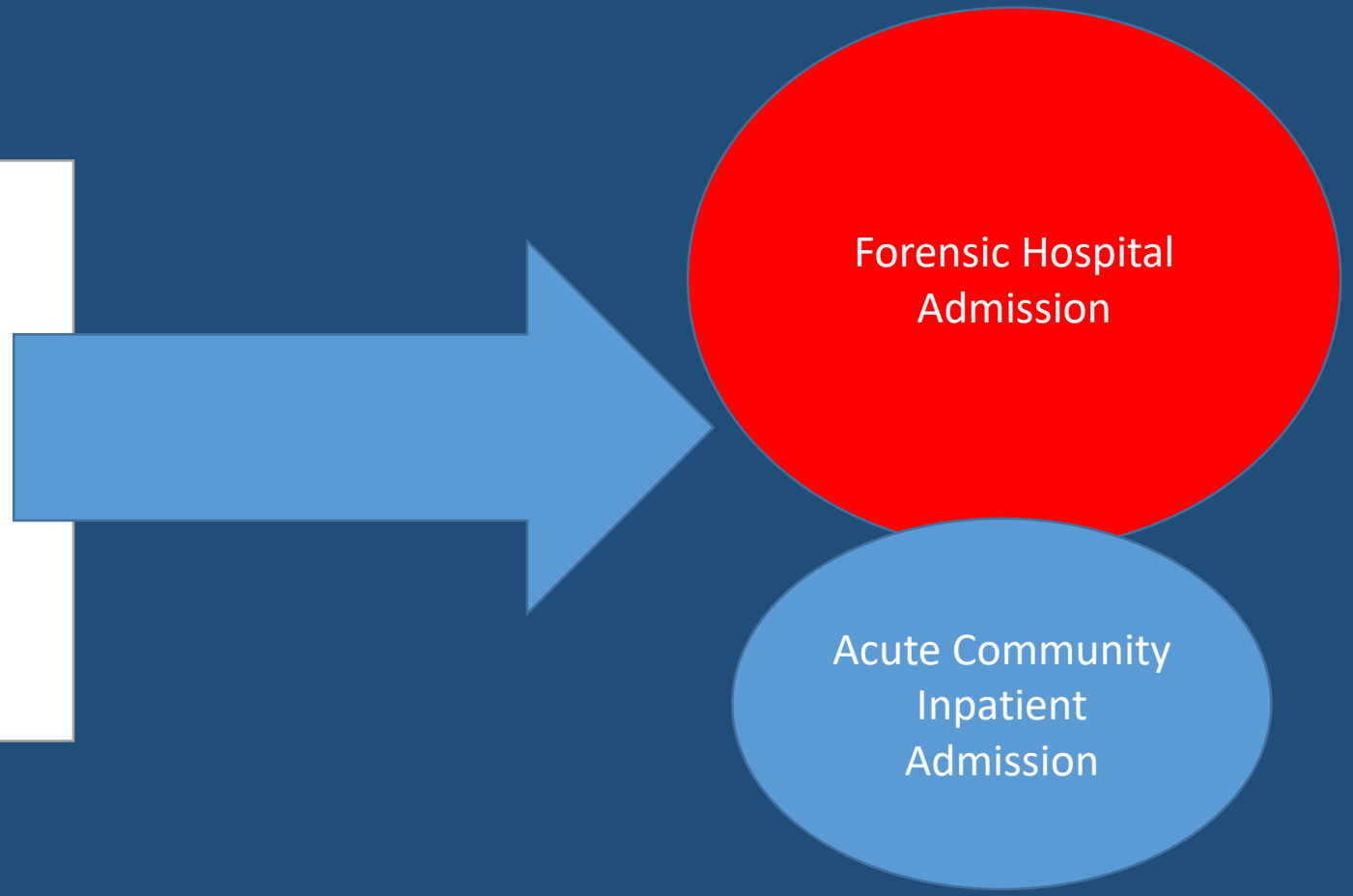
Arrest

Police Station

Court

Remand Prison

Sentenced Prison



Prisons in Ireland

Consultant led in-reach psychiatric service to each prison

Prisoner Population: October 2017

Prisoner Population on Monday 23rd October 2017								
INSTITUTION	Number in Custody	No. On Temp Release*	No. On Trial/ Remand	Total Prisoners in System**	Bed Capacity	% of Bed Capacity	Bed Capacity per Inspector of Prisons***	% of Inspector of Prisoners Bed Capacity
MOUNTJOY CAMPUS								
Mountjoy (m)****	557	57	38	668	755	74%		
Mountjoy (f)	126	11	42	147	105	120%	105	120%
WEST DUBLIN CAMPUS								
Cloverhill****	381	6	275	393	431	88%	414	92%
Wheatfield****	423	18	3	447	550	77%	550	77%
17 Year Olds	0	1	0	1				
PORTLAOISE CAMPUS								
Midlands	824	7	69	837	870	95%	870	95%
Portlaoise	226	0	20	227	291	78%	291	78%
A Block	18	0	0	18	40			
C Block	166	0	0	167	181			
E Block	42	0	20	42	70			
Cork	263	29	74	303	296	89%		
Limerick (m)	209	25	78	239	210	100%	185	113%
Limerick (f)	25	4	4	30	28	89%	24	104%
Castlerea	262	13	48	282	340	77%	300	87%
Arbour Hill	136	0	1	144	142	96%	131	104%
Loughan House	106	2	0	124	140	76%	140	76%
Shelton Abbey	94	3	0	117	115	82%	115	82%
Totals	3,632	175	652	3,958	4,273	85%		

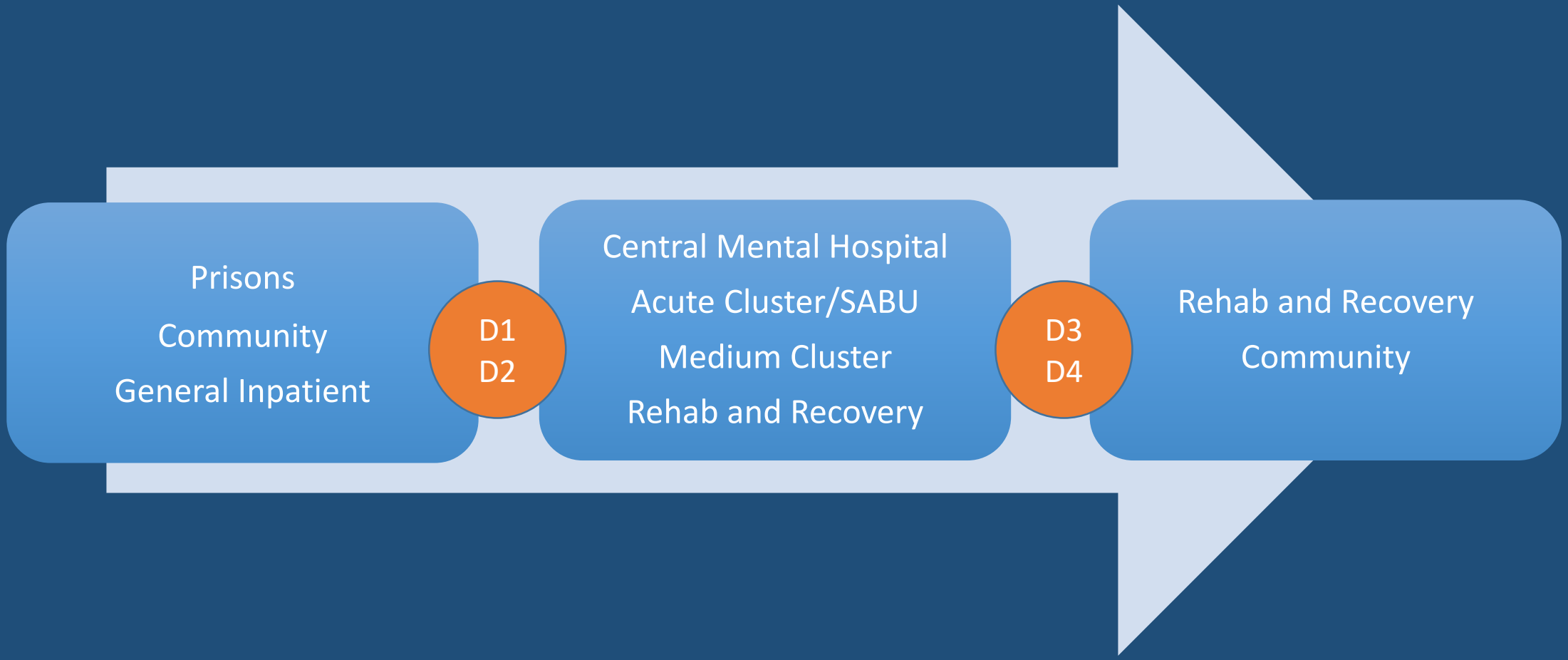
Although Prisoner numbers are decreasing the proportion and severity of mental disorders in prisoners are rising

Psychiatric Hospitals in Ireland

CENTRAL MENTAL HOSPITAL

Medium secure, low secure rehabilitation and open forensic rehabilitation beds all on the same site.

Intake and progress through care guided by the DUNDRUM Toolkit (Kennedy et al)



Downloaded from http://bmjopen.bmj.com/ on June 18, 2016 - Published by group.bmj.com

Open Access Research

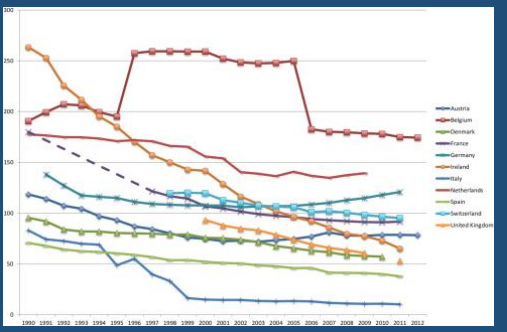
BMJ Open

How has the extent of institutional mental healthcare changed in Western Europe? Analysis of data since 1990

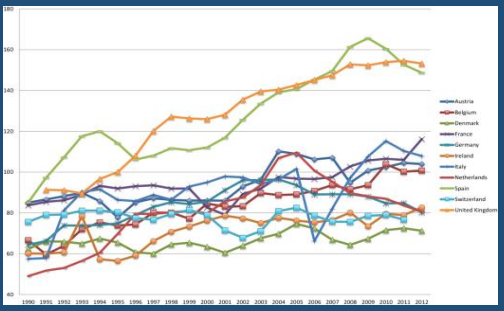
Winnie S Chow, Stefan Priebe

Per 100,000

General Beds

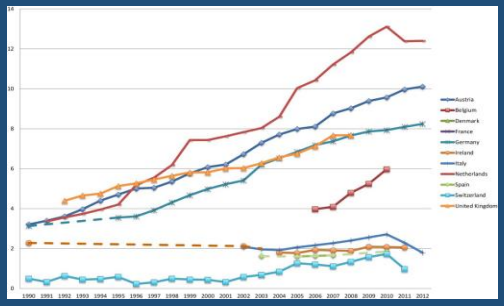


Prison Places



- 11 Western European Countries 1990-2012
- Negative association between bed reduction and prison increase

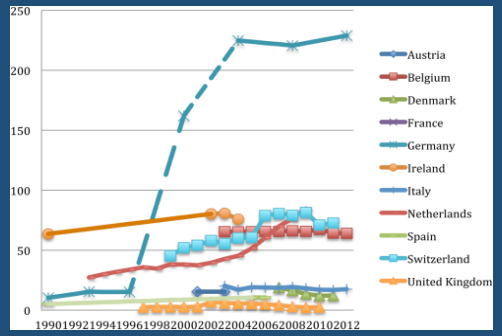
Forensic Beds



•General Beds reducing: Protective Housing, Forensic beds increasing

- Not Ireland!

Protecting Housing



Chow WS, Priebe S.
BMJ Open 2016;6:e010188. doi:10.1136/

Standard Model of care in prisons served by NFMHS

Local (Prison setting)

- Multidisciplinary Teams
- Screening, Assessment, Follow-up care
- Detailed letter to local services
  - Committal/discharge/release/Prison transfer
- Weekly Multiagency meetings in each prison:
  - High-Support Units
  - Pre-release plannnig

Central (CMH)

- Weekly multidisciplinary meeting at CMH of hospital and prison teams
  - Prison and hospital staff
  - Prioritise waiting lists based on DUNDRUM Toolkit
- Monthly Prison Continuity & Aftercare meetings
  - Prison inreach teams
  - Aggregated activity and aftercare arrangements

Triage	
CMH Admission	Major Illness/Major offence or High Risk
Community Diversion	Major Illness/Minor Offence
Prison Management	Minor or no illness

The DUNDRUM Toolkit (Kennedy et al)

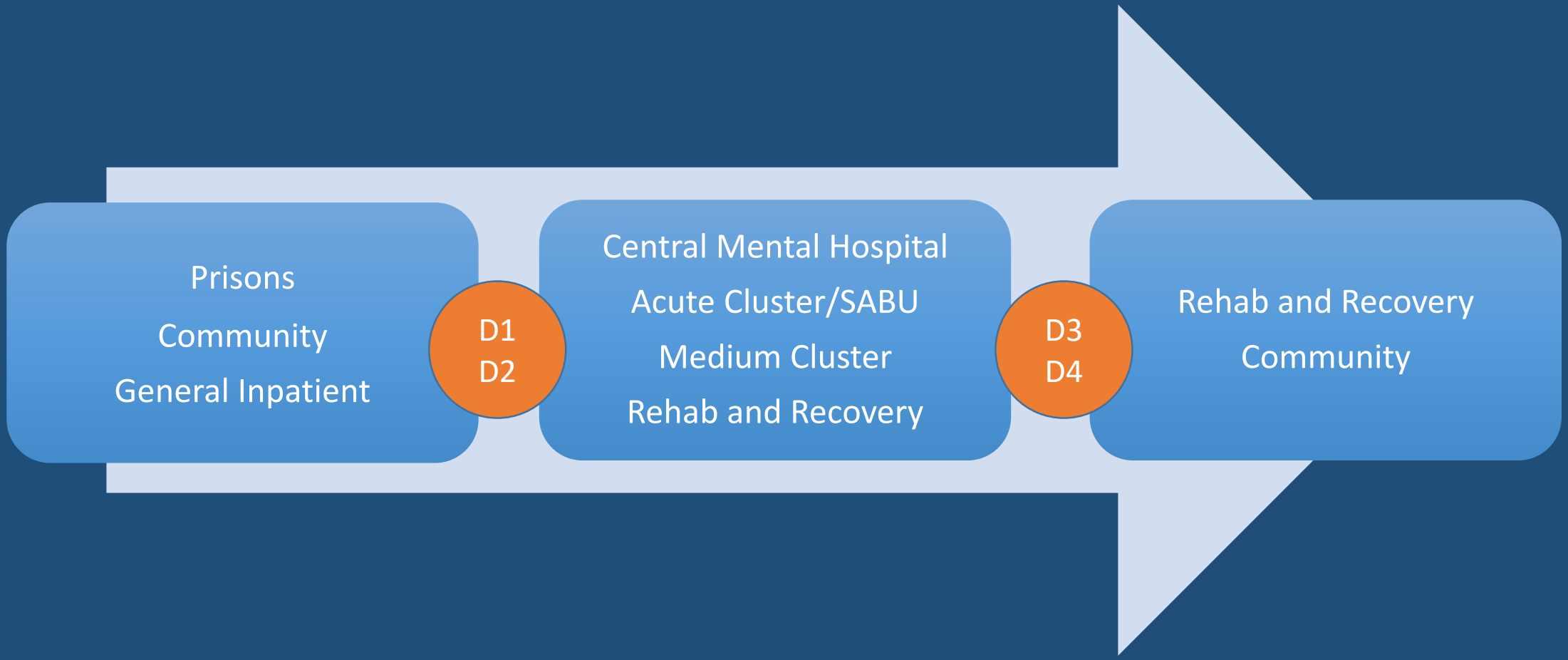
www.tara.tcd.ie/handle/2262/39131

- Suite of 4 SPJ instruments: Open access
  - D1- Triage Security
  - D2- Triage Urgency
  - D3- Programme completion
  - D4 -Forensic recovery

- D1 and D2 used to triage and prioritise persons on waiting lists for admission to forensic services (eg in prisons)

- D3 and D4 used to assess progress through and readiness to progress from forensic services

Intake and progress through care guided by the DUNDRUM Toolkit (Kennedy et al)

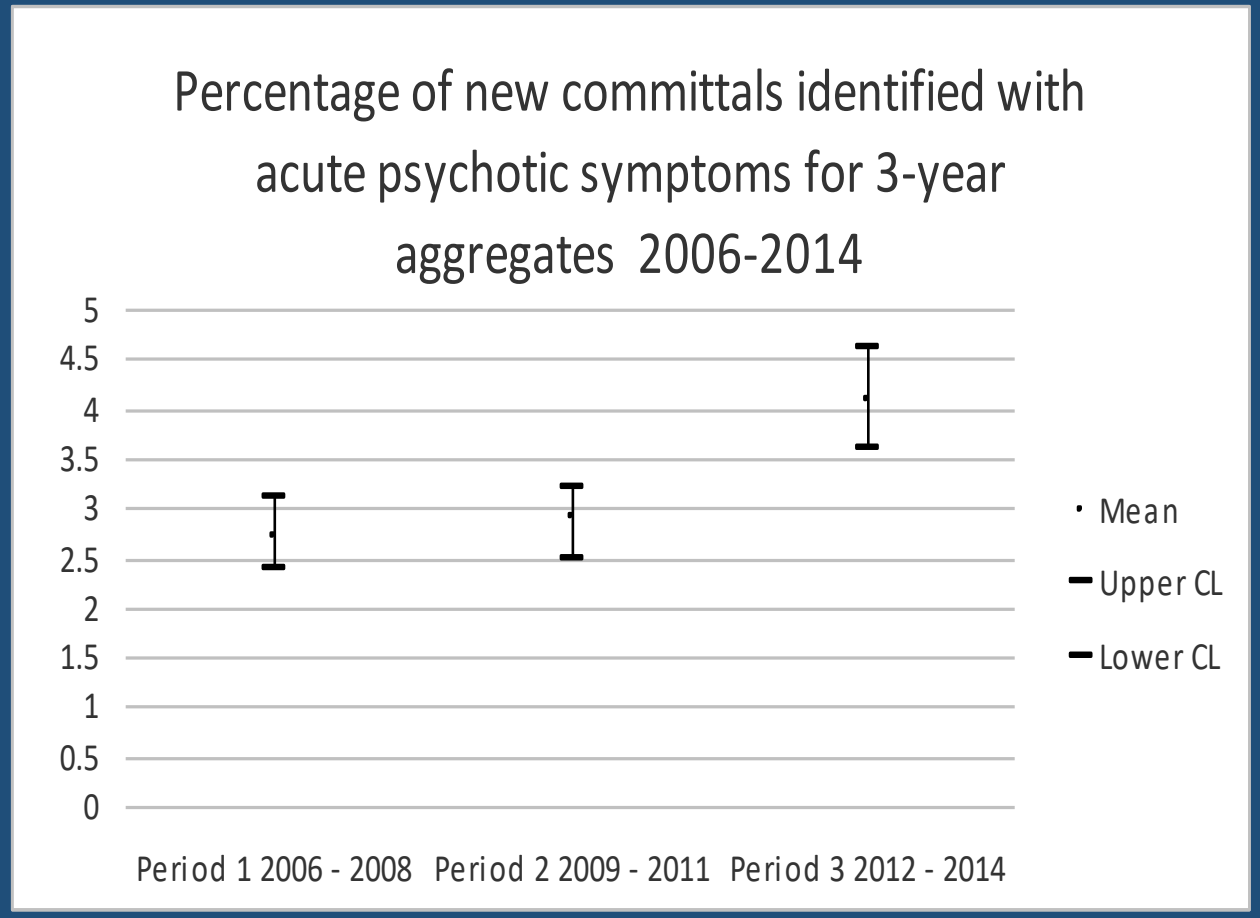


Risk-appropriateness of diversions

Method

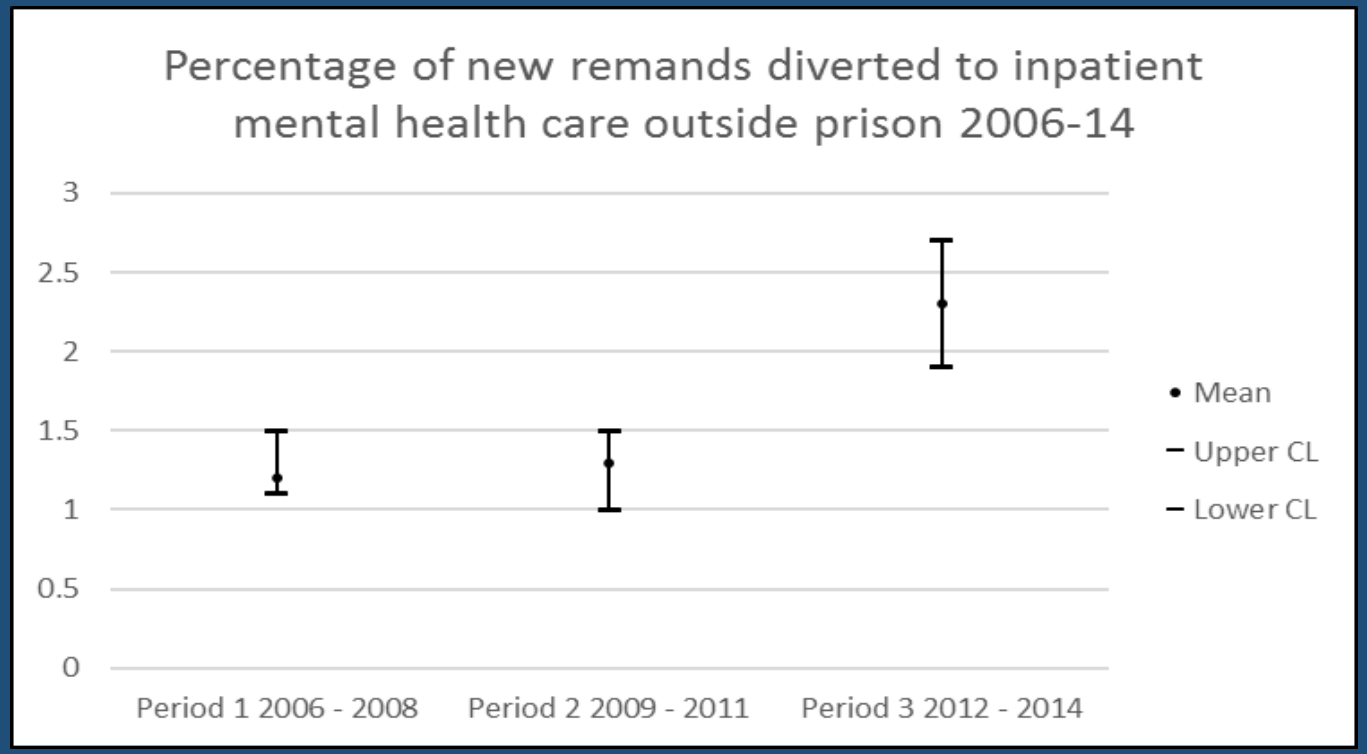
- DUNDRUM Toolkit Mean scores calculated on a weekly basis for persons placed on waiting lists.
  - Score as measured in the week prior to the outcome for
  - DUNDRUM 1- Security Requirements
  - DUNDRUM 2- Urgency of treatment needs

Testing: Identification of Psychosis: 3-year aggregates 2006-2014



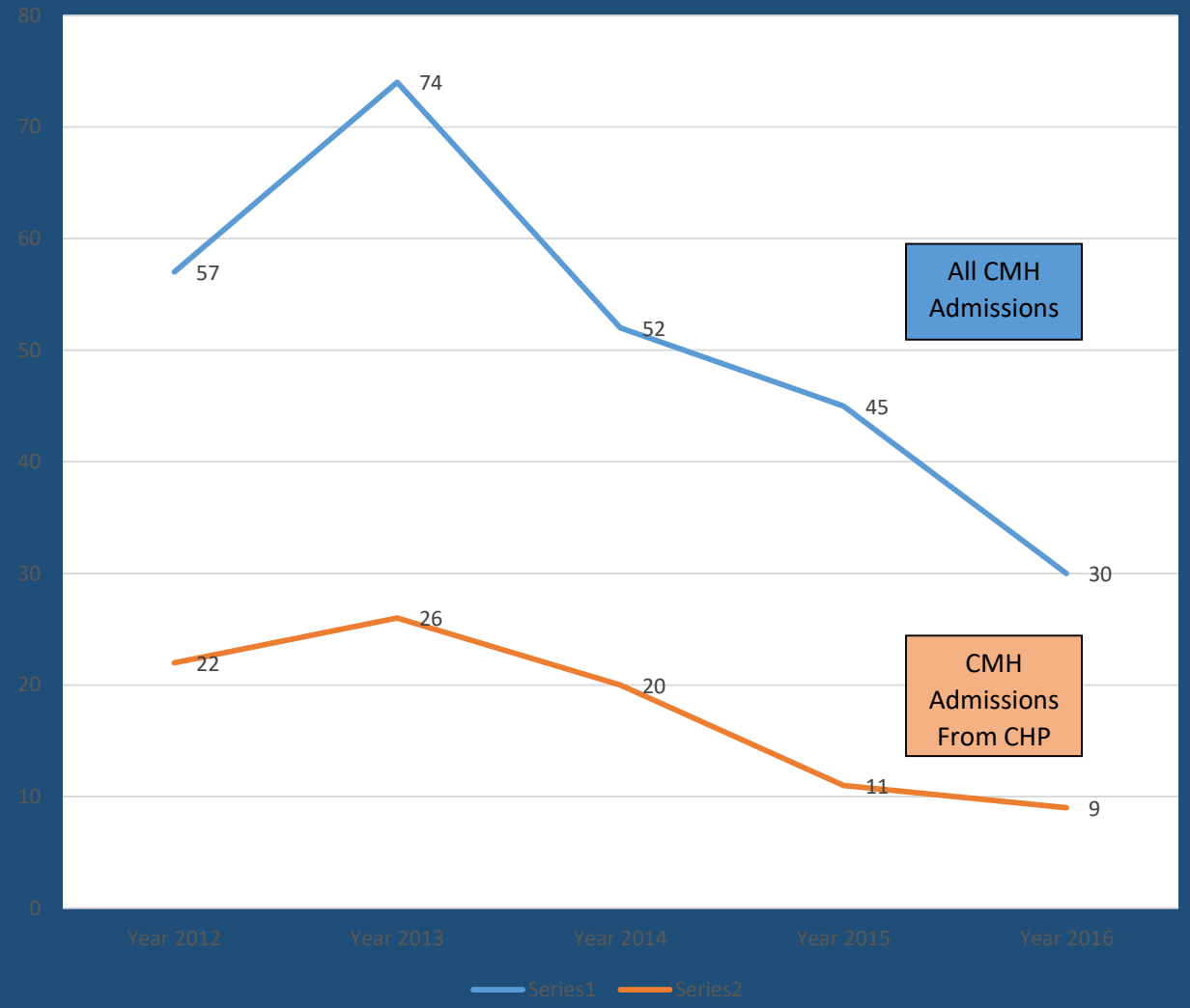
Testing:

Inpatient diversions: 3-year aggregates 2006-2014



Census Date	Prison Pop	PICLS Caseload	
	Number	N	% prison population
2008	452	23	5.1%
2011	418	23	5.5%
2014	413	28	6.8%
2015	370	30	8.1%
2016	391	32	8.2%
2017	384	33	8.6%

CMH Admissions 2012-2016



RCPsych- Quality Network for Forensic Psychiatric Services

UK Royal College of Psychiatrists

Quality Network for Prison Mental Health Services

Standards developed to support, improve and standardise prison mental health services.

Collaborative: and supportive

Site visits by teams from member services

Georgiou M, Souza R, Holder S, Stone H, Davies S. Standards for Prison Mental Health Services, quality network for Prison Mental Health Services [Internet]. London: 2015. Royal College Psychiatrists publication number CCQI202.

Discussion

Hub and spoke model

Inreach to prisons can work well in identifying mental illness in prisoners

Decreasing psychiatric admission bed numbers nationally is occurring at the same time as increasing levels of psychiatric morbidity in prisoners

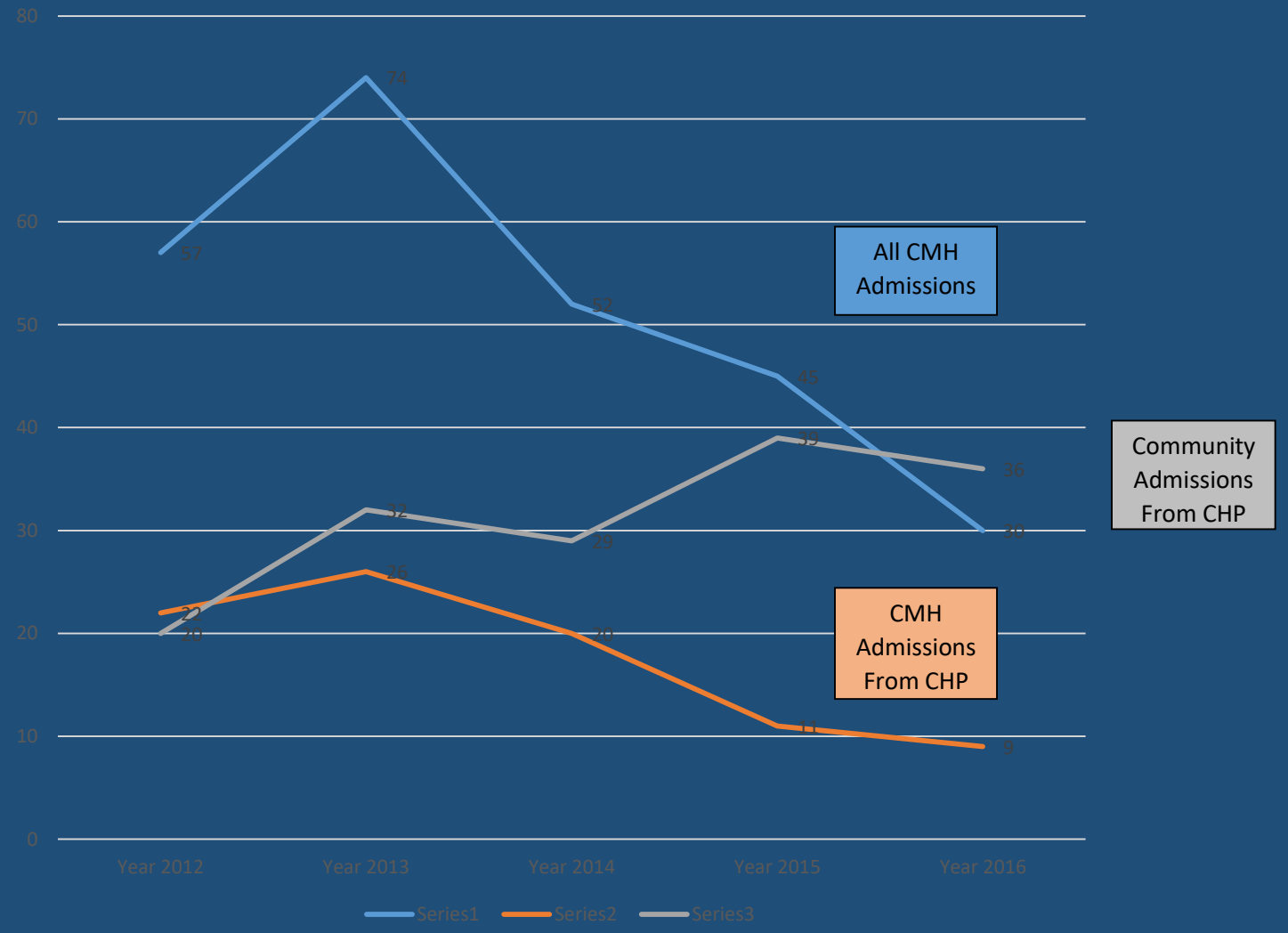
Treatment is more challenging given legal and bed number constraints

Limited capacity in face of increasing need- 93 beds; new hospital with 170 beds in 2019

POLICE BOX

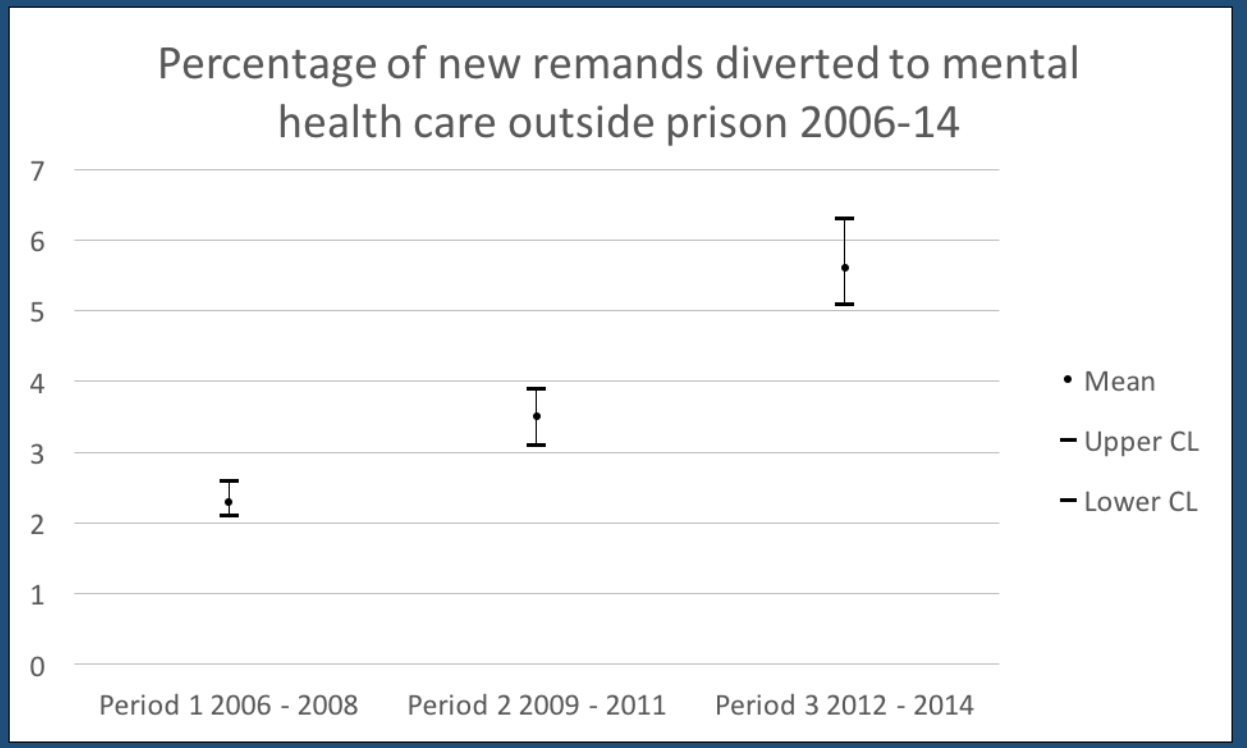
Thank you!

Admissions 2012-2016



Testing:

All diversions: 3-year aggregates 2006-2014



Case Example

Vignette :
Use of Section 12 of MHA 2001

- 64 year old homeless man
- Charges:
    - Urinating in Public Place
    - Failure to follow Garda Directions
- Noted to behave bizarrely in Court
- Matted beard and Hair, Poor Hygiene
- Represented self; Declined to enter plea

Vignette:
Use of Section 12 of MHA 2001

- Psychiatric Report

    - Schizophrenia: Psychotic
    - Sleeping in Crypt in graveyard for past 3 years
    - Requests to see Organ Grinder not Monkey
    - States he has close contact with Pope and Royalty
    - Insists his case should be heard in Europe
    - Wants to revise Constitution

- Major Illness, Minor Offence
- Low Risk to Community
- Report recommends admission to local hospital
- Early liaison with local service

Vignette:
Use of Section 12 of MHA 2001

- Consequential Disposal
  - PICLS Staff in Court
  - Involuntary admission paperwork ready
  - Receiving hospital on standby
- Judge grants conditional bail
  - Permit self to be brought to Hospital
  - Remain there until discharged if admitted
  - Accept appropriate Treatment

Vignette:
Use of Section 12 of MHA 2001

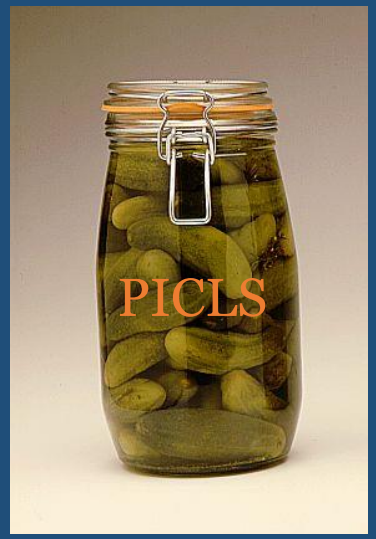
- Consequential Disposal

  - Declines to sign bail bond
  - Paperwork “has grammatical problems”
  - Unable to persuade
  - Charges adjourned under fitness legislation.
  - Section 12 MHA application made by Gardai

Vignette:
Use of Section 12 of MHA 2001

- Consequential Disposal
  - Transported by CLS Nursing Staff & Gardai under S12
  - Admitted to Hospital for treatment
  - Outpatient Follow up by Local Service
  - Accommodation arranged
  - Access to Drop-in Centre

Thank You!



Questions/Comments

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Seirbhís Phríosúin na hÉireann
IRISH PRISON SERVICE

- CMH admissions 20006-2017
- Damian S: attendances, homelessness

PICLS

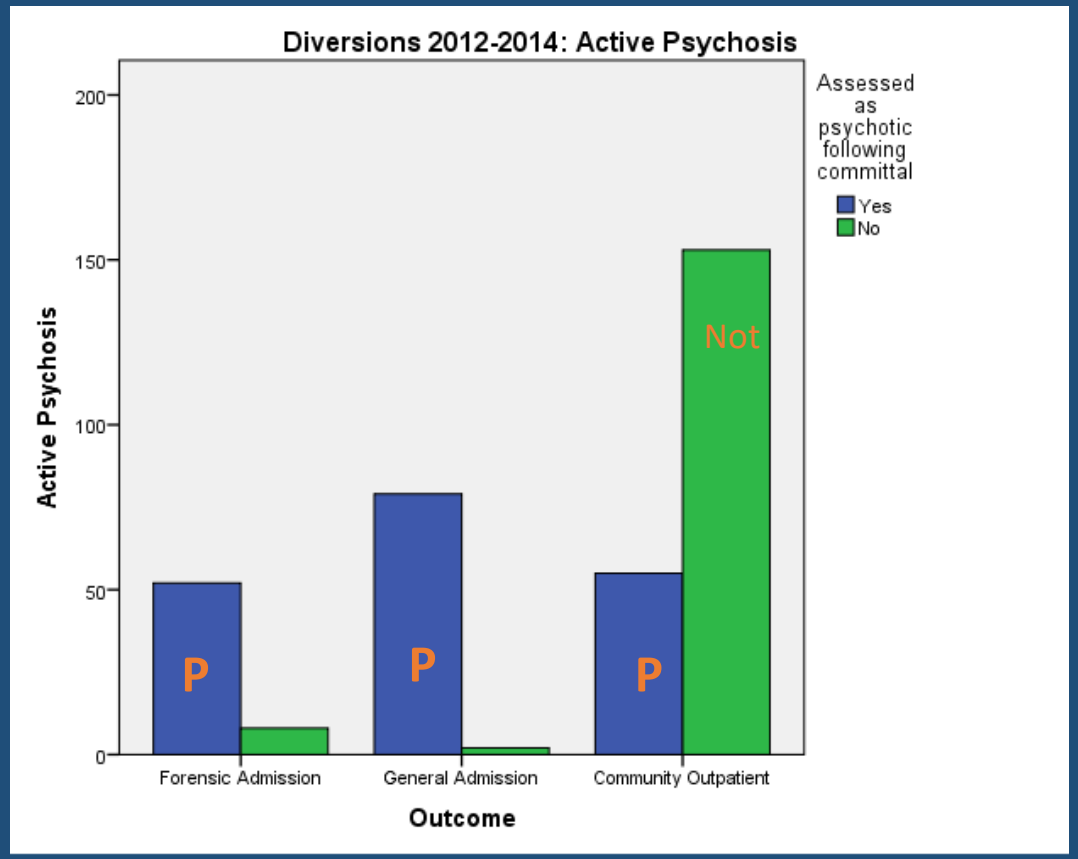
Georgiou et al 2015:

RCPsych Quality Network and Standards developed to support, improve and standardise prison mental health services internationally.

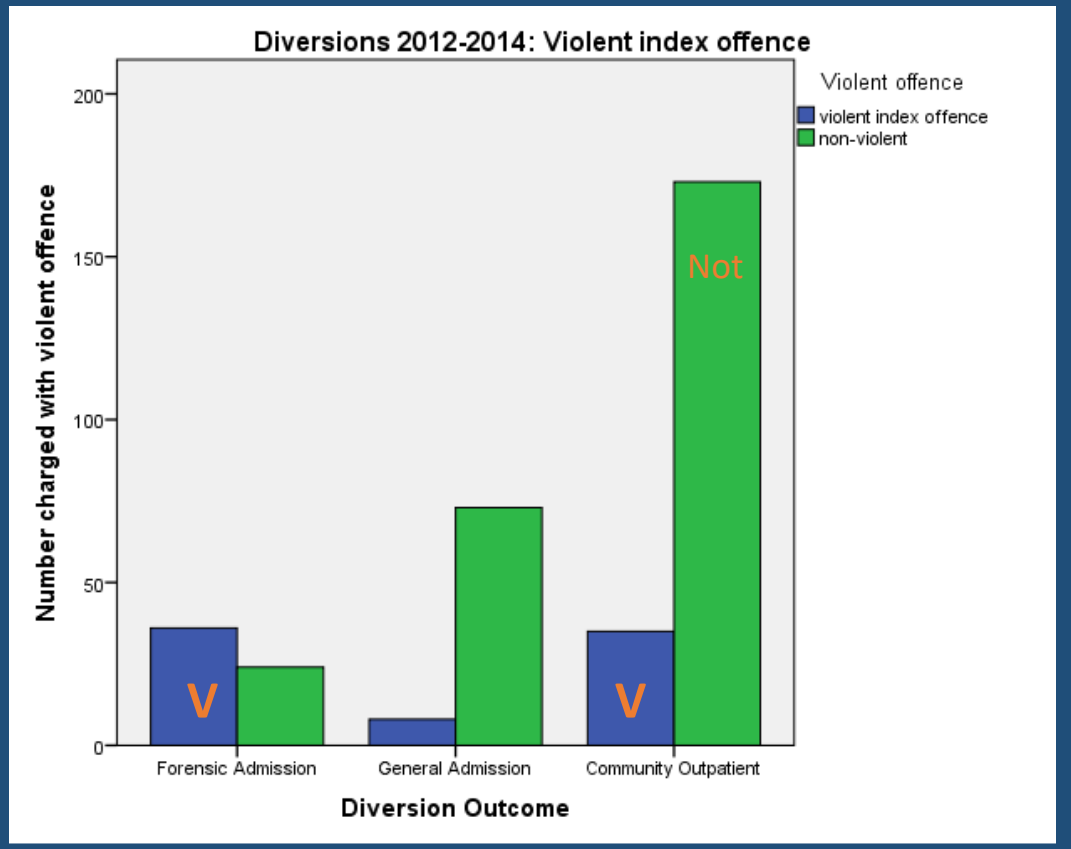
- Mainly qualitative standards, rather than quantitative measurement

Georgiou M, Souza R, Holder S, Stone H, Davies S. Standards for Prison Mental Health Services, quality network for Prison Mental Health Services [Internet]. London: 2015. Royal College Psychiatrists publication number CCQI202.

Risk/Need Responsivity:
Are people being directed to appropriate healthcare settings?

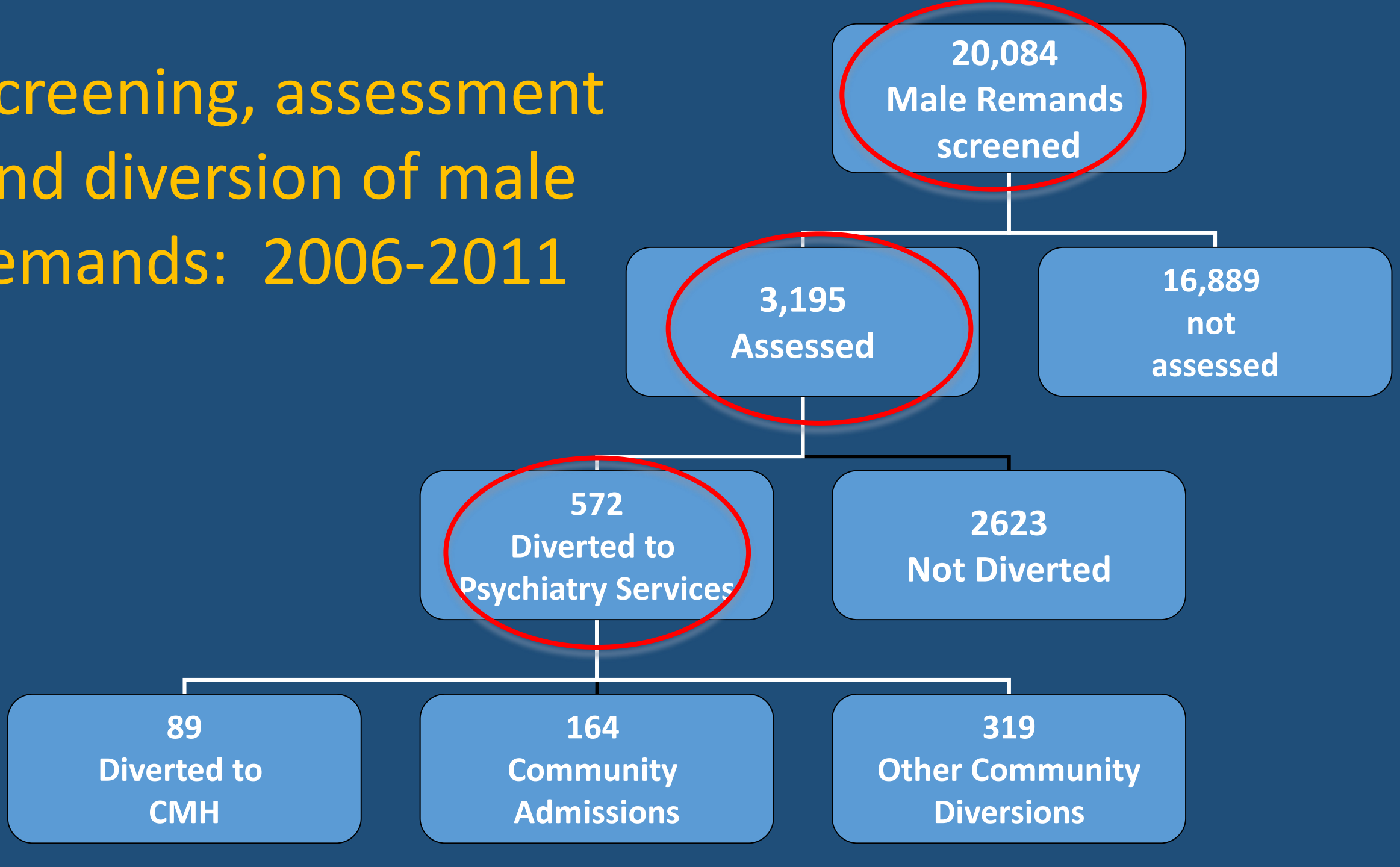


Admissions mostly actively psychotic



Non-forensic diversions mainly non-violent

Screening, assessment and diversion of male remands: 2006-2011



Identification of acute psychotic symptoms in male remands 2006-2011 (expected range 2.2-6.6%)

2.3% in 2006

3.2% 2011

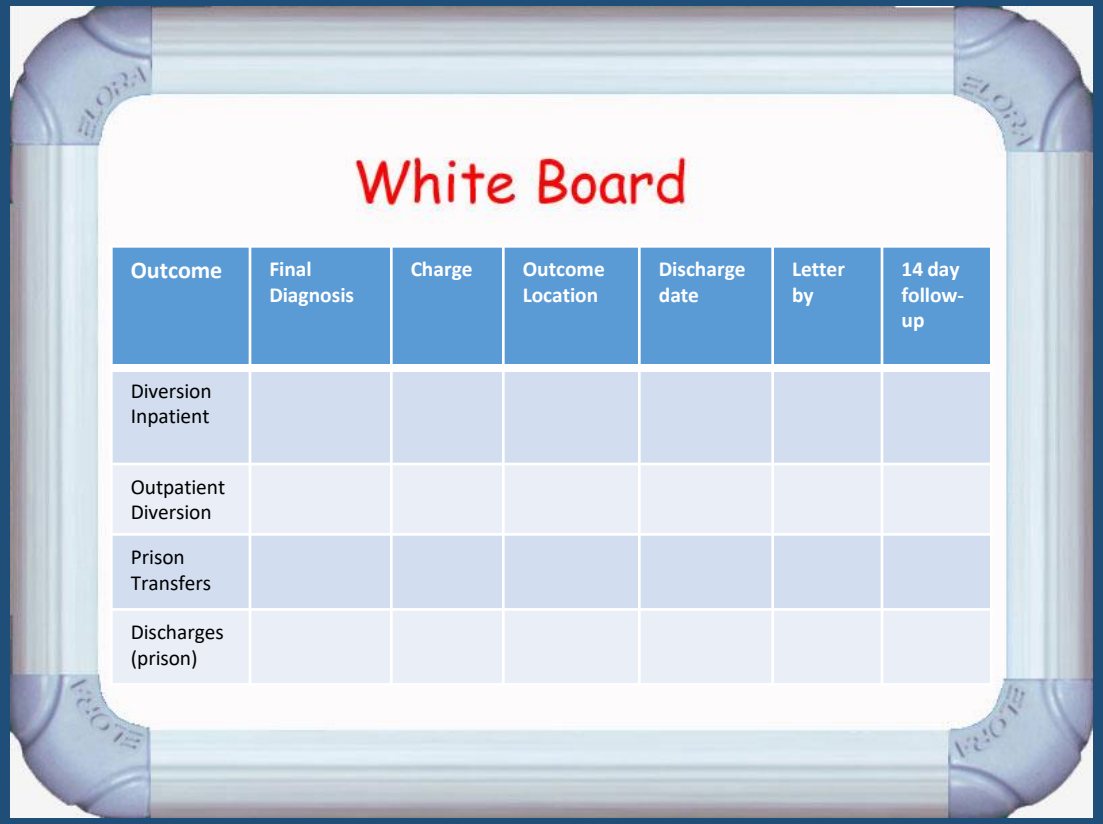
Absolute numbers stayed relatively constant

Year	Screened	Assessed	Psychosis (N)	Psychosis (%)	95% CI
2006	4107	306	95	(2.3%)	1.9-2.8
2007	3562	371	102	(2.9 %)	2.4-3.5
2008	3635	680	112	(3.1 %)	2.6-3.7
2009	2919	755	70	(2.4 %)	1.9-3.0
2010	3121	576	91	(2.9 %)	2.4-3.6
2011	2740	507	91	(3.2 %)	2.6-3.9
Total	**20,084**	**3,195**	**561**	**(2.8 %)**	**2.6-3.0**

Boards

Active Caseload

Discharges



Used to populate outcome database at time of discharge:

Counting in, counting out

Surgical Safety Checklist

World Health Organization | Patient Safety

Before induction of anaesthesia
(with at least nurse and anaesthetist)

Has the patient confirmed his/her identity, site, procedure, and consent?
- ☐ Yes

Is the site marked?
- ☐ Yes
- ☐ Not applicable

Is the anaesthesia machine and medication check complete?
- ☐ Yes

Is the pulse oximeter on the patient and functioning?
- ☐ Yes

Does the patient have a:

Known allergy?
- ☐ No
- ☐ Yes

Difficult airway or aspiration risk?
- ☐ No
- ☐ Yes, and equipment/assistance available

Risk of >500ml blood loss (7ml/kg in children)?
- ☐ No
- ☐ Yes, and two IVs/central access and fluids planned

Before skin incision
(with nurse, anaesthetist and surgeon)

- ☐ **Confirm all team members have introduced themselves by name and role.**
- ☐ **Confirm the patient's name, procedure, and where the incision will be made.**

Has antibiotic prophylaxis been given within the last 60 minutes?
- ☐ Yes
- ☐ Not applicable

Anticipated Critical Events

To Surgeon:
- ☐ What are the critical or non-routine steps?
- ☐ How long will the case take?
- ☐ What is the anticipated blood loss?

To Anaesthetist:
- ☐ Are there any patient-specific concerns?

To Nursing Team:
- ☐ Has sterility (including indicator results) been confirmed?
- ☐ Are there equipment issues or any concerns?

Is essential imaging displayed?
- ☐ Yes
- ☐ Not applicable

Before patient leaves operating room
(with nurse, anaesthetist and surgeon)

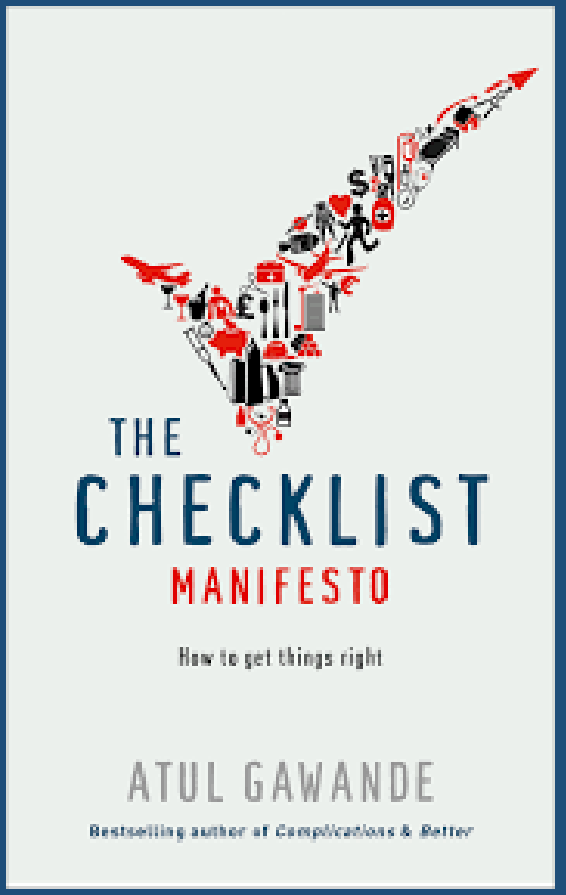
Nurse Verbally Confirms:
- ☐ The name of the procedure
- ☐ Completion of instrument, sponge and needle counts
- ☐ Specimen labelling (read specimen labels aloud, including patient name)
- ☐ Whether there are any equipment problems to be addressed

To Surgeon, Anaesthetist and Nurse:
- ☐ What are the key concerns for recovery and management of this patient?

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.

Revised 1 / 2009

© WHO, 2009



All committals nationally, male remand committals nationally, male remands to Cloverhill, Number screened and taken onto PICLS caseload for years 2012–2014

	Total 2006–2011	**Total 2012–2014**	**2012**	**2013**	**2014**
All committals to all prisons in Ireland (remand and sentenced episodes, males and females)	87,570	48,916	17,026	15,735	16,155
Male remand committals to all prisons in Ireland	34,323	10,148	3543	3256	3349
Male remand committals to Cloverhill (all screened)	20,084	6177	2248	1953	1976
As percentage of male remand committals to all prisons in Ireland (95 % CI)	58.5 % (58.0–59.0)	60.9 % (59.9–61.8)	63.4 % (61.8–65.0)	60.0 % (58.3–61.7)	59.0 % (57.3–60.7)
Number assessed and taken onto PICLS caseload	3195	1109	374	375	360
As percentage of total male remands to Cloverhill (95 % CI)	15.9 % (15.4–16.4)	18.0 % (17.0–18.9)	16.6 % (15.1–18.2 %)	19.2 % (17.5–21.0)	18.2 % (16.5–20.0

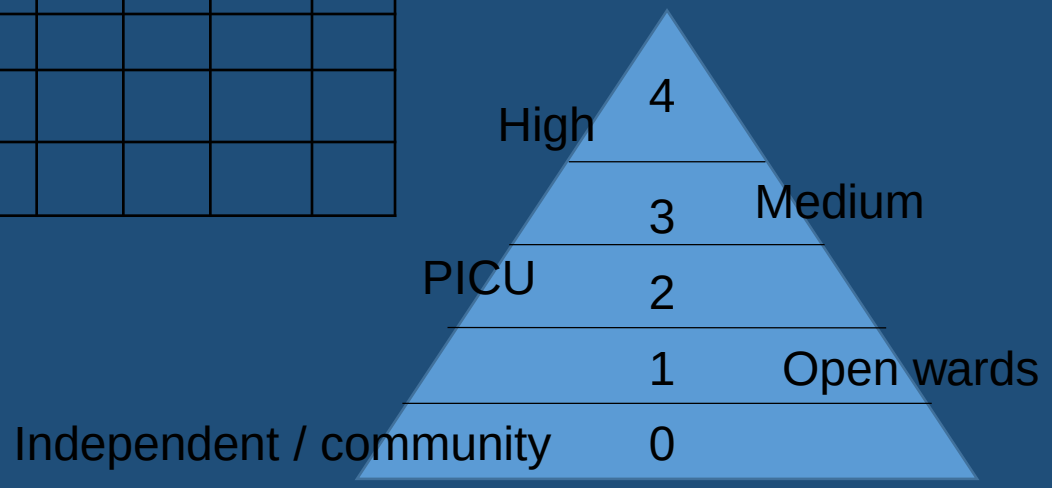
Identification and Diversion as proportion of caseload: 2006-2011 and 2012-14

	Total 2006-2011	2012	2013	2014	Total 2012-2014
Number taken onto PICLS caseload (N2)	**3195**	374	375	360	**1109**
No. identified with active psychotic symptoms	**561**	79	89	83	**251**
• Percentage (95 % CI)	**17.56 % (16.25–18.92)**	21.12 % (17.10–25.62)	23.73 % (19.52–28.37)	23.06 % (18.80–27.76)	**22.63 % (20.20–25.21)**
No. admitted to forensic Hospital	**89**	18	28	14	**60**
• Percentage (95 % CI)	**2.79 % (2.24–3.42)**	4.81 (2.88–7.50)	7.47 % (5.02–10.61)	3.89 % (2.14–6.44)	**5.41 % (4.15–6.91)**
No. admitted to General Hospital	**164**	20	32	29	**81**
• Percentage (95 % CI)	**5.13 % (4.39–5.96)**	5.35 % (3.30–8.14)	8.53 % (5.91–11.83)	8.06 % (5.46–11.36)	**7.30 % (5.84–9.00)**
No. diverted to community OPD	**319**	58	66	84	**208**
• Percentage (95 % CI)	**9.98 % (8.97–11.08)**	15.51 % (11.99–19.58)	17.60 % (14.08–21.78)	23.33 % (19.06–28.05)	**18.76 % (16.50–21.18)**
No. admitted to hospital (General or forensic)	**252**	38	60	43	**141**
• *Percentage (95 % CI)*	**7.89 % (6.98–8.88)**	10.16 % (7.29–13.68)	16.00 % (12.44–20.11)	11.94 % (8.78–15.75)	**12.71 % (10.81–14.82)**
No. diverted to any location (forensic hospital, general hospital or OPD)	**572**	96	126	127	**349**
• *Percentage (95 % CI)*	**17.90 % (16.59–19.28)**	25.67 % (21.32–30.41)	33.60 % (28.83–38.63)	35.28 % (30.34–40.46)	**31.47 % (28.74–34.30**

Domain	Aim
Screening, Identification and caseload description	• How many remands were screened? • How many were assessed and taken onto the team caseload? • Is the caseload over time described in terms of diagnosis, co-morbid conditions and offence type? • Is the caseload described in terms of other factors including homelessness, whether or not known to have a past history of self harm and whether or not known to have previous contact with psychiatric services outside prison. • Is the service identifying persons with the most severe acute symptoms, such as active psychotic symptoms at rates in keeping with expected rates based on the existing epidemiological literature?
Transfer of Care	• How many were diverted from the criminal justice system to mental health treatment settings?
Risk-appropriateness of diversions	• Were diversions to forensic inpatient settings, to general psychiatric inpatient settings and to outpatient settings justifiable in terms of risk and clinical need?
Efficiency and Productivity	• What was the delay from committal screening to first comprehensive assessment? • Were persons identified as actively psychotic seen more rapidly than persons without acute psychotic symptoms? • What was the delay from committal and first assessment to diversion? • How many cases were managed and diversions achieved per whole time equivalent employed?
Self-harm	• How many persons deliberately harmed themselves in custody over the study period?
Service Mapping	• Can the service 'map' the flow of all patients through the system, with outcomes at the point of discharge and times to those outcomes? • Can the service map subsequent outcomes for persons admitted to the 'parent' forensic psychiatric unit ?
Testing	• How did the above activity and outcome data compare with previously published findings for the same service in the six years preceding this three-year study?

Triage/Waiting List Prioritisation: DUNDRUM Toolkit

		SCORE				
DUNDRUM-1:TRIAGE SECURITY ITEMS		**0**	**1**	**2**	**3**	**4**
S1	**Seriousness of violence**					
S2	**Seriousness of self-harm**					
S3	**Immediacy of risk of violence**					
S4	**Immediacy of risk of suicide/ self harm**					
S5	**Specialist forensic need**					
S6	**Absconding / eloping**					
S7	**Preventing access**					
S8	**Victim sensitivity/public confidence issues**					
S9	**Complex Risk of Violence**					
S10	**Institutional behaviour**					
S11	**Legal process**					



Testing:

Multivariate Analysis: Binary Logistic Regression

Relative strengths of association of demographic, clinical and offending variables with diversion outcome

Any diversion vs no diversion:

4 step model predicted 79% diversions

- Active Psychosis
- Known to services
- Dx F20-31
- Violent index offence

	Diversion outcome					Binary logistic regression 'enter' (any psychiatric admission versus no psychiatric admission)			Binary logistic regression 'enter' (any diversion versus no diversion)		
	Forensic admission	General admission	Outpatient diversion	Not diverted	Total	Odds ratio	p	95 % CI	Odds ratio	p	95 % CI
N	60	81	208	760	1109						
Psychotic	52 (86.7 %) (75.8–93.1)	79 (97.5 %) (91.4–99.3)	55 (26.4 %) (20.9–32.8)	65 (8.6 %) (6.8–10.8)	251 (22.6 %) (20.3–25.2)	53.42	<0.001	20.47–139.44	6.27	<0.001	3.82–10.29
Known to services	53 (88.3 %) (77.8–94.2)	70 (86.4 %) (77.3–92.2)	179 (86.1 %) (80.7–90.1)	468 (61.6 %) (58.1–65.0)	770 (69.4 %) (66.7–72.1)	1.08	0.84	0.51–2.32	2.45	<0.001	1.66–3.63
Irish	46 (76.7 %) (64.6–85.6)	61 (75.3 %) (64.9–83.4)	189 (90.9 %) (86.2–94.1)	656 (86.3 %) (83.7–88.6)	952 (80.0 %) (77.6–82.2)	0.54	0.08	0.27–1.08	1.01	0.96	0.64–1.61
Homeless	28 (46.7 %) (34.6–59.1)	32 (39.5 %) (29.6–50.4)	87 (41.8 %) (35.3–48.6)	241 (31.7 %) (28.5–35.1)	388 (35.0 %) (32.2–37.8)	0.72	0.21	0.44–1.19	1.01	0.94	0.74–1.39
ICD-10 F20–31	49 (81.7 %) (70.1–89.4)	76 (93.8 %) (86.4–97.3)	72 (34.6 %) (28.2–41.5)	104 (13.7 %) (11.4–16.3)	301 (27.1 %) (24.6–29.8)	2.55	0.03	1.10–5.90	1.83	0.01	1.12–2.91
Substance misuse	48 (80.0 %) (68.2–88.2)	64 (79.0 %) (68.9–86.5)	183 (88.0 %) (82.9–91.7)	659 (86.7 %) (84.1–88.9)	954 (86.0 %) (83.9–87.9)	0.57	0.13	0.27–1.18	0.63	0.05	0.39–1.01
History of Deliberate Self Harm	30 (50.0 %) (37.7–62.3)	33 (40.7 %) (30.7–51.6)	149 (71.6 %) (65.2–77.3)	503 (66.2 %) (62.7–69.5)	715 (64.5 %) (61.6–67.2)	0.75	0.25	0.45–1.23	1.09	0.64	0.77–1.53
Violent offence	36 (60.0 %) (47.4–71.4)	8 (9.9 %) (5.1–18.3)	35 (16.8 %) (12.4–22.5)	305 (40.1 %) (36.7–43.7)	384 (34.6 %) (31.9–37.5)	1.91	0.02	1.09–3.32	0.51	<0.001	0.37–0.72

Thank You!

Questions/Comments

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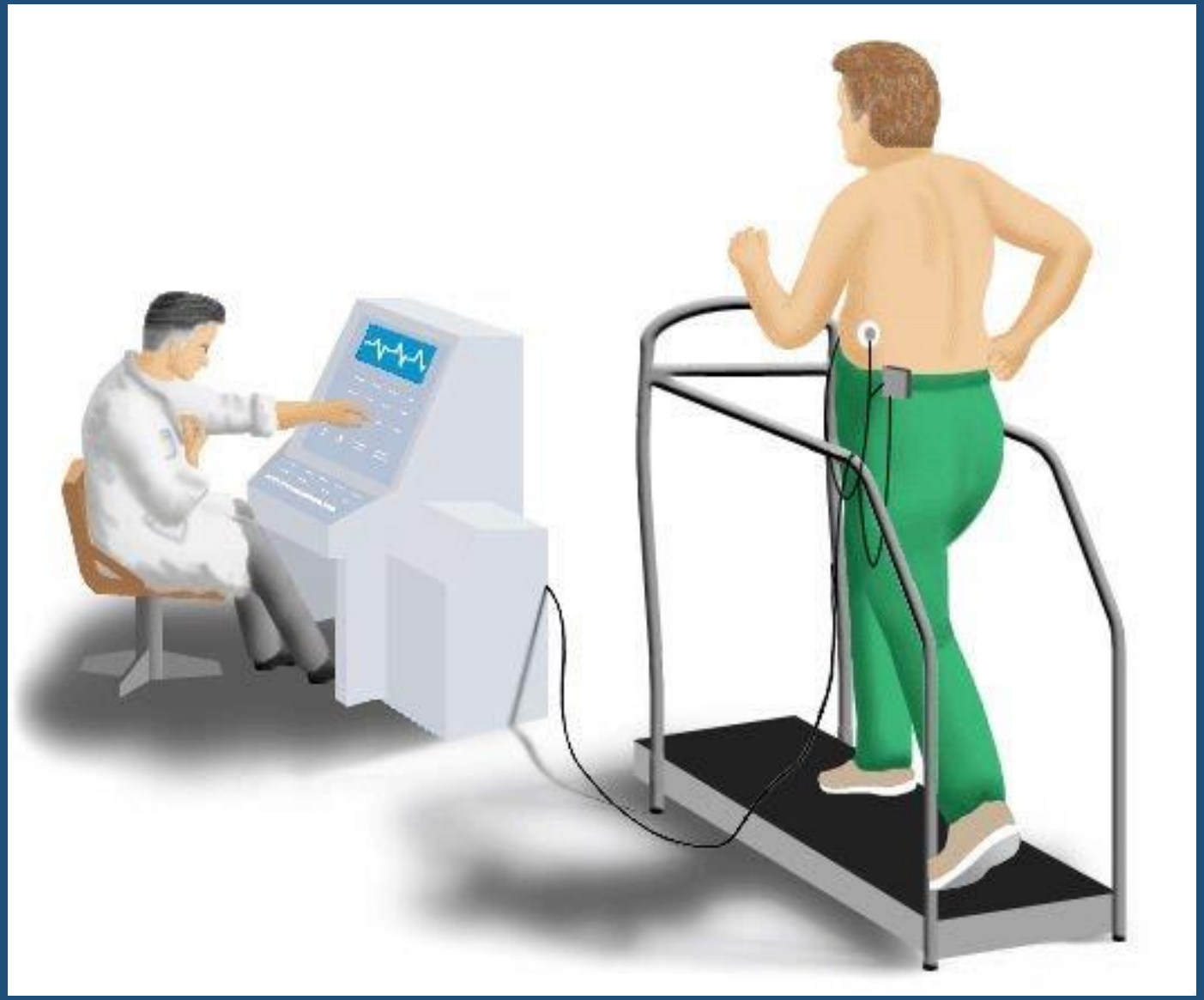
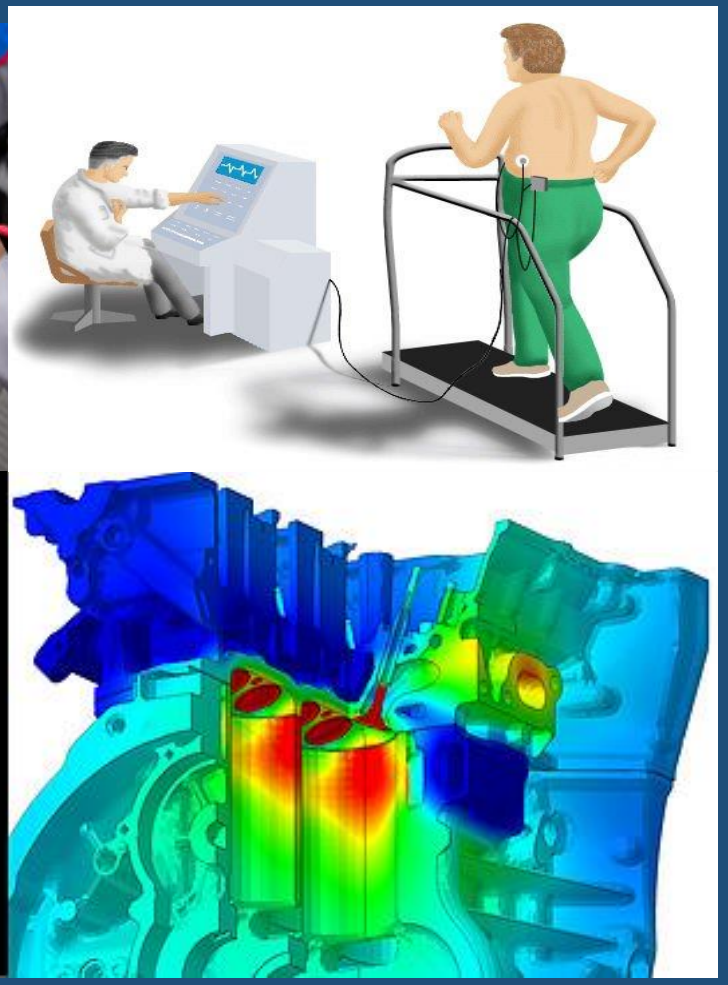
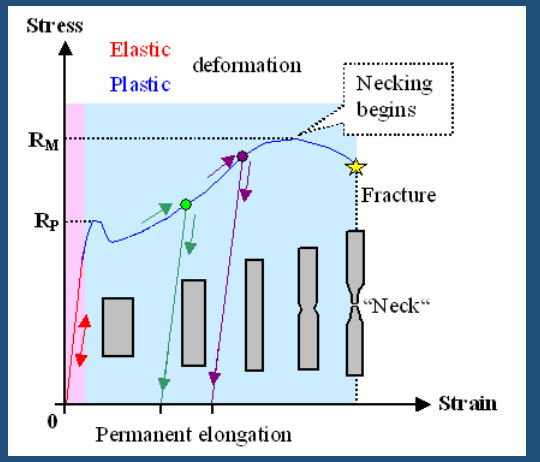
Table 1 Pooled prevalances for psychosis and major depression in prisoners

Variable	Psychosis, % (95% CI)	Major depression, % (95% CI)
Overall	3.7 (3.2–4.1)	11.4 (9.9–12.8)
Gender of inmates		
Male	3.6 (3.1–4.2)	10.2 (8.8–11.7)
Female	3.9 (2.7–5.0)	14.1 (10.2–18.1)
Prisoner status		
Sentenced prisoners	3.7 (3.0–4.2)	10.5 (8.8–12.1)
Remand prisoners (detainees)	3.5 (4.2–6.8)	12.3 (9.5–15.1)
Country		
Low/middle income	5.5 (4.2–6.8)	22.5 (10.6–34.4)
High income	3.5 (3.0–3.9)	10.0 (8.7–11.2)



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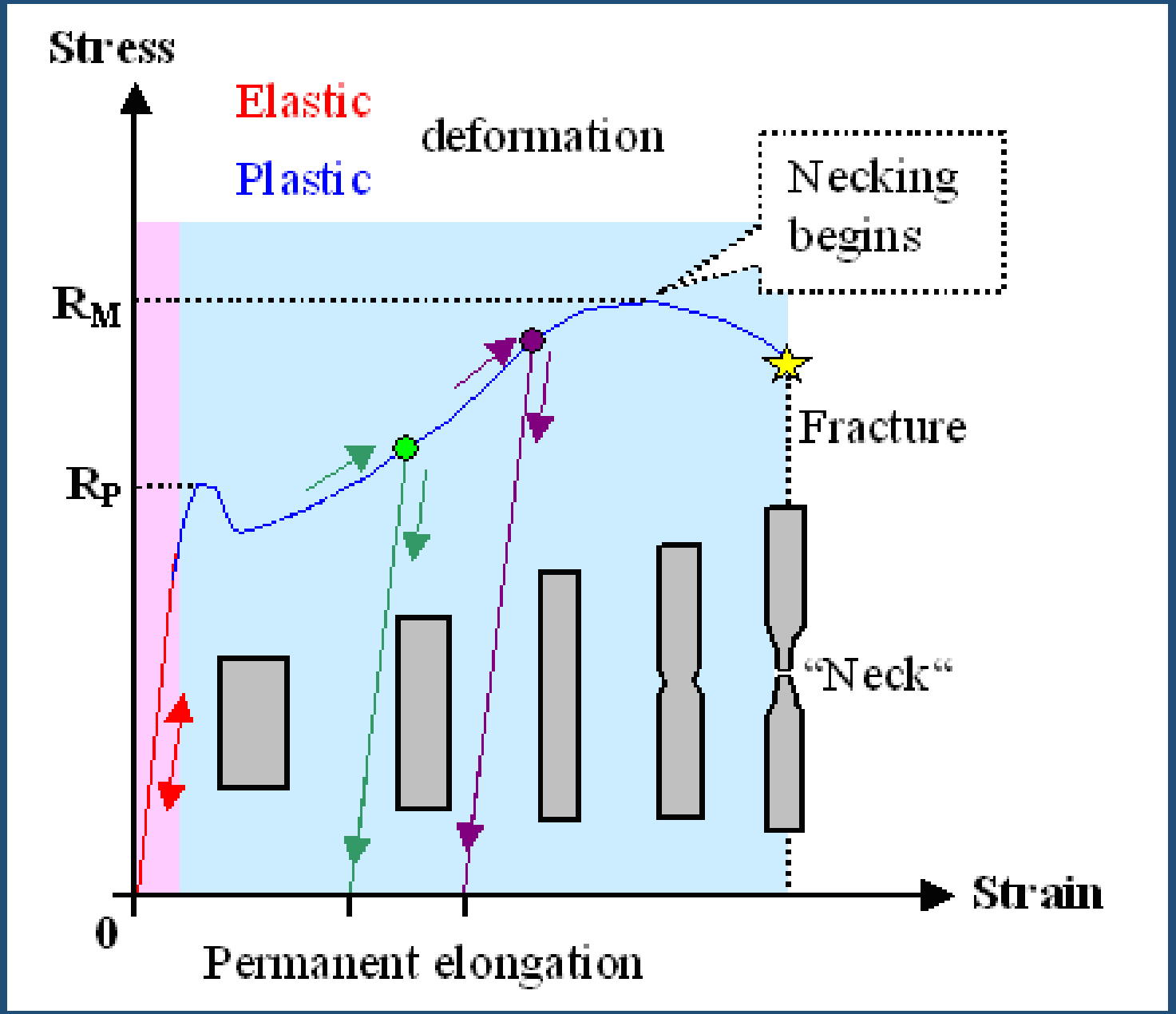
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Screening

2-stage screening

2012-14: 6177 screened

Table: Male individuals remanded and total remand episodes (remands/trial/deportation and extradition) committed to all prisons in Republic of Ireland and to Cloverhill: Numbers and proportions assessed 2006-2014.

	Individuals Remanded			All Remand Episodes			
Year	Remands to all prisons nationally	Remands to Cloverhill	% national total remands	Remands to all prisons nationally	Remands to Cloverhill Screened	% national total remands	Number assessed at Cloverhill (%)
2006	5,165	3,233	62.6%	6,515	4,107	63.0%	306(7.5%)
2007	5,024	2,882	57.4%	6,219	3,562	58.7%	371(10.4%)
2008	4,371	2,674	61.2%	6,096	3,635	59.6%	680(18.7%)
2009	3,580	2,103	58.7%	5,199	2,919	56.1%	755(21.1%)
2010	3,480	2,038	58.6%	5,318	3,121	58.7%	576(25.9%)
2011	4,236	2,369	55.9%	4,976	2,740	55.1%	507(18.5%)
Subtotal	25,856	15,299	59.2%	34,323	20,084	58.5%	3195 (15.9%)
2012	3,075	1,992	64.8%	3,543	2,248	63.4%	374(16.6%)
2013	2,863	1,741	60.8%	3,256	1,953	60.0%	375(19.2%)
2014	2,898	1,739	60.0%	3,349	1,976	59.7%	360(18.2%)
Subtotal	8,836	5,472	61.9%	10,148	6,177	60.9%	1109 (18.0%)
TOTAL	**34,692**	**20,771**	**59.9%**	**44,471**	**26,261**	**59.1%**	**4304 (16.4%)** **95% CI 15.9-16.4**

Results: Screening, Identification and caseload description

- 1109 remands
  - All Male
  - Mean Age 32.8
  - 86% Irish
  - 35% Homeless
  - 31%Lifetime Psychosis
  - 23% Active Psychosis
  - 86% Substance Misuse
  - 65% DSH
  - 35% Violent Index Offence

Variable	Status at first remand episode for persons taken onto PICLS caseload during 2012–14 (N = 917)			All remand episodes taken onto PICLS caseload during 2012–2014 (N = 1109)			All remand episodes taken onto PICLS caseload during 2006–2011 (N = 31 95)		
	No. positive	Percentage	95 % CI limits for percentage	Proportion positive	Percentage	95 % CI limits for percentage	Proportion positive	Percentage	95 % CI limits for percentage
Irish nationality	772	84.2	81.7–86.5	952	85.8	83.7–87.8	2690	84.2	82.9–85.4
Homeless	308	33.6	30.5–36.7	388	35.0	32.2–37.9	748	23.4	22.0–24.9
Lifetime Psychosis	252	27.5	24.6–30.5	339	30.6	27.9–33.4	943	29.5	27.9–31.1
Active psychotic symptoms	192	20.9	18.3–23.7	251	22.6	20.2–25.2	561	17.6	16.3–18.9
History substance misuse	781	85.2	82.7–87.4	954	86.0	83.8–88.0	2773	86.8	85.6–87.9
History deliberate self-harm	571	62.3	59.0–65.4	715	64.5	61.6–67.3	Figure not available		
Violent index offence	329	35.9	32.8–39.1	384	34.6	31.8–37.5	Figure not available		
History of contact with psychiatric service outside prison	599	65.3	62.1–68.4	770	69.4	66.6–72.1	Figure not available		
Age at committal	Mean age 32.8 S.D. 10.5			Mean age 32.6 S.D. 10.2			Mean age 31.8 S.D. 10.8		

Table 5: Primary diagnoses at point of discharge/transfer/diversion for all remand episodes (N = 1109) assessed by the PICLS team from 2012 to 2014

	Primary ICD-10 diagnosis	Number	%
F00–09	Organic disorders	17	1.5
F10–19	Substance abuse disorders	426	38.4
F20–29	Schizophreniform disorders	255	23.0
F30–39	Mood disorders 46/117 (39.3 %) bipolar disorder	117	10.6
F40–59	Neurotic disorders, behavioural syndromes	7	0.6
F60–69	Personality disorders	200	18.0
F70–79	Mental retardation	14	1.3
F80–98	Developmental/childhood disorders	9	0.8
	No mental illness/adjustment reaction	64	5.8
	Total	1109	100.0

Identification and Diversion as proportion of all remands: 2006-2011 and 2012-14

	Total 2006–2011	2012	2013	2014	Total 2012-2014
Number taken onto PICLS caseload	3195	374	375	360	1109
• Percentage (95 % CI)	15.9 % (15.4–16.4)	16.6 % (15.1–18.2)	19.2 % (17.5–21.0)	18.2 % (16.5–20.0)	18.0 % (17.0–18.9)
Number identified as having active psychotic symptoms	561	79	89	83	251
• Percentage (95 % CI)	2.8 % (2.6–3.0)	3.5 % (2.8–4.4)	4.6 % (3.7–5.6)	4.2 % (3.4–5.2)	4.1 % (3.6–4.6)
Number admitted to forensic Hospital	89	18	28	14	60
• Percentage (95 % CI)	0.44 % (0.36–0.55)	0.74 % (0.44–1.17)	1.43 % (0.96–2.07)	0.71 % (0.39–1.19)	0.97 % (0.74–1.25)
Number admitted to General Hospital	164	20	32	29	81
• Percentage (95 % CI)	0.82 % (0.70–0.95)	0.82 % (0.50–1.27)	1.64 % (1.12–2.31)	1.47 (0.99–2.10)	1.31 % (1.04–1.63)
Number diverted to community outpatient facilities	319	58	66	84	208
• Percentage (95 % CI)	1.59 (1.42–1.77)	2.39 % (1.82–3.08)	3.38 (2.62–4.28)	4.25 (3.41–5.24)	3.37 (2.93–3.85)
Number admitted to any hospital (General or forensic)	*252*	*38*	*60/1953*	*43*	*141*
• *Percentage (95 % CI)*	*1.26 % (1.11–1.42)*	*1.57 % (1.11–2.14)*	*3.07 % (2.35–3.94)*	*2.18 (1.58–2.92)*	*2.28 % (1.93–2.69)*
Number diverted to any location (forensic hospital, general hospital or OPD)	*572*	*96*	*126*	*127*	*349*
• *Percentage (95 % CI)*	*2.85 % (2.62–3.09)*	*3.95 (3.21–4.81)*	*6.45 % (5.40–7.63)*	*6.43 (5.39–7.60)*	*5.65 % (5.09–6.26)*

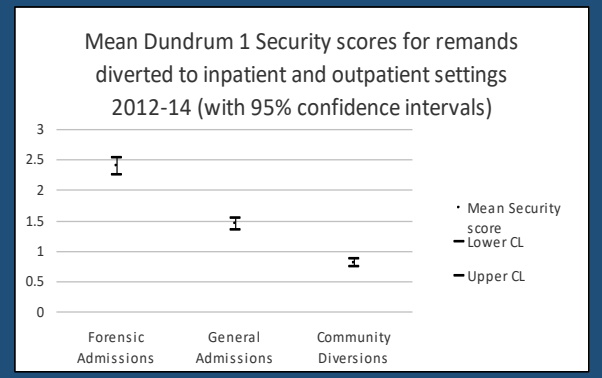
Transfer of care: Results

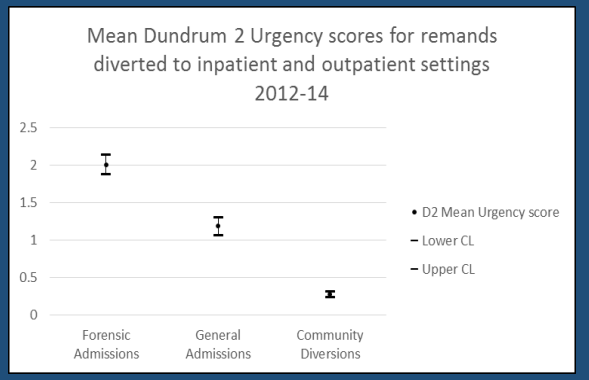
utcome	N	Days from committal to outcome				Days from first assessment to outcome			
		Median	Range	Mean	95 % CI	Median	Range	Mean	95 % CI
Discharge to prison GP	451	8.0	0–346	29.3	24.3–34.4	0.0	0–344	12.9	9.4–16.4
Discharge to prison GP and addiction services	95	8.0	1–307	24.0	14.7–33.4	0.0	0–141	9.8	5.2–14.4
Overseas prison transfer	6	10.0	2–24	12.3	2.7–21.9	1.5	0–12	4.0	−1.1–9.1
Community outpatient diversion	208	15.5	0–398	36.7	28.2–45.2	11.0	0–269	26.8	21.4–32.1
General admission	81	15.0	2–60	19.7	16.4–23.0	13.0	0–59	16.8	13.5–20.1
Forensic admission	60	19.5	1–774	52.0	22.4–81.5	17.0	0–773	47.4	17.9–77.0
Transfer to in-reach psychiatry service in other Prison	202	23.5	0–538	54.2	42.7–65.8	17.0	0–538	43.8	33.7–53.8
Remained on PICLS caseload as at 9th April 2015	6	188.0	35–227	160.0	87.6–232.1	187.0	31–225	158.2	84.8–231.6
Total	1109	13.0	0–774	35.9 (SD 65.8)	31.8–40	6.0	0–773	23.7 (SD 53.7)	20.4–27

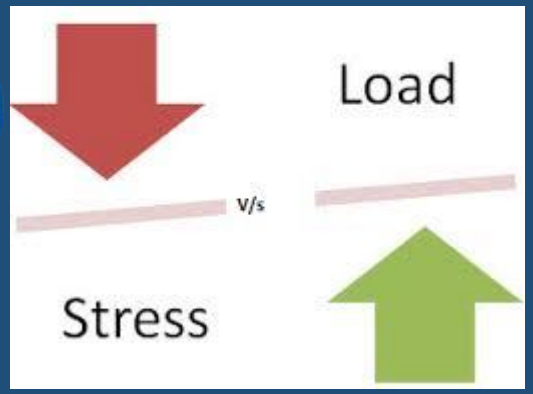
Risk/Need Responsivity

Table: Mean Dundrum 1 Security, Dundrum 2 Urgency and mean total Triage scores (with 95% confidence intervals for mean) for admissions to forensic hospitals, general psychiatric admissions and outpatient diversions 2012-2014.

	Mean Triage Security Score (SD)	95% C.I.	Mean Triage Urgency Score (SD)	95% C.I.	Mean Total Triage Score (SD)	95% C.I.
Forensic Admission N=60	2.39 (0.54)	2.25-2.53	2.01 (0.51)	1.88 -2.14	2.26 (0.44)	2.15-2.37
General Admission N=81	1.44 (0.44)	1.34-1.54	1.19 (0.54)	1.07-1.31	1.36 (0.42)	1.27-1.45
Outpatient Diversion N=140	0.80 (0.43)	0.73-0.87	0.28 (0.26)	0.24-0.32	0.62 (0.33)	0.56-0.68







Stress Tests Among Community Banks

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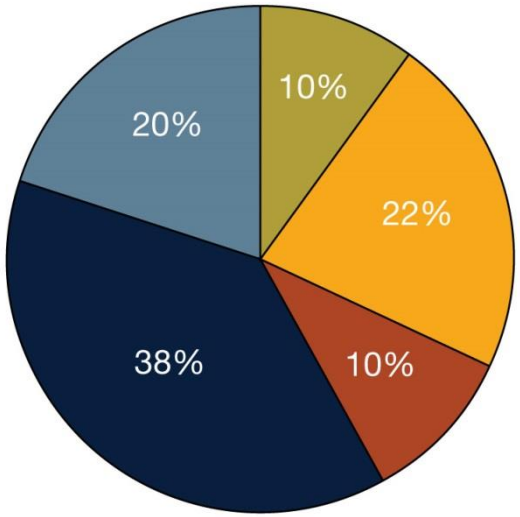

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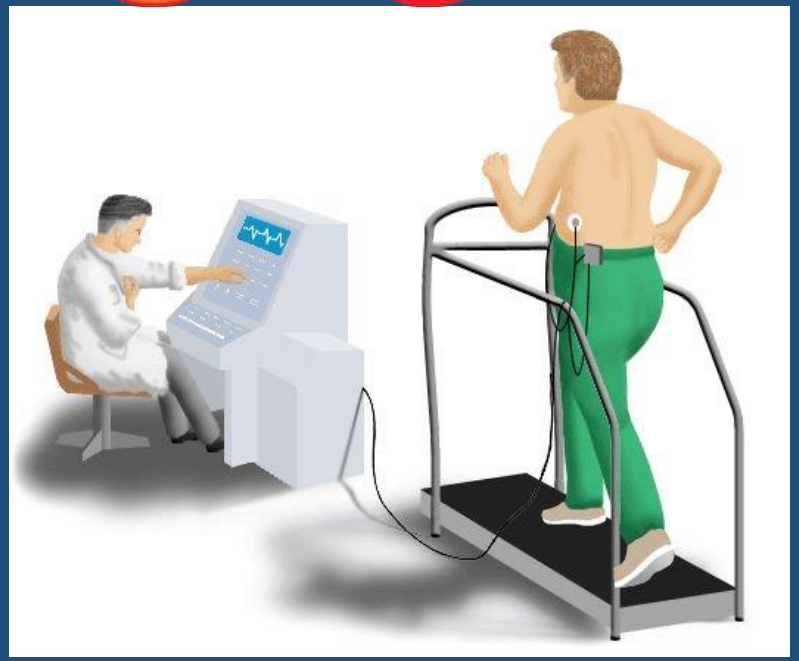
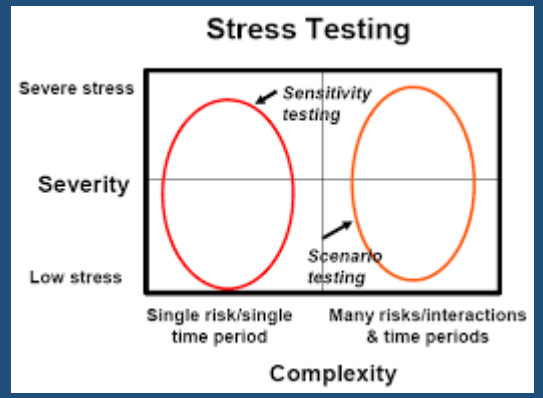
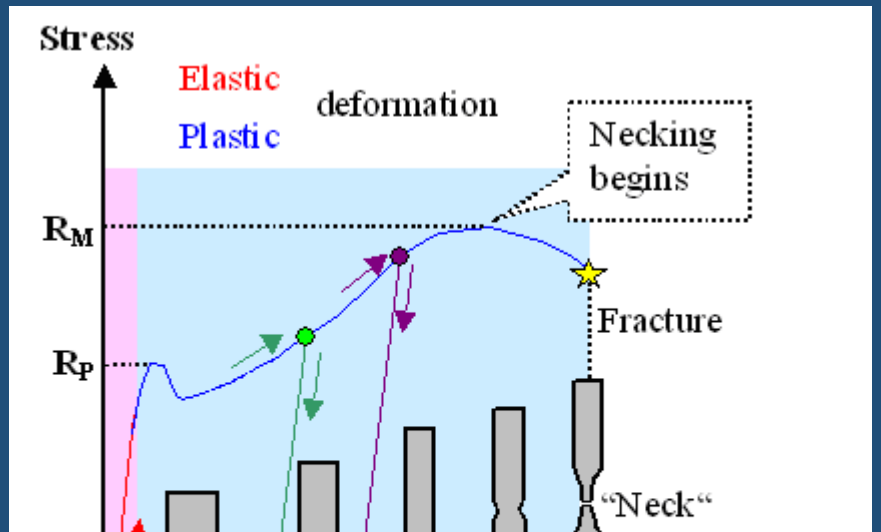
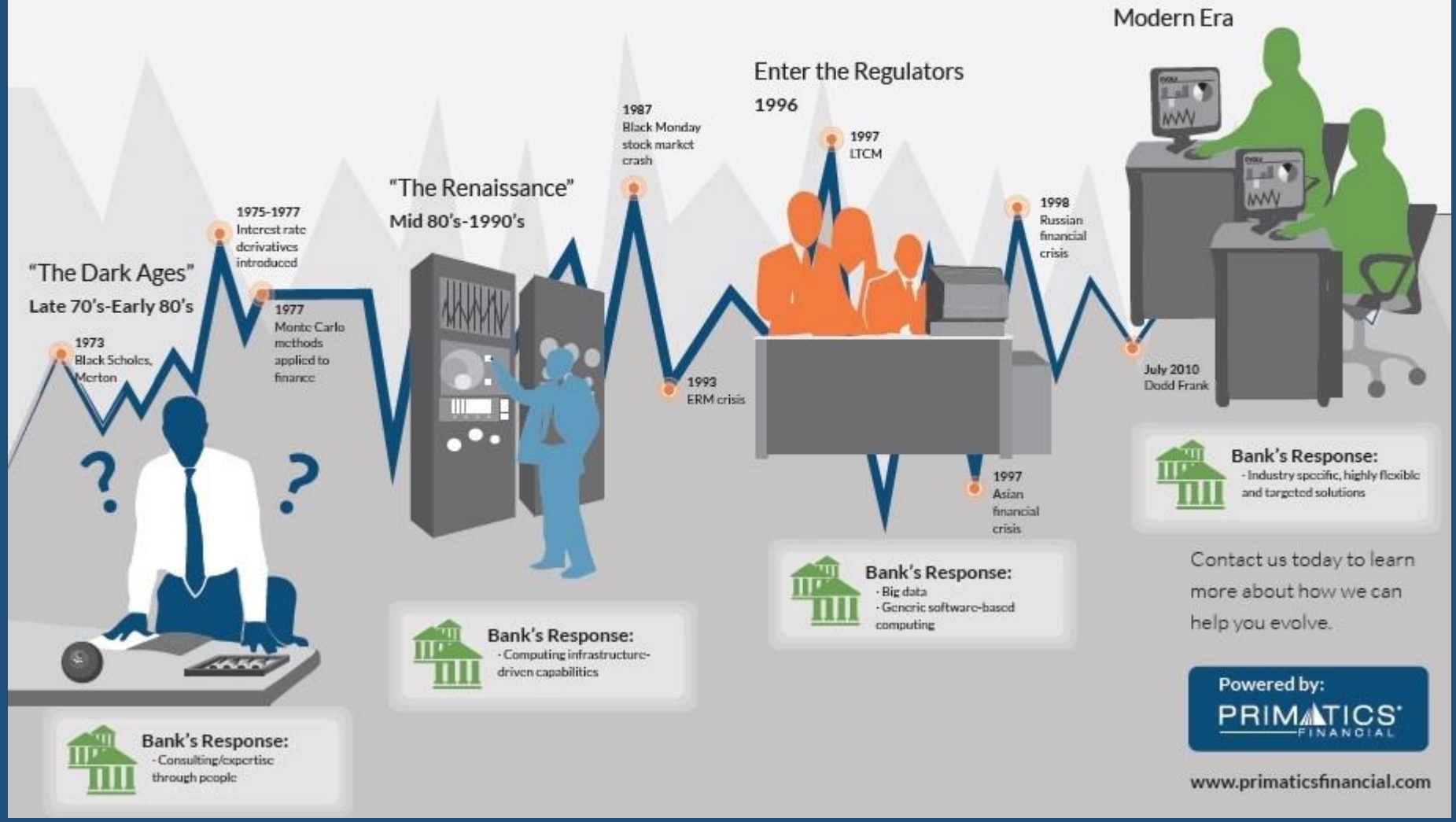






The Evolution of Stress Testing

Stress testing has been around a long time...



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Need to shorten background and introduction- Also conclusion.
Strong model allows sustainable service delivery
Need to record key activity-need slide (Ronan) describing the data recorded and how at discharge

C/s Fazel
Review- recommends longitudinal
Longitudinal what?

Pakes- incoherent data
Coid- services fail to identify/provide aftercare for psychotic prisoners
diversion may be unfeasible specific things, public safety

Longitudinal-previous
Curtin
Our 2006-2011 paper - limitations
More comprehensive dataset to advise a service assessment protocol
not complex to answer more

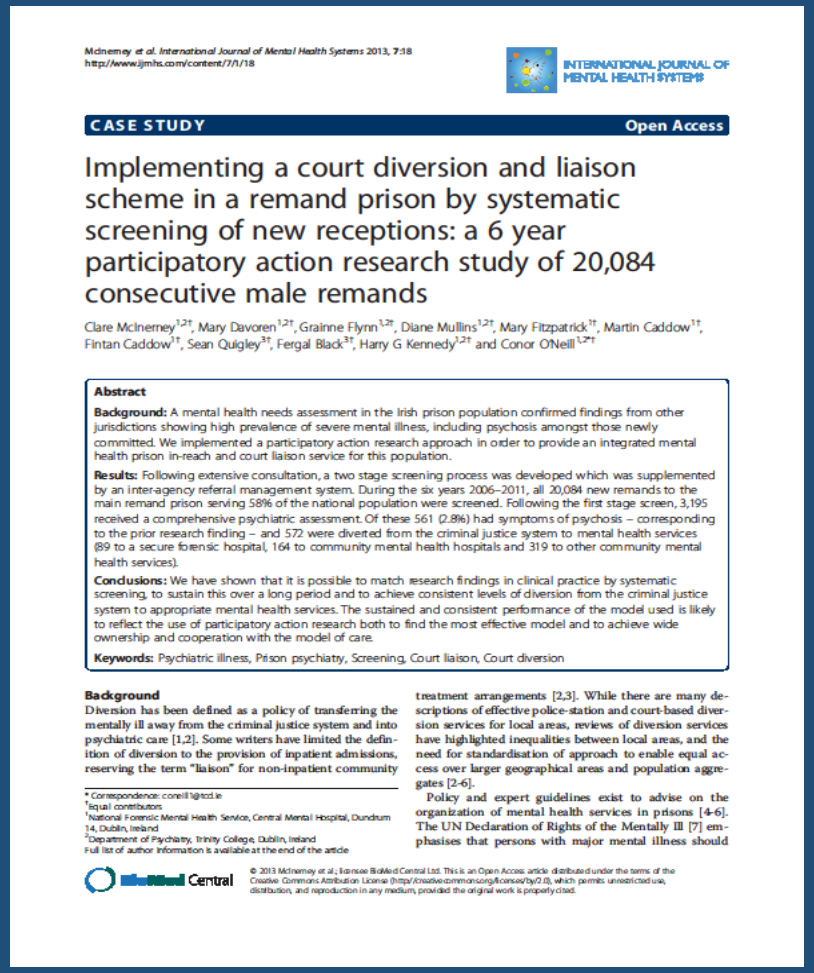
- Summary/Conclusions
- S
- T
- R
- E
- S
- S- WHO chart-counting in, counting out
- Evaluate- see stressors- capacity, strain
- Take home message- strong model-sustainable service
- Skeleton/Service Assessment Protocol

Background

- Prisons have been described as representing a ‘rare public health opportunity’ for identifying and managing major mental illness in young men (1) and can provide a focal point for arranging diversion to healthcare (2).
- Cross-sectional prevalence rates of psychotic illness in prison populations have been estimated at ten times the community rate (4,5). Fazel et al (3) in a review of the area identified the need for longitudinal studies of mental health in prisoners.

- Curtin et al. (9) found 3.8% (95% C.I. 2.2-6.6%) of a series of 313 male remands in Ireland had a current diagnosis of psychotic disorder (including schizophrenia, psychotic mood disorders, substance-induced psychosis and other organic psychoses)

- Limited research base describing clinical pathways for persons receiving mental health care in prisons over extended periods. There remains a need to determine and define the variables measuring the effectiveness of prison mental health services.



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INTERNATIONAL JOURNAL OF MENTAL HEALTH SYSTEMS

CASE STUDY Open Access

Implementing a court diversion and liaison scheme in a remand prison by systematic screening of new receptions: a 6 year participatory action research study of 20,084 consecutive male remands

Clare McInerney[1,2†], Mary Davoren[1,2†], Grainne Flynn[1,2†], Diane Mullins[1,2†], Mary Fitzpatrick[1†], Martin Caddow[1†], Fintan Caddow[1†], Sean Quigley[3†], Fergal Black[3†], Harry G Kennedy[1,2†] and Conor O'Neill[1,2*†]

Abstract

Background: A mental health needs assessment in the Irish prison population confirmed findings from other jurisdictions showing high prevalence of severe mental illness, including psychosis amongst those newly committed. We implemented a participatory action research approach in order to provide an integrated mental health prison in-reach and court liaison service for this population.

Results: Following extensive consultation, a two stage screening process was developed which was supplemented by an inter-agency referral management system. During the six years 2006–2011, all 20,084 new remands to the main remand prison serving 58% of the national population were screened. Following the first stage screen, 3,195 received a comprehensive psychiatric assessment. Of these 561 (2.8%) had symptoms of psychosis – corresponding to the prior research finding – and 572 were diverted from the criminal justice system to mental health services (89 to a secure forensic hospital, 164 to community mental health hospitals and 319 to other community mental health services).

Conclusions: We have shown that it is possible to match research findings in clinical practice by systematic screening, to sustain this over a long period and to achieve consistent levels of diversion from the criminal justice system to appropriate mental health services. The sustained and consistent performance of the model used is likely to reflect the use of participatory action research both to find the most effective model and to achieve wide ownership and cooperation with the model of care.

Keywords: Psychiatric illness, Prison psychiatry, Screening, Court liaison, Court diversion

Background

Diversion has been defined as a policy of transferring the mentally ill away from the criminal justice system and into psychiatric care [1,2]. Some writers have limited the definition of diversion to the provision of inpatient admissions, reserving the term "liaison" for non-inpatient community treatment arrangements [2,3]. While there are many descriptions of effective police-station and court-based diversion services for local areas, reviews of diversion services have highlighted inequalities between local areas, and the need for standardisation of approach to enable equal access over larger geographical areas and population aggregates [2-6].

Policy and expert guidelines exist to advise on the organization of mental health services in prisons [4-6]. The UN Declaration of Rights of the Mentally Ill [7] emphasises that persons with major mental illness should

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Described PICLS service model

Outcomes 2006-2011

Identification of Psychosis

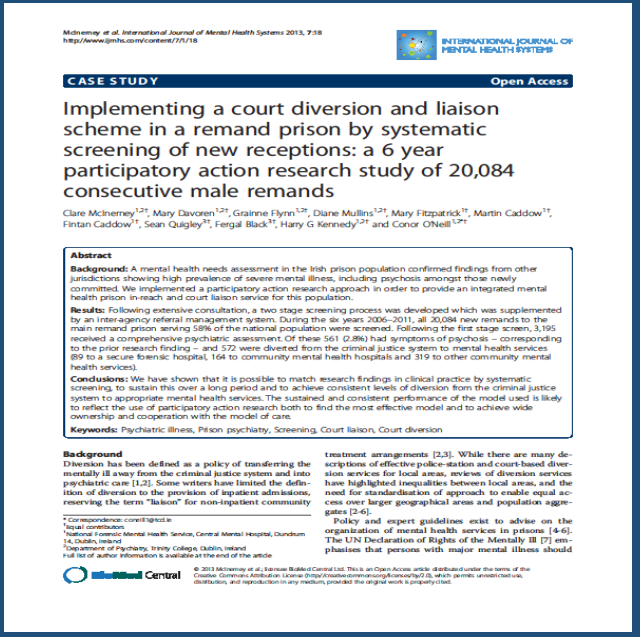
McInerney C, Davoren M, Flynn G, Mullins D, Fitzpatrick M, Caddow M, Caddow F, Quigley S, Black F, Kennedy HG, O'Neill C. Implementing a court diversion and liaison scheme in a remand prison by systematic screening of new receptions: a 6 year participatory action research study of 20,084 consecutive male remands. Int J Mental Health Syst. 2013;7:18

Outcome Standards 1:

2006-2011 study demonstrated:

1. Can identify major mental illness at levels predicted by research
2. Can achieve diversion to healthcare
3. Can sustain quality of service over time

- More comprehensive approach required
- Outcome standards refined 2012-14:
  - STRESS TESTING approach



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Conclusions: We have shown that it is possible to match research findings in clinical practice by systematic screening, to sustain this over a long period and to achieve consistent levels of diversion from the criminal justice system to appropriate mental health services. The sustained and consistent performance of the model used is likely to reflect the use of participatory action research both to find the most effective model and to achieve wide ownership and cooperation with the model of care.

Keywords: Psychiatric illness, Prison psychiatry, Screening, Court liaison, Court diversion

Background

Diversion has been defined as a policy of transferring the mentally ill away from the criminal justice system and into psychiatric care [1,2]. Some writers have limited the definition of diversion to the provision of inpatient admissions, reserving the term "liaison" for non-inpatient community treatment arrangements [2,3]. While there are many descriptions of effective police-station and court-based diversion services for local areas, reviews of diversion services have highlighted inequalities between local areas, and the need for standardisation of approach to enable equal access over larger geographical areas and population aggregates [2-6].

Policy and expert guidelines exist to advise on the organization of mental health services in prisons [4-6]. The UN Declaration of Rights of the Mentally Ill [7] emphasises that persons with major mental illness should

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Comparators:

- Gold standard
- Other services
- Same service over time
- Correlate with national/local statistics

Surgical Safety Checklist

World Health Organization | Patient Safety

Before induction of anaesthesia
(with at least nurse and anaesthetist)

Has the patient confirmed his/her identity, site, procedure, and consent?
- ☐ Yes

Is the site marked?
- ☐ Yes
- ☐ Not applicable

Is the anaesthesia machine and medication check complete?
- ☐ Yes

Is the pulse oximeter on the patient and functioning?
- ☐ Yes

Does the patient have a:

Known allergy?
- ☐ No
- ☐ Yes

Difficult airway or aspiration risk?
- ☐ No
- ☐ Yes, and equipment/assistance available

Risk of >500ml blood loss (7ml/kg in children)?
- ☐ No
- ☐ Yes, and two IVs/central access and fluids planned

Before skin incision
(with nurse, anaesthetist and surgeon)

- ☐ **Confirm all team members have introduced themselves by name and role.**
- ☐ **Confirm the patient's name, procedure, and where the incision will be made.**

Has antibiotic prophylaxis been given within the last 60 minutes?
- ☐ Yes
- ☐ Not applicable

Anticipated Critical Events

To Surgeon:
- ☐ What are the critical or non-routine steps?
- ☐ How long will the case take?
- ☐ What is the anticipated blood loss?

To Anaesthetist:
- ☐ Are there any patient-specific concerns?

To Nursing Team:
- ☐ Has sterility (including indicator results) been confirmed?
- ☐ Are there equipment issues or any concerns?

Is essential imaging displayed?
- ☐ Yes
- ☐ Not applicable

Before patient leaves operating room
(with nurse, anaesthetist and surgeon)

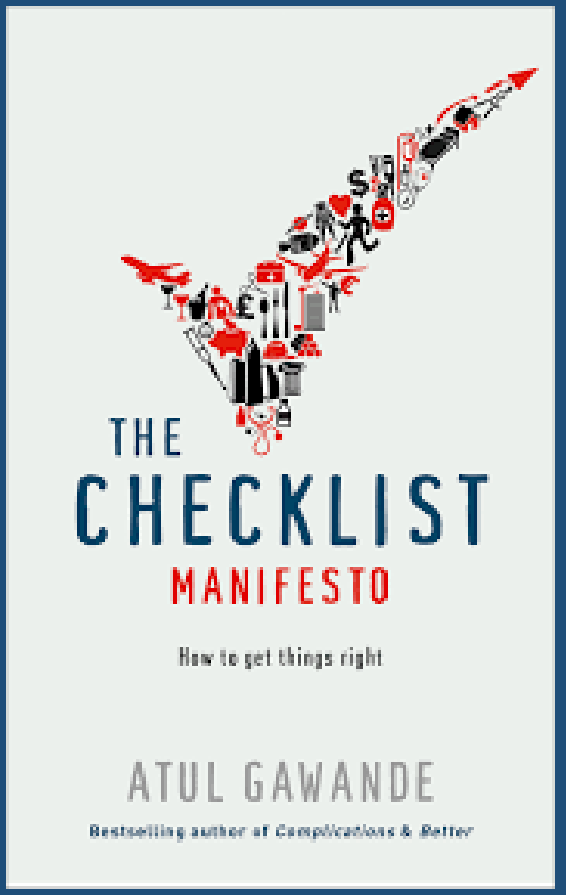
Nurse Verbally Confirms:
- ☐ The name of the procedure
- ☐ Completion of instrument, sponge and needle counts
- ☐ Specimen labelling (read specimen labels aloud, including patient name)
- ☐ Whether there are any equipment problems to be addressed

To Surgeon, Anaesthetist and Nurse:
- ☐ What are the key concerns for recovery and management of this patient?

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.

Revised 1 / 2009

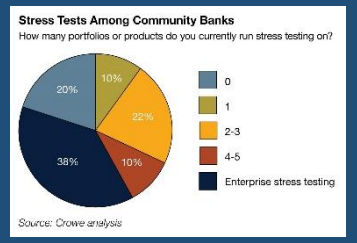
© WHO, 2009

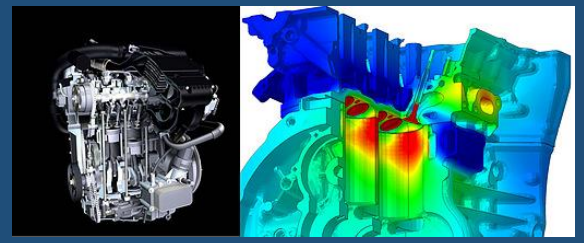


Stress testing

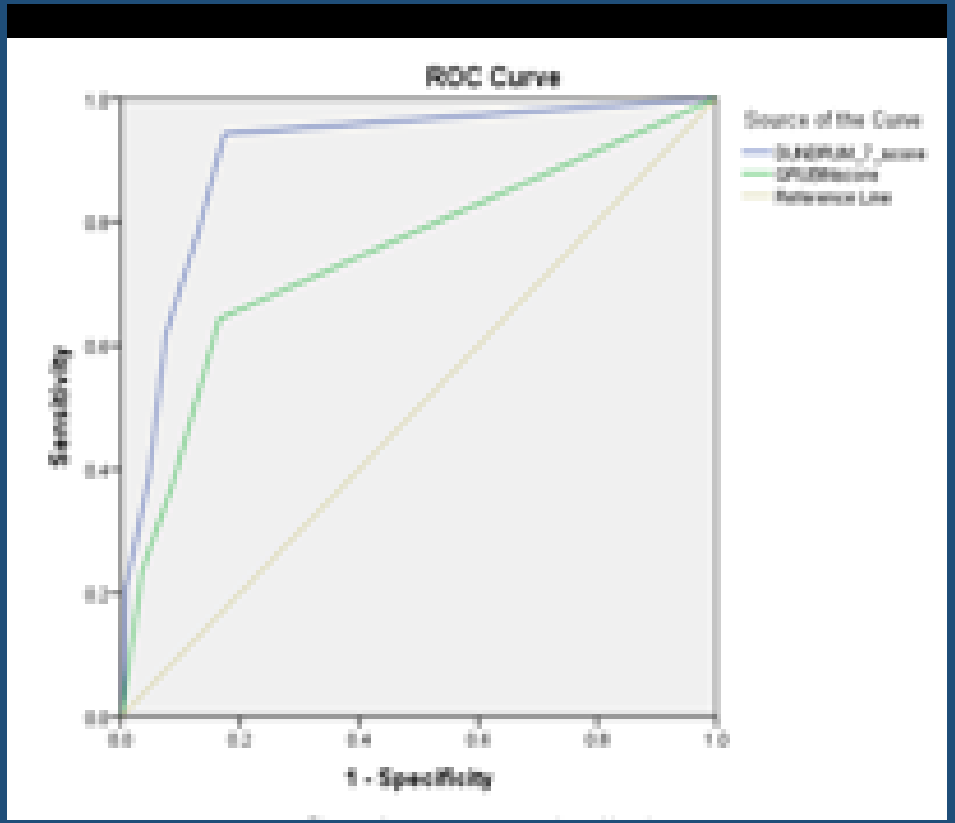
“Deliberately thorough testing used to determine the stability of a given system to confirm intended specifications are being met and help determine modes of failure”.

Specifications





- An effectively functioning in-reach service should be able to ‘count in and count out’ those using the service, identifying those with the most severe acute symptoms and arrange healthcare.
- Inability to achieve (or effectively) measure such outcomes may reflect a service under stress, and may help advise resource requirements or system recalibration.
- In prison settings, the greatest turnover is in remand settings


ROC Curve
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Source of the Curve
Reference Line

Ethical Approval

•The research protocol for this study was approved by the Central Mental Hospital Audit, Research, Ethics and Effectiveness Committee. Only anonymised information from a large sample was analysed and presented in the current study. Data collected was that routinely collected for the service's annual reports. No individual patient data has been presented.

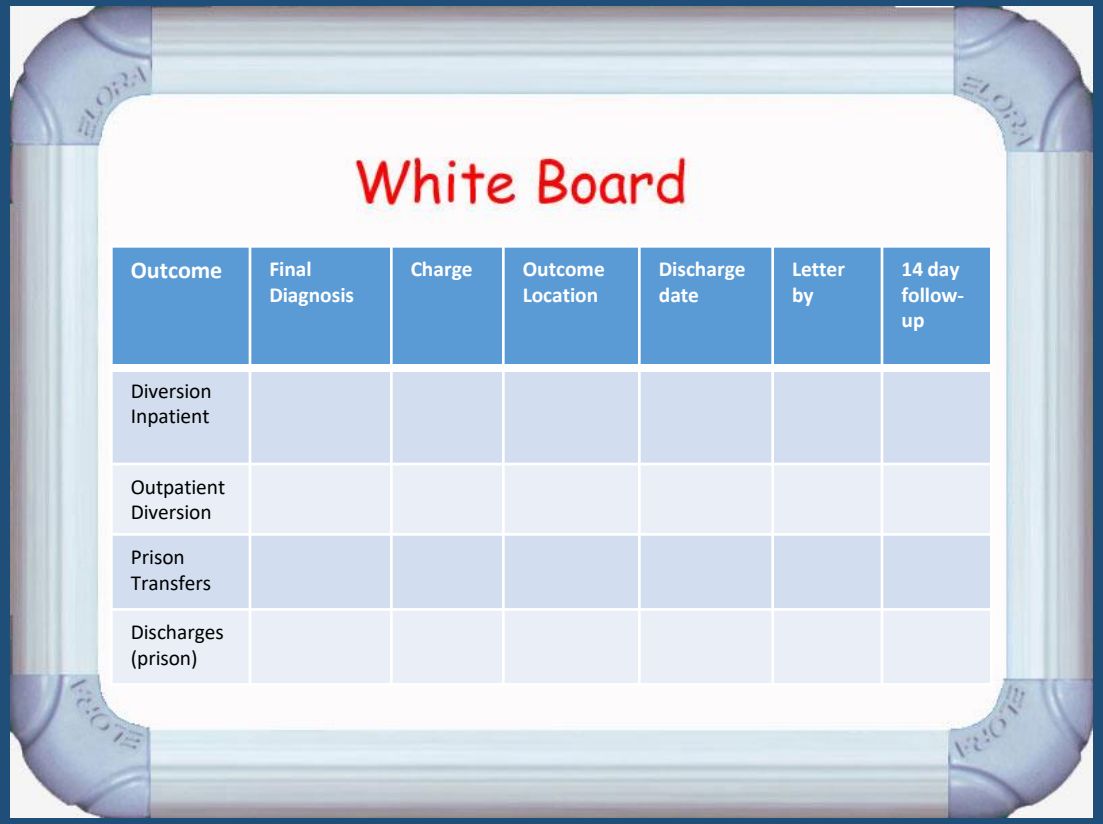
Data Analysis

•Anonymised information was analysed using SPSS 20 (18). Confidence intervals for proportions were calculated using the Epitools program (19). The data collected was that routinely collected for the annual reports of the service, which have become more comprehensive as the service has developed.

Boards

Active Caseload

Discharges



Used to populate outcome database at time of discharge:

Counting in, counting out

2006-2011 study:

1. Identified psychosis at predicted rate
2. Can achieve diversion to healthcare
3. Quality of service sustained over time

- More comprehensive approach required
- Outcome standards refined 2012-14:
  - STRESS TESTING approach

McInerney et al. International Journal of Mental Health Systems 2013, 7:18
http://www.ijmhs.com/content/7/1/18

INTERNATIONAL JOURNAL OF MENTAL HEALTH SYSTEMS

CASE STUDY Open Access

Implementing a court diversion and liaison scheme in a remand prison by systematic screening of new receptions: a 6 year participatory action research study of 20,084 consecutive male remands

Clare McInerney[1,2†], Mary Davoren[1,2†], Grainne Flynn[1,2†], Diane Mullins[1,2†], Mary Fitzpatrick[1†], Martin Caddow[1†], Fintan Caddow[1†], Sean Quigley[3†], Fergal Black[3†], Harry G Kennedy[1,2†] and Conor O'Neill[1,2*†]

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McInerney C, Davoren M, Flynn G, Mullins D, Fitzpatrick M, Caddow M, Caddow F, Quigley S, Black F, Kennedy HG, O'Neill C. Implementing a court diversion and liaison scheme in a remand prison by systematic screening of new receptions: a 6 year participatory action research study of 20,084 consecutive male remands. Int J Mental Health Syst. 2013;7:18

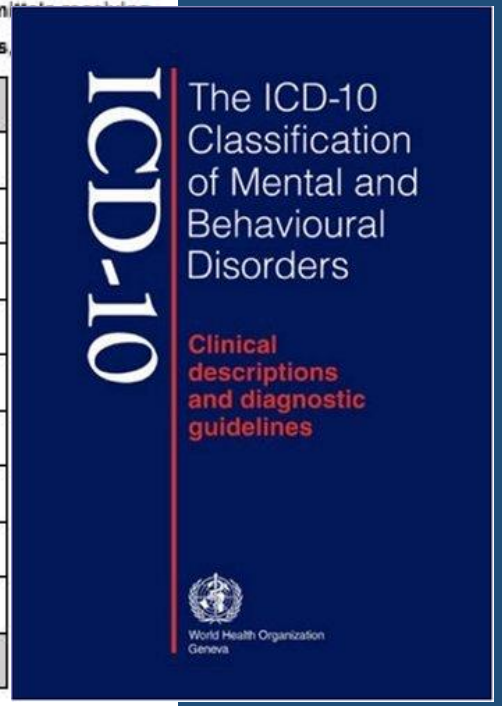
Screening, Identification and caseload description
Results:

Primary ICD-10 Diagnosis

- 1109 remands
  - 23% Schizophreniform
  - 39% Substance misuse
  - 18% Personality Disorder
  - 14% other
  - 6% No illness

Table: Primary ICD-10 Diagnoses at discharge/transfer/diversion for new comm
psychiatric assessment following post-remand screening (All remand episodes,

	Primary ICD-10 Diagnosis	Number	%
F00-09	Organic disorders	17	1.5%
F10-19	Substance Abuse Disorders	426	38.4%
F20-29	Schizophreniform Disorders	255	23.0%
F30-39	Mood Disorders	117	10.6%
F40-59	Neurotic Disorders	7	0.6%
F60-69	Personality disorders	200	18.0%
F70-79	Mental Retardation	14	1.3%
F80-98	Developmental/Childhood Disorders	9	0.8%
	No Mental Illness/Adjustment Reaction	64	5.8%
	Total	**1109**	**100.0**



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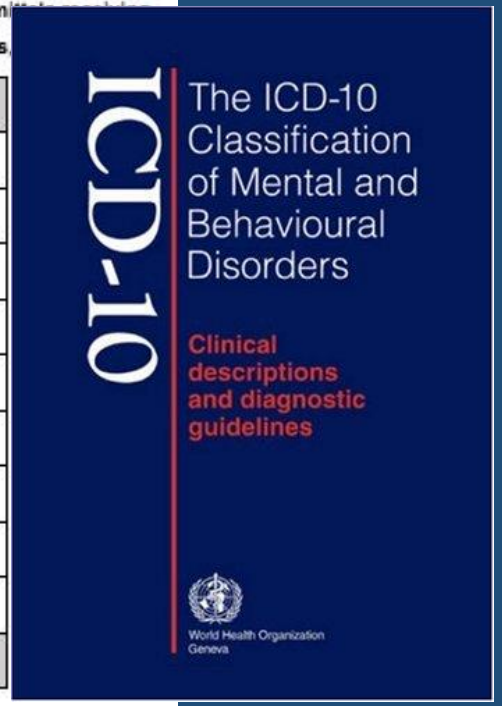

Testing

Identification of Psychosis: 2006-2014

3.1% of all remands had active psychotic symptoms

- 2.3% in 2006
- 4.2% in 2014

- Absolute numbers relatively constant

Table: Remands to Cloverhill Prison 2011-2014; proportions identified with active psychotic symptoms per committal episode and per person receiving psychiatric assessment

Year	All remand committals*	Assessed	Number with active psychotic symptoms	% Psychotic identified per committal (95% C.I.)	% Psychosis identified per assessment (95% C.I.)
2006	4107	306(7.5%)	95	2.3 (1.9-2.8)	31.0% (25.9-36.6)
2007	3562	371(10.4%)	102	2.9 (2.4-3.5)	27.5% (23.0-32.3)
2008	3635	680(18.7%)	112	3.1 (2.6-3.7)	16.5% (13.8-19.5)
2009	2919	755(21.1%)	70	2.4 (1.9-3.0)	9.3% (7.3-11.6)
2010	3121	576(25.9%)	91	2.9 (2.4-3.6)	15.8% (12.9-19.0)
2011	2740	507(18.5%)	91	3.2 (2.6-3.9)	17.9% (14.7-21.6)
2012	2,248	374(16.6%)	79	3.5 (2.8-4.4)	21.1% (17.1-25.6)
2013	1,953	375(19.2%)	89	4.6 (3.7-5.6)	23.7% (19.5-28.4)
2014	1,976	360(18.2%)	83	4.2 (3.4-52)	23.1% (18.8-27.8)
Total	**26,261**	**4304 (16.4%)**	**812**	**3.1 (2.9-3.3)**	**18.9% (17.7-20.1)**

Testing:
All diversions 2006-2014

3.5% diverted
(921/26,261)

1.5% in 2006
6.4% in 2014

Absolute numbers doubled

Proportion X 4

Table: Remands to Cloverhill Prison 2011-2014; proportions diverted to healthcare outside prison per committal episode and per person receiving psychiatric assessment

Year	All remand committals to Cloverhill	Assessed (%)	Number diverted from prison to mental health services	% Diverted per committal (95% CI)	% Diverted per assessment (95% CI)
2006	4107	306(7.5%)	60	1.5 (1.1-1.9)	19.6 (15.3-24.5)
2007	3562	371(10.4%)	87	2.4 (2.0-3.0)	23.5% (19.2-28.1)
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2012	2,248	374(16.6%)	96	4.3 (3.5-5.2)	25.7% (21.3-30.4)
2013	1,953	375(19.2%)	126	6.5 (5.4-7.6)	33.6% (28.8-38.6)
2014	1,976	360(18.2%)	127	6.4 (5.4-7.6)	35.3% (30.3-40.5)
Total	**26,261**	**4304 (16.4%)**	**921**	**3.5% (3.3-3.7)**	**21.4% (20.2-22.7)**

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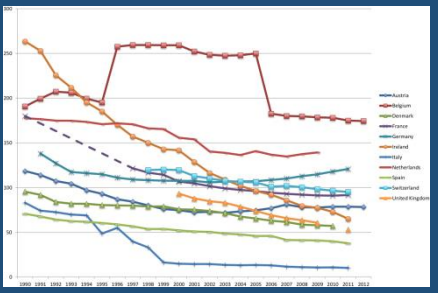
BMJ Open

How has the extent of institutional mental healthcare changed in Western Europe? Analysis of data since 1990

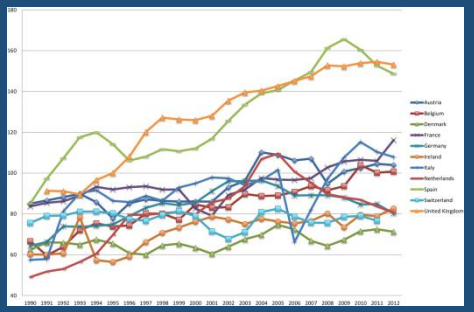
Winnie S Chow, Stefan Priebe

Per 100,000

General Beds

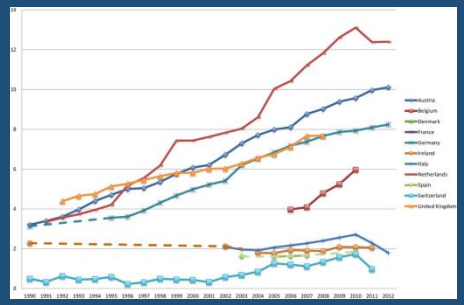


Prison Places



- 11 Western European Countries 1990-2012
- Negative association between bed reduction and prison increase

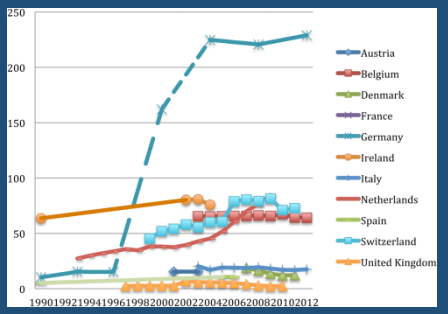
Forensic Beds



•General Beds reducing: Protective Housing, Forensic beds increasing

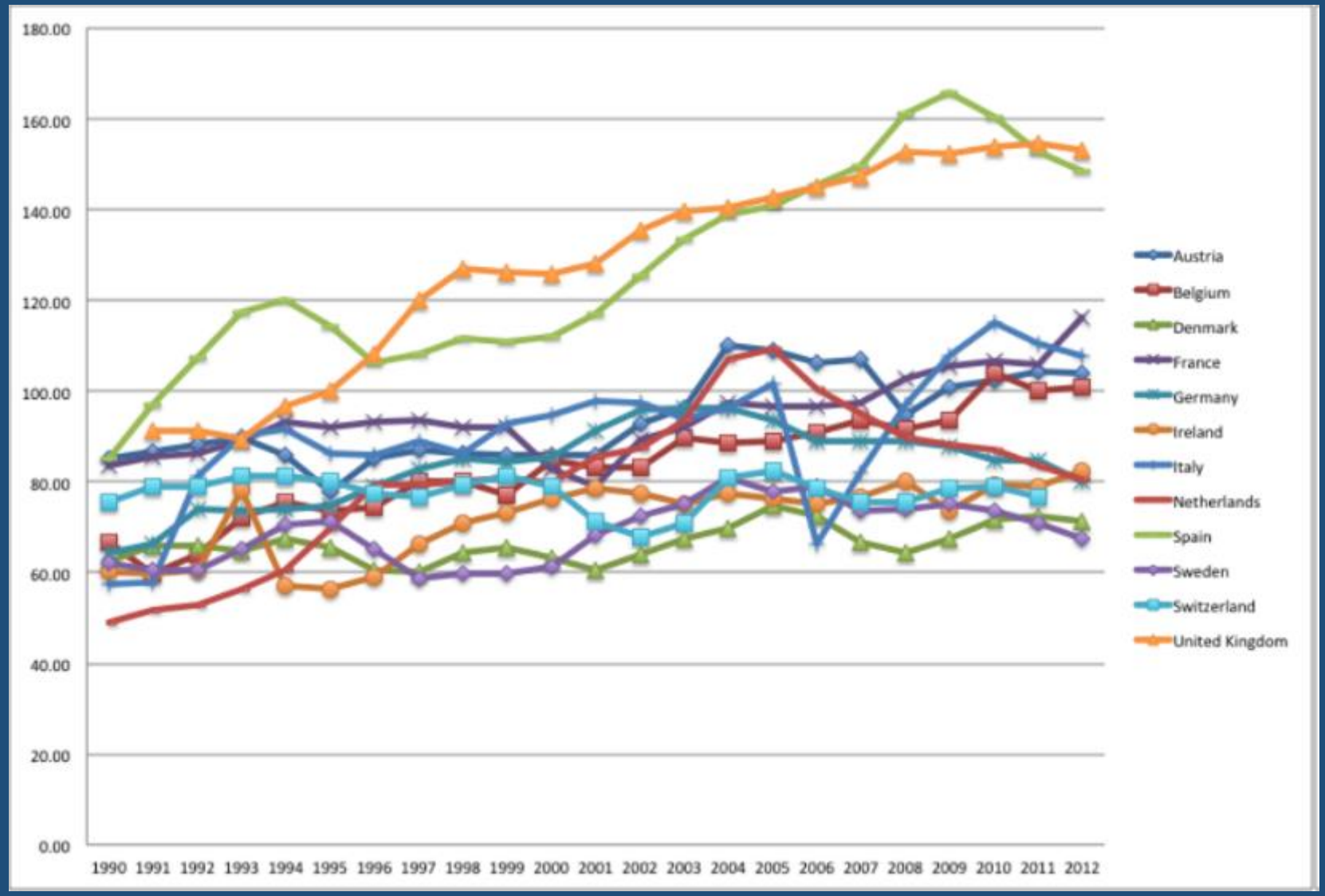
- Not Ireland!

Protecting Housing



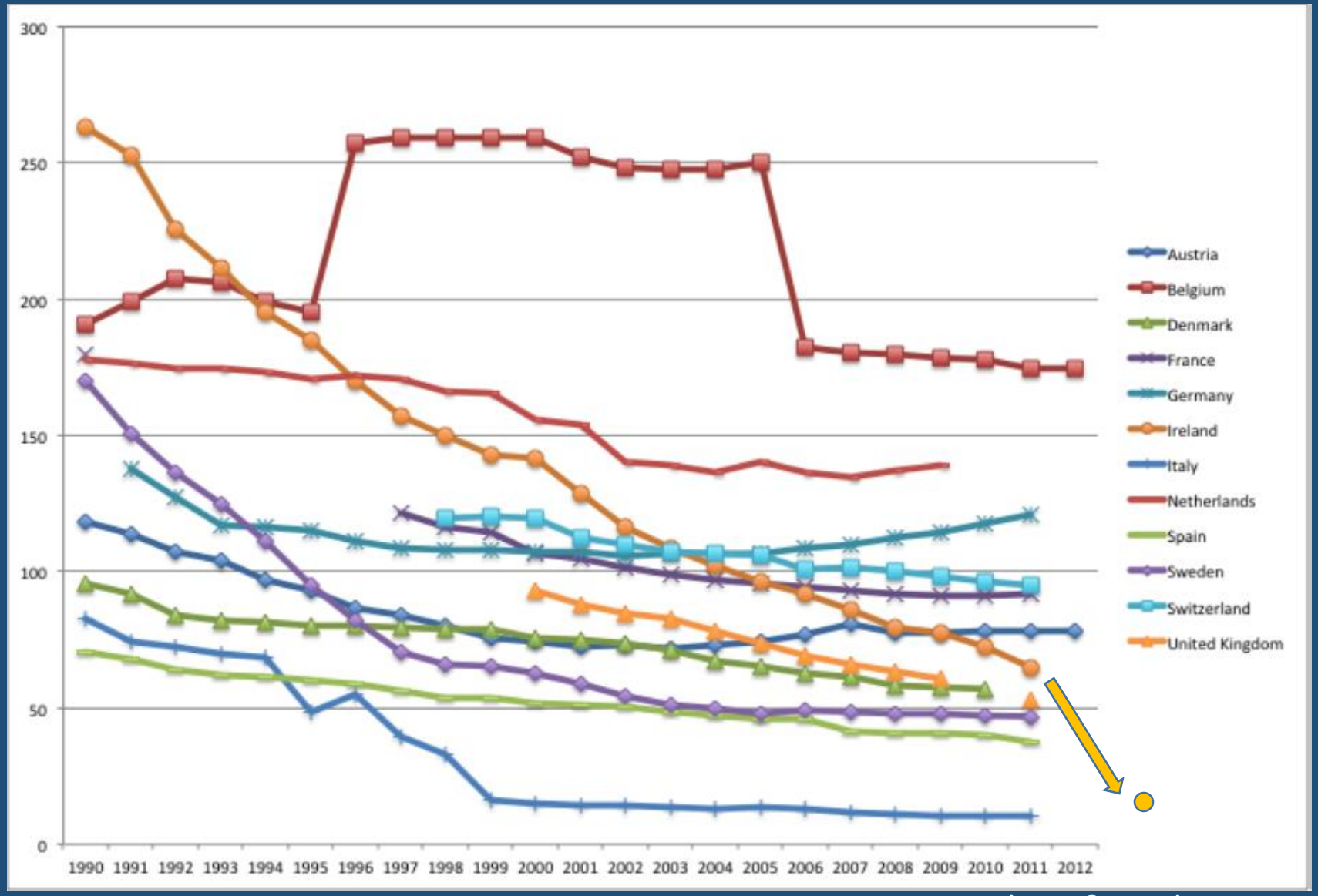
Chow WS, Priebe S.
BMJ Open 2016;6:e010188. doi:10.1136/

Figure 2. Prison Population per 100,000 inhabitants from 1990-2012



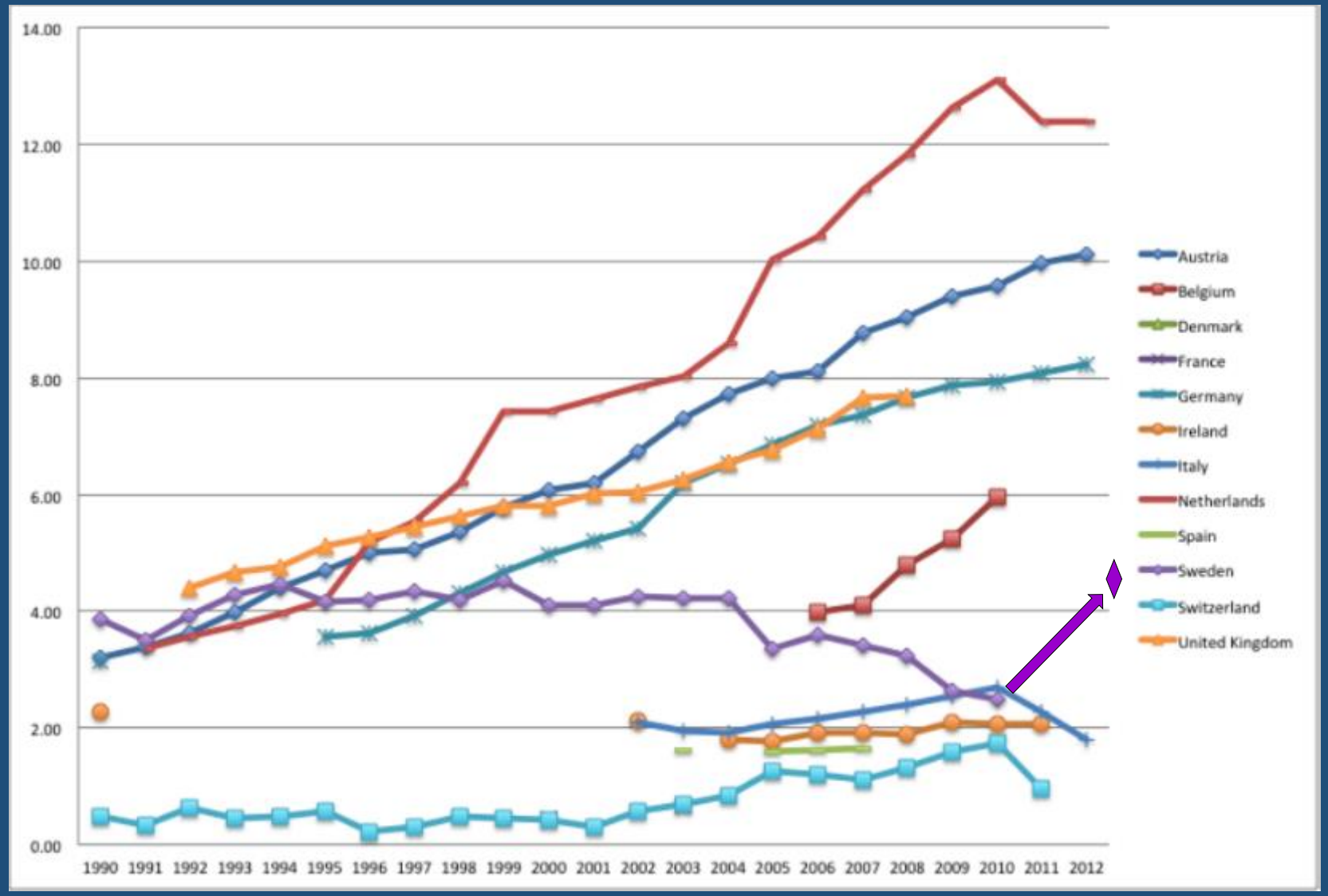
From Chow & Priebe 2016

Fig. 1: Psychiatric hospital beds per 100,000 inhabitants from 1990-2012



From Chow & Priebe 2016

Figure 3. Forensic beds per 100, 000 inhabitants from 1990-2012



From Chow & Priebe 2016