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Using Hospital Episode Statistics to explore comorbidities in primary alcohol withdrawal admissions to acute hospitals in England.

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SSA Funded PhD Studentship 2020-2023

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- ▶ Background:
 - ▶ Alcohol Withdrawal (AW) admissions to acute hospitals are increasing^{1,2,3}
 - ▶ NHS England developing Alcohol Care Teams as part of the Long Term Plan⁴
 - ▶ Understanding level of comorbidity is important to ensure appropriate clinical management^{5,6}

- ▶ Aim:
 - ▶ To use routinely collected NHS Hospital Episode Statistics (HES) Data to explore the clinical comorbidities presenting in primary AW admissions to acute hospitals

Methods

- ▶ Cross-sectional analysis of HES Admitted Patient Care Data for all adult admissions to acute hospitals in England for 2017/2018
- ▶ Use ICD-10 codes to identify primary AW admissions (F10.3)
- ▶ Explore associations between secondary ICD-10 codes and AW admissions
- ▶ Control for age, sex and hospital provider

What is HES Data?

ID	FCE	Diag1	Diag2	Diag3	Diag4	Diag5	Diag6	Diag7	Diag8	Diag9	Diag 10	Diag 11	Diag 12	CONCAT
Alfie	FCE1	F103	F102	R945	E119	Z864								F103 F102 R945 E119 Z864
Brenda	FCE1	F103	F104	F102	Z502	K760	K449	K296	K221	F129	F139			F103 F104 F102 Z502 K760 K449 K296 K221 F129 F139
Bob	FCE1	F103	F100	K701	J459	F329	F171							F103 F100 K701 J459 F329 F171
Bob	FCE2	J189	J459	K701	F329	F102	F171							J189 J459 K701 F329 F102 F171
Agnes	FCE1	F103	N390	R33X	R634	F329	F419	R458	N200	E119	E039	E780	I10X	F103 N390 R33X R634 F329 F419 R458 N200 E119 E039 E780 I10X Z864 Z960

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Bob	FCE1	F103	F100	K701	J459	F329	F171							F103 F100 K701 J459 F329 F171
Bob	FCE2	J189	J459	K701	F329	F102	F171							J189 J459 K701 F329 F102 F171
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Key Findings

Table 1. Demographic Characteristics – All Admissions vs Primary F10.3 Admissions

	All Adm (n=7,648,233)	Primary F10.3 (n=9,578)
Mean Age (Years)	57.70	47.61
Sex (% Male)	43.07	73.48
Ethnicity (% Caucasian)	78.84	92.27
NFA (%)	0.09	2.42
Emergency Admission (%)	35.60	99.30
Avg Length of Stay (Days)	1.63	3.49
Avg No. ICD-10 Diagnoses	4.81	6.57
DAMA (%)	0.88	12.10

Key Findings

Table 2. ICD10 Diagnoses Associated with Primary Alcohol Withdrawal

	Odds Ratio	95% C.I.	
CH11 – Alcoholic Liver Disease Only**	20.70	19.49	21.99
CH18 – Abnormal Laboratory Findings**	2.07	1.99	2.16
CH6 – Diseases of the Nervous System**	1.40	1.32	1.49
CH19 – Injury/Poisoning**	1.21	1.12	1.30
CH4 – Endocrine Diseases**	1.20	1.14	1.26
CH21 – Health Status **	1.11	1.07	1.16

**statistically significant at p<0.01 level

Conclusions

- ▶ Real time data identifying 6 ICD-10 categories which are associated with Primary AW
- ▶ Supports NHS England goals of developing Alcohol Care Teams as clinically important when considering management of AW
- ▶ Highlights need for long term care pathways and focus on individuals with high comorbidity
- ▶ May be useful in planning aftercare pathways

Thank You

Any Questions?

Ethical Approval

University of Hull Ethics Approval was granted on 01/12/2020 (FHS180)

Conflict of Interest Statement

There is no conflict of interest to declare

References

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