

# Fruit and vegetable intake among psychiatric inpatients

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## Introduction

Individuals with mental illness are at an increased risk of poor physical health (1).

Modifiable risk factors, including unhealthy dietary habits, contribute to this increased risk (2); it is therefore recommended that these risk factors are assessed as part of psychiatric patient care (3). The Cambridgeshire and Peterborough NHS Foundation Trust (CPFT) offers inpatients a Physical Health Check (PHC) within 7 days of admission.

This project investigated fruit and vegetable (FV) intake across diagnosis, among psychiatric inpatients admitted to CPFT psychiatric wards.

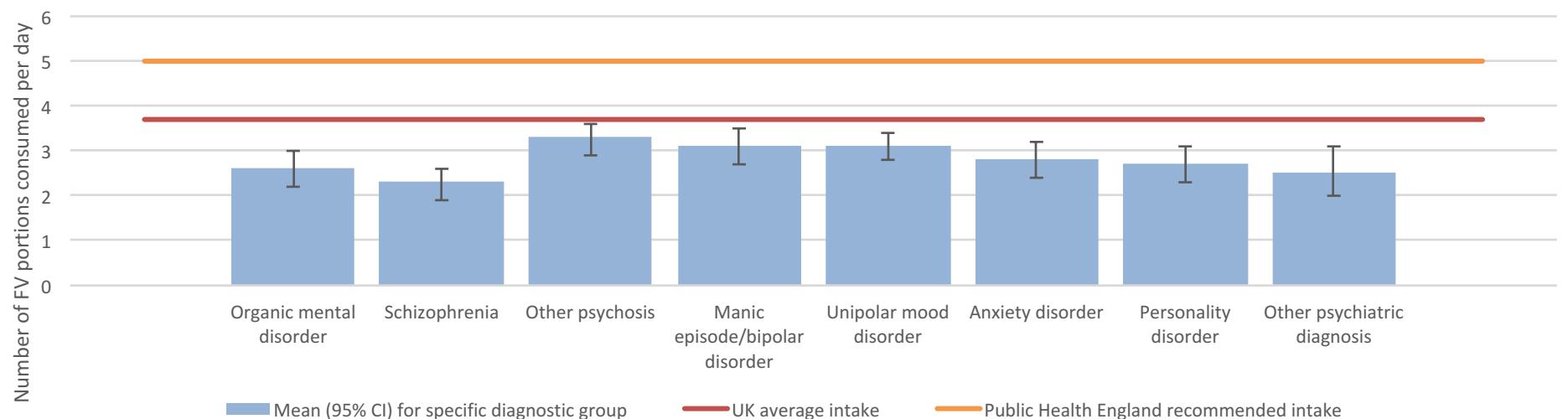
## Methods

An anonymised search of de-identified patient records from the CPFT research database was conducted to locate data for patients aged 18+ with an ICD-10 psychiatric diagnosis, admitted between March 2013 and January 2019 inclusive, who had a completed PHC assessment.

Data was extracted on variables including ICD-10 diagnosis and FV intake, which is asked about as part of the PHC assessment.

FV intake between ICD-10 diagnostic categories was compared using a one-way ANOVA.

Figure 1. Daily fruit and vegetable consumption by diagnosis (compared with UK average and Public Health England recommendations)



## Results and conclusions

Data on FV intake from 768 patients showed that mean (standard deviation) FV intake across all diagnoses was **2.85 (1.85)** FV portions/day. This is lower than the average FV intake among adults in the UK (3.7 portions/day) (4). Furthermore, Public Health England (PHE) recommends consuming at least 5 FV portions/day (5), which is roughly in line with WHO recommendations to consume 400g/day (5, 6). 583 patients (**75.9%**) reported consuming **fewer than 5 FV portions/day**.

Figure 1 shows mean (standard) deviation FV intake by diagnosis, in comparison with the UK average FV intake and PHE recommendations. Mean FV intake in patients with schizophrenia was **2.3 portions/day**, lower than those with other psychosis ( $p=0.001$ ), manic episode/bipolar disorder ( $p=0.026$ ) and unipolar mood disorder ( $p=0.007$ ) (figure 1). 86.5% of schizophrenia patients reported consuming fewer than 5 FV portions/day.

In summary, **FV intake is low among CPFT psychiatric inpatients, compared to the general UK population and PHE recommended intake. FV intake is particularly low among patients with schizophrenia.** There is potential for interventions to be trialed in the inpatient setting to improve FV intake.

## References

1. Firth J, Siddiqi N, Koyanagi A, Siskind D, Rosenbaum S, Galletly C, et al. The Lancet Psychiatry Commission: a blueprint for protecting physical health in people with mental illness. *Lancet Psychiatry*. 2019;6(8):675–712
2. Teasdale SB, Ward PB, Samaras K, Firth J, Stubbs B, Tripodi E, et al. Dietary intake of people with severe mental illness: systematic review and meta-analysis. *The British Journal of Psychiatry*. 2019 May;214(5):251–9.
3. NHS England. Physical health check and follow-up interventions for people with severe mental illness. 2019.
4. Fruit & vegetables [Internet]. Health Survey for England. [cited 2021 Jan 22]. Available from: <http://healthsurvey.hscic.gov.uk/data-visualisation/data-visualisation/explore-the-trends/fruit-vegetables.aspx>
5. Why 5 A Day? [Internet]. nhs.uk. 2018 [cited 2020 Dec 8]. Available from: <https://www.nhs.uk/live-well/eat-well/why-5-a-day/>
6. WHO | Increasing fruit and vegetable consumption to reduce the risk of noncommunicable diseases [Internet]. WHO. World Health Organization; [cited 2020 Dec 1]. Available from: [http://www.who.int/elena/titles/fruit\\_vegetables\\_ncds/en/](http://www.who.int/elena/titles/fruit_vegetables_ncds/en/)