

Change in admission BMI at a specialist eating disorder unit between 2013 and 2021

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Background

- Referrals to eating disorder inpatient services have increased by a fifth in some parts of England, and waiting times have doubled, since the start of the Covid-19 pandemic, according to research published recently by the Royal College of Psychiatrists (Ayton et al, 2022).
- Oaktrees Ward is a 14-bed regional adult SEDU (Specialist Eating Disorder Unit) based at Springview, Clatterbridge, Wirral.
- A 2013 research study at Oaktrees Ward found a trend for a continued reduction in admission and discharge body mass index (BMI) over the preceding ten years.
- In 2022, data was collected from a further nine years of inpatient admissions to Oaktrees Ward to see if this trend had continued.

Aims

To establish whether the mean BMI on admission has reduced over the last nine years at Oaktrees Ward.

Methodology

- The patient electronic record system, Carenotes™, was accessed in order to identify eligible patients, and to retrieve the relevant information required.
- Categories of interest included gender, age at time of admission, length of stay, number of previous admissions and BMI on admission, morning after admission and on discharge.
- All admissions to Oaktrees Ward between 26th May 2013 and 31st December 2021 were included (excluding inpatients at time of data collection or those with incomplete data sets).
- Collected data was analysed using SPSS analysis software.

Results

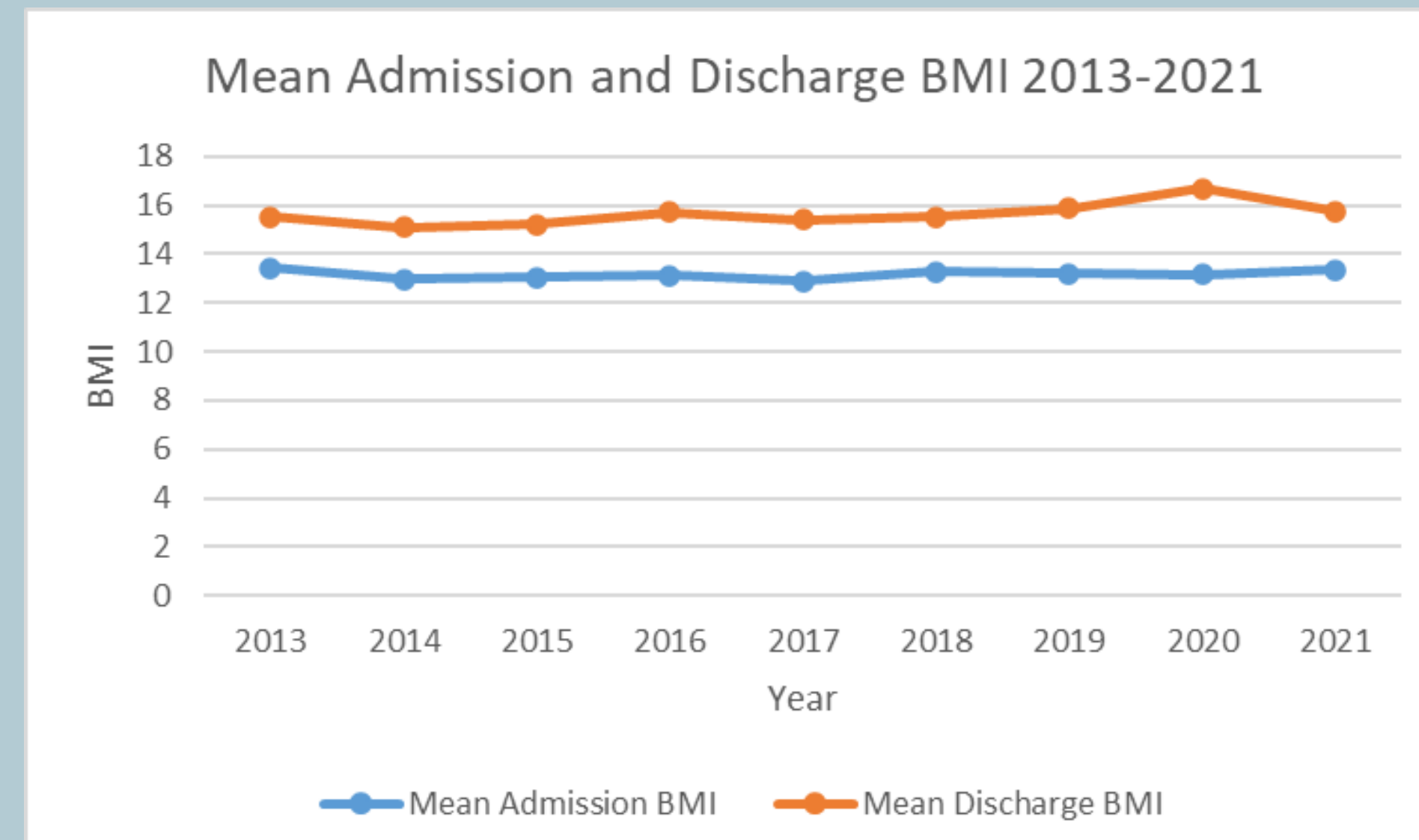
- After exclusions for incomplete data (n=64), there were 252 admissions available for analysis.
- Patients stayed for a mean of 124 days, with a mean admission age of 28.4 years, a mean admission BMI of 13.1, a mean discharge BMI of 15.6 and a mean weight regain of 2.4 kg during their admission.
- Female patients stayed on the unit for an average of 124.6 days (SD 88.1) and males stayed for 118.0 days (SD 90.9).

	First admission	More than one admission
Mean age (in years)	26.2 (SD 9.9)	31.3 (SD 12.6)
Mean length of stay (in days)	121.4 (SD 81.3)	127.4 (SD 97.0)
Mean weight regain (in kg/m ²)	2.5 (SD 1.5)	2.3 (SD 1.4)
Mean admission BMI (in kg/m ²)	13.4 (SD 1.4)	12.9 (SD 1.3)
Mean discharge BMI (in kg/m ²)	15.9 (SD 1.6)	15.2 (SD 1.7)

Figure 1. Table comparing mean values between first admission and multiple admission patients.

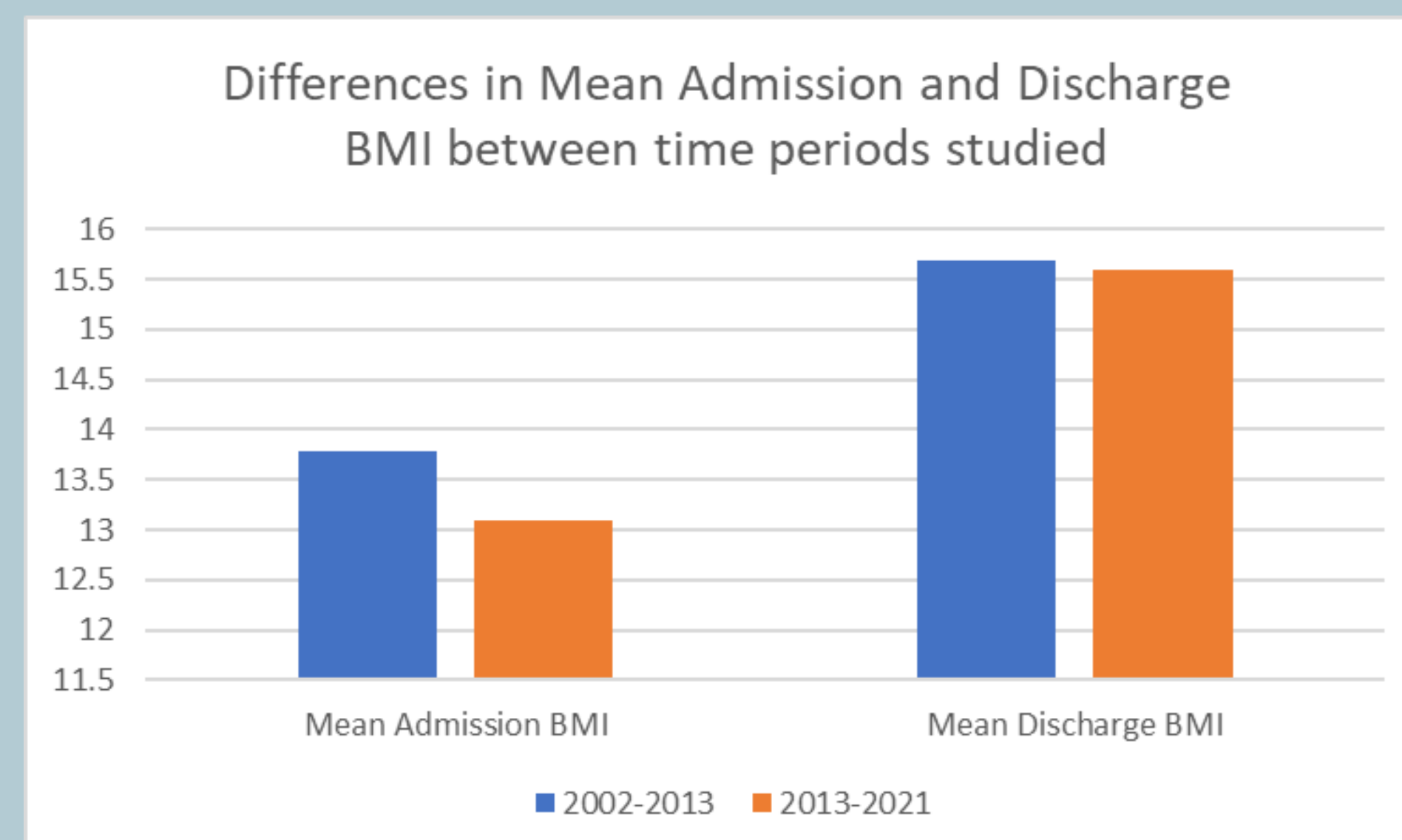
Comparison of findings with the 2013 study

There is no significant trend in the mean admission BMI over time between 2013 and 2021, which is in contrast with the 2013 study findings where both admission and discharge BMI was found to reduce between 2002 and 2013- see Graph 1.



Graph 1

However, there was a decrease in both mean admission and discharge BMI when comparisons were made between the time periods studied (2002-2013 and 2013-2021)- see Graph 2.



Graph 2

Discussion

- The main strength of this study is the extensive amount of data that has been gathered retrospectively over a period of nine years, and the opportunity this presents to compare findings with previous similar studies in order to inform future service development.
- There were however a significant amount of admissions which needed to be excluded due to missing data, and there was a risk of inter-observer variability due to four different clinicians collecting data with varying levels of resources and knowledge.
- There was an overall reduction in mean admission and discharge BMI for admissions between 2013-2021 compared to admissions between 2002-2013.
- However, no statistically significant year on year reduction in mean admission BMI was noted between 2013 and 2021.
- This presents an interesting point of further discussion for clinicians within the eating disorders field, where there is a general 'feel' that patients now present to inpatient services at a lower BMI and in poorer physical health.

Conclusions

- Mean admission BMI to Oaktrees Ward has reduced over time when comparisons are made between the studied time periods of 2002-2013 and 2013-2021.
- Interestingly, there was no significant reduction between 2013 and 2021 which goes against the general hypothesis and the overall 'feel' within eating disorders.
- It would be useful to know whether this pattern is consistent with other areas of the UK. The study is easily replicable.
- Learning more about the evolving challenges facing inpatient eating disorder services will be vital in order to inform future strategy and service development, both on a regional and national scale.



References

Risk, demand, capacity and outcomes in adult specialist eating disorder services in South-East of England before and since COVID-19. Agnes Ayton, David Viljoen, Sharon Ryan, Ali Ibrahim and Duncan Ford. BJPsych Bulletin (2022) 46, 89–95, doi:10.1192/bjb.2021.73.

Oaktrees BMI Audit. Wadsworth (2013).