Hepner, I. and Miller, L. (2024) Exploring Patient Engagement on a New App for Memory Rehabilitation (MEMORehab). Poster and Datablitz presentation at Australasian Society for Study of Brain Impairment (ASSBI) Conference, Sydney Australia (May).

<u>**Background and Objectives**</u>: Levels of motivation and engagement help determine the success of cognitive rehabilitation in patients with Acquired Brain Injury (ABI) (Williams et al., 2021). Demographic variables such as gender and age have been found to affect participation in other types of rehabilitation (Freund, 2006; Ott et al., 2022), but the influence of these factors has rarely been explored on cognitive interventions. The MEMORehab app provides a memory rehabilitation program over a three-month period involving six sessions with a clinician, as well as online videos, quizzes (based on video content) and computer-based exercises for learning and practicing strategies. We sought to determine how patients used the online resources.

<u>**Method**</u>: Data from the first 50 ABI patients in the MEMORehab program were considered, with respect to number of times educational videos were watched, number of times the quizzes (on video content) were tried and number of attempts on computerised strategy training exercises. Participants were divided by gender (17 female; 33 male) and by age range (Younger $\leq$50: n=13; Older >50: n=37).

<u>**Results:**</u> Overall, level of engagement was high, with only 4/50 failing to try *any* of the online material. Most patients (67%) accessed videos and quizzes more than once and, for those who started an exercise, the tendency was to persist until they had obtained the highest level (i.e., on average, 66% reached level 7).

Men and women did not differ in average age (mean= 57). Women engaged more often with the computerised exercises than did men. On average, more women tried an exercise at least once (68% vs 48%) and they made more attempts on an exercise (11.4 vs 6.1; F=6.3, p<.02). There were no differences between men and women in the level of engagement on number of video viewings (mean = 12.5) or quizzes attempted (mean = 8.7). Age range had no significant affect on the level of engagement, though it's worth noting that there are not yet many participants aged between 20-40.

<u>**Conclusions:**</u> The high level of engagement in this web-based app indicates that ABI patients are motivated by this method of rehabilitation delivery. Women tried the computer-based exercises more often than did men, but the possible influence of success rate and etiology on these findings will be discussed. Older age was not a barrier to participation. How engagement is related to outcome is the focus of other current studies involving this app.