Appendix H – Availability of Outcome Measures Data

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The question of the outcomes associated with an individuals' experience of mental health care is a persistent and important question, which relies on the collection and analysis of data relating to (at minimum) the patients' condition at the start of their treatment and again at the end of their treatment, in order to enable a comparison. Ideally information would also be gathered during the course of patients' treatment, since it is reasonably well known that the course of treatment does not follow a linear path (Baldwin, Berkeljon, Atkins, Olsen & Nielsen, 2009; Haas, Hill, Lambert & Morrell, 2002). There is also evidence to suggest that there is often disagreement between clinicians' appraisal of a patients' condition and the opinion of the patient themselves (Hannan et al., 2005; Spielmans, Masters & Lambert, 2006), and so it is useful to measure progress and outcomes from different perspectives; both the Child Outcomes Research Consortium (Fleming, Jones, Bradley & Wolpert, 2014), and the CYP-IAPT project (CYP-IAPT, 2015), advise the collection of client and carer, as well as clinician, perspectives, using a range of norm referenced, in addition to more subjective measures. In order for an analysis of outcomes, a patient must have recorded, on at least 2 occasions, the same outcome measure. In the analysis sample (consisting of 4573 periods of contact), 942 (20.6%) meet this criterion. This number drops to 531 (11.6%) if a stricter criterion of a 'norm referenced' measure is applied. It should also be considered that by requiring simply 2 distinct measures, there is the possibility that these two measures may not be taken near the start and end of treatment, and so will not give an accurate sense of a patients' change during treatment. By applying a stricter criterion, and stipulating that the first recorded measure be within 56 days (8 weeks) of the recorded start of a patients period of contact, and that the last measure be completed within 56 days of the recorded period of contact end (this is defined in the table as 'proximal' to the start and end of treatment), the number of cases with a set of paired outcome measures is just 609 cases (13.3%) and 287 (6.3%) cases with a paired set of norm-referenced measures. These figures are summarised in table H.1.

Table H.1. Availability of Outcome Measures for Payment Systems Data

	Number	Percentage
Any paired measure	942	20.6%
Any paired proximal measure	609	13.3%
Norm referenced paired measure	531	11.6%
Norm referenced paired proximal measure	287	6.3%

Completion numbers and rates for the entire analysis dataset, showing availability of paired measures, paired norm-referenced measures, and measures that are 'proximal' (within 56 days) to the recorded start and end dates of an individuals' period of contact.
Norm-referenced measures are: SDQ, RCADS, CGAS, HoNOSCA, Goals, MAMSC, PHQ and RMQ.

Within this data on the availability of outcome measures, there is considerable variability resulting from a number of factors. Notably, the number of cases with paired outcome measures differs significantly according to which grouping they belong to; 31% of cases in the 'co-occurring emotional difficulties' category (EMO) have paired measures, while only 10% of cases in the 'ADH' grouping have paired outcomes measures. The full breakdown of outcome measures by grouping is presented in table 2. Given the differences between groups it is unsurprising that this difference in availability of outcomes is statistically significantly different from the availability of outcomes being equally available among all groupings ($\chi^2_{(16)}$ = 52.743, p < 0.0005, two-tailed). Scrutinising the figures in table H.2 reveals a likely source (or at least contributor) to this effect, in that there appears to be a reasonably strong positive correlation between the availability of outcome measures for each grouping, and the average number of sessions that individuals in that grouping attend (figure H.1).

Table H.2. Availability of Outcome Measures for Each Group

Grouping	Percentage of Cases with any Paired Outcomes	Mean Number of Sessions Recorded per Period of Contact
ADH	10%	3.0
ADV	19%	3.8
AUT	14%	3.2
BIP	24%	3.9
BEM	28%	8.6
BEH	15%	3.5
DEP	21%	5.9
EAT	29%	8.6
GAP	28%	5.8
DNC	19%	5.0
DSI	23%	7.0
EMO	31%	7.3
OCD	24%	5.7
PSY	26%	7.7
PTS	22%	4.2
SHA	25%	6.2
SOC	23%	4.8

It makes a certain amount of intuitive sense that cases which tend to attend a higher number of sessions will also tend to have a better rate of outcome measure completion, as there are simply more opportunities for these measures to be collected.

Figure H.1. Relationship Between Mean Number of Sessions Attended by Patients in each Grouping, and the Availability of Outcome Measures
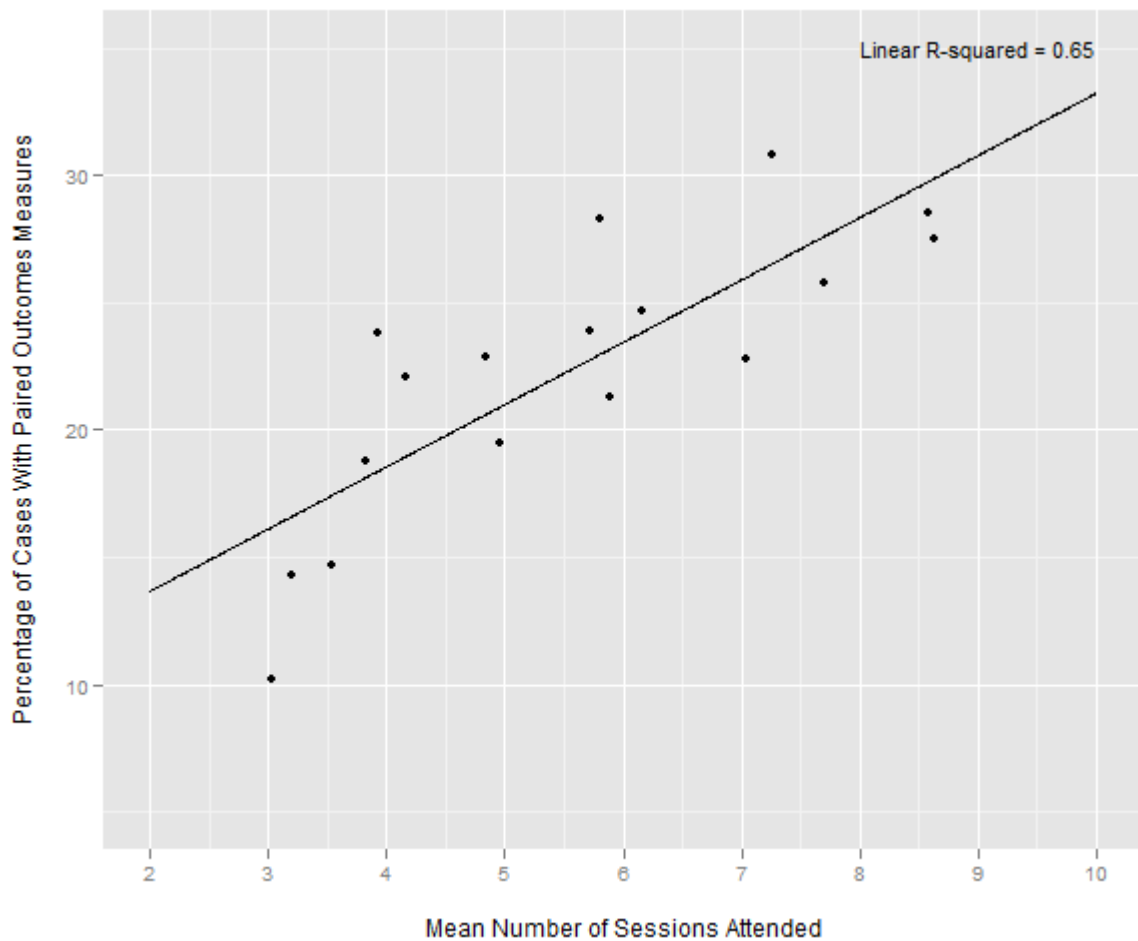
The relationship between mean number of sessions attended by patients in each grouping and the proportion of patients in each grouping with any paired outcome measure available is statistically significant (Pearson's $r_{(15)}$ = 0.81, p < 0.0005 (two-tailed)).

There is also considerable variation in the availability of paired outcomes measures depending on the service an individual attends, and once again (with the exception of one outlier with an unusually high mean number of sessions per period of contact, there appears to be a considerable effect of the mean number of sessions attended by individuals attending each service, and the proportion of periods of contact with paired outcomes available (table H.3), again with the number of cases with paired outcome measures being significantly different between services ($\chi^2_{(10)}$ = 526, p < 0.0005, two-tailed).

Table H.3. Availability of Any Paired Outcome Measure for Each Service in the Payment Systems Data

Random Service ID	Percentage of Cases with Paired Outcomes	Mean Number of Sessions Recorded per Period of Contact
1	0%	4.2
2	23%	4.4
3	19%	13.0
4	71%	7.4
5	7%	3.3
8	39%	7.5
10	29%	4.3
12	16%	5.8
13	1%	3.0
15	48%	5.8
17	6%	2.9

Note: With the exception of Service Number 3, there is again a strong relationship between the average number of sessions attended by patients and the proportion of cases with any paired outcome measure.

One final note is the availability of paired outcomes measures depending on the age group of individual patients. There is no clear linear pattern, with availability of measures not increasing (or decreasing) with age, and the relationship between the mean number of sessions attended and the availability of outcomes measures is also much less evident. This analysis may be made somewhat less reliable considering the small number of groups (4 age groups, compared to 11 services, and 17 groupings). Never-the-less, the differences in the number of patients with available outcomes is statistically significant ($\chi^2 (3) = 29.6$, p < 0.0005, two-tailed), and the full breakdown of the figures is presented in table H.4.

Table H.4. Availability of Paired Outcome Measures from Patients in Each Age Group

Age Group	Percentage of Cases with any Paired Outcome Measure	Mean Number of Sessions Recorded per Period of Contact
0-4 years	21%	3.7
5-9 years	16%	3.7
10-14 years	18%	4.5
15-19 years	25%	6.3

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