

Identification and Optimisation of Care for Patients at Risk of Respiratory Admission Through an Enhanced Integrated Multi-Disciplinary Respiratory Team (IRT Project): Evaluation of a Sub-group (N=117) IRT patients identified by the IRT team to require psychological support.

Abstract

117 IRT patients were identified to be seen for psychological assessment/treatment during the 18-month IRT project. 25 patients were seen once only for assessment and advice/signposting and 79 patients were seen for cognitive-behavioural treatment (CBT). The average number of sessions of treatment was 6.85, which is more than the average for other respiratory patients (5.24 sessions) seen in the IAPT service during the same period. The IRT cohort were also much older with an average age of 68.24 years, compared to the average age for the other respiratory patients seen during the same period of 39.98 years. The ratio of men to women was also different for the IRT cohort, with similar numbers of men and women seen, compared to the 1 male:2 female ratio seen in the IAPT service generally and the other respiratory patients seen during the same period. Although the IRT patients were older, frailer and more unwell than the IAPT population and other respiratory patients seen in the IAPT service during the same period, they achieved similar mental health recovery rates and clinical improvement rates post-psychological treatment. There was a reduction in average scores on measures of anxiety (GAD-7) and depression (PHQ-9), and improvement in quality of life activity, as measured by the WSAS questionnaire. The IRT patients reported high satisfaction with the psychological service received and there was a reduction in healthcare service utilisation (A&E attendance and call out of ambulance) after psychological treatment compared to before treatment, as measured by the CSRI questionnaire. It was concluded that having a psychological therapist as part of the IRT helped patients who otherwise would not have accessed mental health care, do so, and that this group demonstrated that they could engage with and respond well to psychological treatment. In addition to providing direct clinical care, the psychological therapists also offered consultation, advice and training to the IRT healthcare workers and IAPT clinicians, care home workers, palliative care team and other primary care workers. In turn the IRT psychological therapists received training and support from the other IRT workers and were therefore able to offer better integrated care to patients and their carers.

Introduction

The aim of the 18 month IRT project (Jan 1st 2019-June 30th 2020) was to develop and implement an integrated multi-disciplinary respiratory team (IRT) to improve the quality of care for individuals with a primary diagnosis of a respiratory condition including Asthma, Bronchiectasis, Bronchitis, Chronic

Obstructive Pulmonary Disease (COPD), Emphysema, Interstitial Lung Disease, Sarcoidosis, and Wheezing, registered with 34 GP practices, across seven neighbourhoods within the Oxford City and North Oxfordshire areas.

The role of the psychological therapist was to become integrated into the respiratory team providing professional support and advice to the Integrated Respiratory Team colleagues and other healthcare professionals and to provide clinical assessment and treatment to patients with the above respiratory diseases, who might benefit from psychological assessment/treatment. This was typically face-to-face pre COVID-19 moving to virtual methods and phone. Outcome measures were obtained to assess post-treatment changes in mood (PHQ-9: Patient Health Questionnaire 9), anxiety (GAD-7: Generalised Anxiety Questionnaire 7), quality of life activities (WSAS: Work and Social Adjustment Scale) and healthcare utilisation (CSRI: Client Service Receipt Inventory) pre-and post-psychological treatment.

Aims of having a psychologist in the IRT

The aim of including a psychological therapist in the IRT team was to:

1. Assist other IRT healthcare professionals to identify mental health distress in patients with respiratory conditions, in particular low mood and anxiety and enable a conversation about their mental health.
2. Assist the patient to engage with a psychological therapist to have assessment/treatment of their mental health problems and for the psychological therapist to regularly link with the IRT team professionals to allow for joint working, coordinated care, professional consultation and advice.
3. To offer joint training with other IRT colleagues to GP and other community and primary care staff.

Evaluation methodology

The evaluation methodology used to assess the impact for the IRT patients having a psychological therapist as part of an integrated respiratory team was to use pre and post-psychological treatment self-report measures to assess changes in;

- Mood (depression) pre and post psychological treatment (PHQ-9 questionnaire)
- Anxiety pre and post psychological treatment (GAD-7 questionnaire)
- Impact on life activities pre and post psychological treatment (WSAS questionnaire)
- Patient satisfaction with the psychological service provided pre and post psychological treatment (PEQ questionnaire)
- Changes in self-reported healthcare utilisation pre and post psychological treatment (CSRI questionnaire)

Recruitment of the Psychological therapist

The staff recruited were seconded from the Improving Access to Psychological Therapies (IAPT) service in Oxfordshire in order to recruit more quickly to the project. Two 0.5wte 8a posts were developed, one for the City patients and one for the North patients. The appointed clinicians had the skills mix to be able to offer evidence-based (NICE, 2011; NCCMH, 2018) psychological treatments, including CBT and mindfulness, to respiratory patients, focussed on treating anxiety and depression.

Later in the project a 0.5wte assistant psychologist was seconded to provide administrative and clinical support to the psychological therapists. The Consultant Clinical Health Psychologist in IAPT provided clinical supervision and project leadership for the psychological therapists and contributed to the IRT Project Implementation Group.

Results

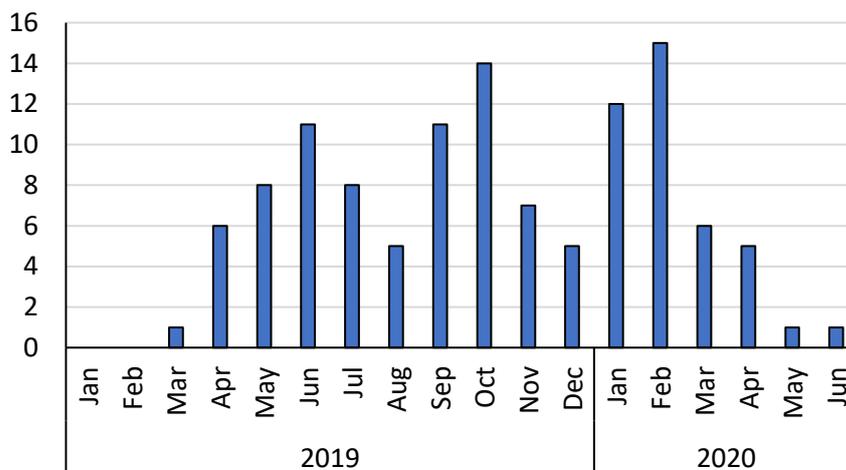
Number of IRT identified for psychological treatment during the 18-month period of the IRT project

117 IRT patients were identified to be seen for psychological assessment/treatment. Of these, 25 (21%) patients were seen once only for assessment and advice/signposting. 79 (67%) IRT patients entered treatment. 15 (12%) patients were not seen as they either did not want to have an appointment or were too unwell to engage.

Identification and referral rate

The identification referral rate of IRT patient from IRT healthcare professionals over the 18 months of the project is shown below (Table 1).

Table 1. IRT Referral Rate



Gender

During the IRT project period there was a similar number of male patients (55; 47%) and female patients (58; 50%) identified for psychological assessment/treatment (3% missing data). This is in contrast to the 2 female: 1 male ratio of general IAPT patients (7,546 male: 32.5% and 15,921 female 67.5 %). Similarly, respiratory patients seen in the same period were approximately one third male to two thirds female (350; 36.5% male and 610; 63.5% female).

Age

The average age for an individual referred to IAPT during the period of the project was 37.32 years ($N = 23770$, *Range* = 16-100) and for other respiratory conditions was 39.98 years ($N = 965$, *Range* = 16-89). In contrast the average age for IRT was much older, 68.24 ($N = 117$, *Range* = 35-88) suggesting that a different cohort of patients were accessed via the IRT.

Ethnicity

Whilst there is some missing data to account for some differences, there is under representation of patients from a BAME background compared to the diversity in the Oxfordshire population. This is across IAPT, respiratory referrals generally and IRT referrals specifically (see Table 2 below).

Ethnicity	All IAPT Referrals		Respiratory Referrals		IRT Referrals	
	N	%	N	%	N	%
White-Irish	264	1.11	12	1.24	1	0.85
White-British	18475	77.72	792	82.07	75	64.10
White-Any other	1887	7.94	45	4.66	2	1.71
Pakistani	207	.87	4	.41	1	.85
Other	279	1.17	6	.62	2	1.71
Mixed-White and Black Caribbean	183	.77	3	.31	0	.00
Mixed-White and Black African	67	.28	1	.10	0	.00
Mixed-White and Asian	216	.91	13	1.35	1	.85
Mixed-Any other	293	1.23	9	.93	0	.00
Indian	268	1.13	9	.93	0	.00
Chinese	115	.48	2	.21	0	.00
Caribbean	105	.44	7	.73	0	.00
Bangladeshi	54	.23	4	.41	0	.00
Any other Black	53	.22	4	.41	0	.00
Any other Asian	177	.74	4	.41	0	.00
African	190	.80	6	.62	0	.00
Missing Data	937	3.94	44	4.56	35	29.91
Grand Total	23770		965		117	

Table 2. Ethnicity

Number of treatment sessions

IRT patients engaging in therapy had more sessions with an average of 6.85 sessions ($SD = 4.88$, $Range = 2-21$) of psychological treatment compared to general IAPT patients (5.81 session; $SD = 4.11$, range = 2-36) and other patients with respiratory conditions (5.24 sessions; $SD = 3.88$, range = 2-27) who attended during the same period, suggesting IRT patients may require more sessions on average than other cohorts of IAPT patients

Long-Term Health Conditions and Comorbidities

Tables 3 and 4 below show the rates of long-term conditions comorbidities for respiratory patients in IAPT and the IRT referrals specifically. 73.89% of respiratory patients had asthma whereas 75.21% of IRT patients had COPD suggesting the IRT population are a different cohort to those routinely seen in the IAPT service.

Respiratory Referrals to IAPT by long-term conditions			IRT Referrals to IAPT by long-term conditions		
LTC	N	%	LTC	N	%
Asthma	713	73.89	Asthma	7	5.98
Asthma & COPD	16	1.66	Asthma & COPD	8	6.84
COPD	152	15.75	Asthma, Cardiac & COPD	1	0.85
Asthma, Cardiac & Diabetes	3	.31	Asthma, COPD & Diabetes	1	0.85
Asthma, Cardiac, COPD & Diabetes	1	.10	Cardiac & COPD	8	6.84
Cardiac, COPD & Diabetes	3	.31	Cardiac, COPD & Diabetes	1	0.85
Asthma & Diabetes	30	3.11	COPD	88	75.21
Asthma, COPD & Diabetes	3	.31	COPD & Diabetes	2	1.71
COPD & Diabetes	11	1.14	Other	1	0.85
Asthma & Cardiac	15	1.55			
Cardiac & COPD	18	1.87			

Table 3. Shows LTCs for all respiratory patients

Table 4. Shows LTCs for IRT patients.

Deaths

The IRT population were older, frailer and more unwell than the patients with respiratory conditions seen in IAPT. There were 14 deaths (17.95% of IRT referrals) all from natural causes during the project period compared to the number of deaths of 0.09% of IAPT referrals during the same period. This is a much higher mortality rate than the psychological therapists would usually encounter. Working with palliative patients and the palliative team was new to them requiring further adaptations to the clinical delivery of psychological care and support.

Anxiety and Depression

All patients who entered treatment were given outcome measures before and after psychological treatment to assess changes in mood, anxiety, quality of life activities, and health care utilisation.

Of the 79 patients who entered treatment 70 patients completed the depression PHQ-9 measure and 71 completed the anxiety GAD-7. Of these 41 (58%) patients scored in the clinical caseness range for depression and 50 (71%) scored in the clinical caseness range respectively. 37 cases (53%)

scored in the clinical caseness range on both PHQ9 and GAD7, indicating these IRT patients had both clinical anxiety and clinical depression.

The graph below shows the improvement in mean scores post-psychological treatment on the measures of depression (PHQ-9), anxiety (GAD-7), quality of life activities (Work and Social Adjustment Scale; WSAS).

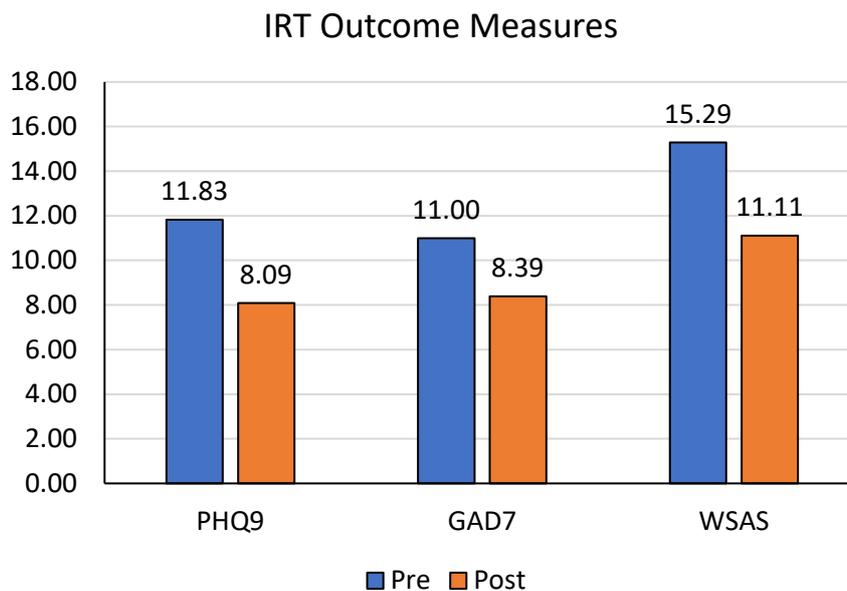


Figure 1 Graph displaying the mean pre and post scores on the outcome measures.

Depression (PHQ-9) pre-treatment mean score was 11.83 ($SD = 7.02$, $N = 70$) compared to the post-treatment mean score of 8.09 ($SD = 6.22$, $N = 45$).

Anxiety (GAD-7) pre-treatment score was 11.00 ($SD = 5.71$, $N = 71$) compared to the post-treatment mean score of 8.39 ($SD = 5.98$, $N = 44$).

Work and Social Adjustment (WSAS) pre-treatment mean score was 15.29 ($SD = 11.59$, $N = 68$) compared to the post-treatment mean score of 11.11 ($SD = 11.09$, $N = 38$).

COPD Assessment Test (CAT)

IRT patients with a diagnosis of COPD were given a COPD Assessment Test questionnaire pre- and post- psychological treatment to evaluate changes in the severity of the condition. Reductions in

scores were found in the IRT patients receiving psychological treatment with initial average scores of 25.45 ($N = 47, SD = 7.32$) and an average end of treatment score of 20.6 ($N = 20, SD = 7.07$).

Patient Satisfaction with Psychological Care: Patient Experience Questionnaire (PEQ)

Although the completion rate was low and some patients were still in treatment at the end of the project, 11 IRT patients who accessed treatment from the IRT psychological therapists completed the Patient Experience Questionnaire used in the IAPT service to evaluate patient satisfaction with the service provided. These patients indicated 100% satisfaction and answered “all of the time” on the following items in Figure 2:

PEQ Questions
1. Did Staff listen to you and treat your concerns seriously?
2. Do you feel that the service has helped you to better understand and address your difficulties?
3. Did you feel involved in making choices about your treatment and care?
4. On reflection, did you get the help that mattered to you?
5. Did you have confidence in your therapist and his/her skills and techniques?

Figure 2 Patient Experience Questionnaire questions

Qualitative feedback from IRT patients included:

Patients could also write free text, examples below:

“The extra time and support she (clinician) gave me made all the difference.”

“I have found it helpful; I would have stayed at home and possibly got lower and lower and been back on antidepressants without the sessions.”

“She (clinician) has really helped with my anxiety and I never thought it would work.”

“It has been really efficient, and the outcome has been really good, and the outcome has really changed my everyday life.”

Reduction in Healthcare Utilisation

The CSRI is a self-report measure of healthcare utilisation which was used pre- and post-psychological intervention. There were 16 IRT patients who completed it both at pre and post intervention. The results indicated:

- 33% reduction in A&E visits post psychological treatment
- no increase in hospital admission (no increase or decrease in admissions)
- 67% reduction in ambulance callout post psychological treatment

Estimated average health care utilisation cost-reduction per IRT patient post psychological treatment was £215.56 using national and local tariffs.

Psychotropic medication

There were 34 patients who were taking psychotropic medication pre-psychological treatment reducing to 21 patients post treatment.

Conclusions

In summary it was concluded that:

Advantages of having a psychological therapist the IRT: lessons learned

1. Increases access to mental health support for a hard to reach older and more ill cohort of patients
2. Increases access to mental health support to more men with IRT respiratory conditions
3. Adaptations to physical health limitations helped patients to engage with psychological treatment and stay in treatment e.g. shorter sessions for breathless patients, adaptations for patients with mobility issues, hearing loss and/or sight problems, language needs, reading ability etc needed in IAPT to be sensitive for this older, more frail cohort of patients
4. Demonstrates this cohort respond well to psychological treatment with improvement in mood, reduction in anxiety and reduction in negative impact on activities post-psychological treatment compared to pre psychological treatment
5. Estimated cost-savings and reduction in healthcare service utilisation is similar to that for a younger less ill LTC cohort seen in IAPT
6. Patient satisfaction is high, similar to the high levels of satisfaction with other IAPT patients .
7. There was a reduction in use of psychotropic medication post psychological treatment compared to before psychological treatment

8. Increased integration with other respiratory (IRT) healthcare workers to provide holistic care and increase mutual learning and exchange of skills and knowledge with each other and to support each other
9. Better communication about and coordination of patient care
10. New links with palliative care and care homes established and extend IRT colleagues

Areas for development going forward: lessons learned

1. Need to increase IRT access to BAME community
2. Need to support the referral process from other IRT professionals and GPs to encourage patient engagement with psychological care for this harder to reach group.
3. Risk of reduced access to psychological support and integrated coordinated care for this older, frailer and more vulnerable sub-group of respiratory patients, at all stages of illness, if a psychological therapist is not integrated in the team
4. Risk of patient disengagement from treatment of this harder to reach sub-group of respiratory patients if psychological therapist is not integrated in the team
5. Higher death rates from natural causes in this vulnerable group requires support for staff around end of life care and for carers and loved ones of the patients who themselves may be vulnerable.

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