Compliance with Post-Intervention Follow-up in the Depressive Peri and Post-Menopausal Client: *A QI Initiative*

T. DeNeui, MS, APRN-BC, R. Gilder MS, RN, J. Michael, PhD, ANP, WHNP-BC

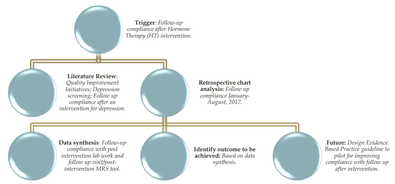
Problem

The presence of depression in women is a widespread, worldwide phenomenon, crossing cultural and ethnic lines; occurs twice as often in women as in men and is a major source of dysfunction and disability in women.

Researchers have ascertained hormonal fluctuations to be a primary contributing factor, however quality improvement (QI) initiatives related to screening, situational appropriate treatment and subsequent follow up for depression are lacking for the general population, and non-existent in women experiencing hormone decline.

Framework- *Iowa Model*

In the context of this project, the model provided a framework to assemble research defining the practice issue or "trigger", compliance with post intervention follow up; utilize evidence systematically obtained from the practice to evaluate the extent of the issue, and evaluate and make decisions regarding the evidence to subsequently plan evidence based change.



Study Question

In pre, peri-and postmenopausal women who self-report moderate to severe depressive symptoms and receive an intervention with sex hormone therapy, what percentage are compliant with post intervention laboratory assessment and follow up visit?

Methods

Design: A dashboard created in Excel format for data collection and analysis from a retrospective chart review of pre, peri and post-menopausal patients presenting for a hormone consultation.
The primary goal was to evaluate compliance with follow up labs, completion of post intervention validated tool, the menopausal rating scale (MRS), and follow-up visit with practitioner for assessment and further intervention.
Exclusion criteria: Did not receive an intervention; did not complete a pre-treatment MRS.
Population: Females across the reproductive spectrum with self-reported symptoms of sex hormone deficiency with corroborating lab tests who presented new to the practice setting for a hormone consultation and received an intervention.
The sampling method was a non-probability convenience sample, of which patients who met the inclusion criteria were between the ages of 18-57, with a median age of 49 (*n 484).*
Measures: A retrospective chart review was conducted to obtain the data. Compliance in obtaining the post-therapy MRS to evaluate post therapy depression scores was a key initiative. The MRS is an open access, reliable, validated tool that is widely used in 9 countries, available in 22 languages, and has been used in several research studies to evaluate the effectiveness of hormone therapy interventions
Procedure: Data was collected over eight months. The primary endpoints of data collection were to evaluate compliance with post intervention follow up labs, completion of post intervention MRS, and follow-up visit with practitioner for assessment and further intervention.
Statistical Analysis: Chi-Square Fishers Exact was used for compliance analysis. Independent Samples Mann-Whitney U test was used for comparison of pre and post MRS depression scores.

Results

- Pre-intervention MRS compliance was clinically significant at 97.8%, however was not statistically significant due to limited sample size (Chi-Square Fisher's Exact, df 1, N484, p=.203).
- Post-intervention MRS compliance was 56% and post intervention lab work compliance was 84% (Chi-Square Fishers Exact, df 1, N484, p= 0.000).
- Compliance with all three variables, patients who received the intervention, completed the pre-and post MRS and the follow up lab work was 53% (Chi-Square Fisher's Exact, df 1, N484, p= 0.000).

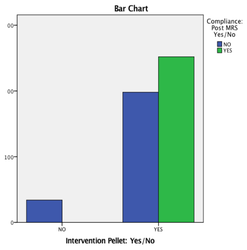
Pellet_INTERVENTION Intervention Pellet: Yes/No * Post_MRS Compliance: Post MRS Yes/No Crosstabulation

			Post_MRS Compliance: Post MRS Yes/No		
			0 NO	1 YES	Total
Pellet_INTERVENTION Intervention Pellet: Yes/No	0 NO	Count	34	0	34
		% within Pellet_INTERVENTION Intervention Pellet: Yes/No	100.0%	0.0%	100.0%
	1 YES	Count	198	252	450
		% within Pellet_INTERVENTION Intervention Pellet: Yes/No	44.0%	56.0%	100.0%
Total		Count	232	252	484
		% within Pellet_INTERVENTION Intervention Pellet: Yes/No	47.9%	52.1%	100.0%

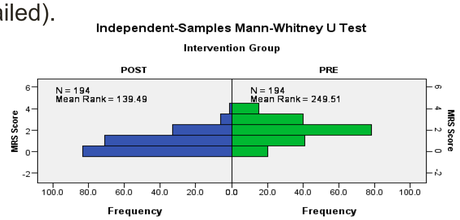
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	39.721[a]	1	.000		
Continuity Correction[b]	37.509	1	.000		
Likelihood Ratio	52.803	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	39.639	1	.000		
N of Valid Cases	484				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 16.30.
b. Computed only for a 2x2 table



- Analysis of the change in depression scores between pre-intervention MRS and post-intervention MRS showed a statistically significant change in depressive symptoms post intervention (Mann-Whitney U 8,146, N388, p = 0.000, two-tailed).



Practice Implications

- Utilizing the pre/post MRS results and investigating follow up in patients with no change in symptoms can have major future implications for improving quality of care in this population.
- *Practice process changes to consider to improve follow up compliance:*
  - Ensure post-intervention appointments are scheduled at time of initial therapy appointment.
  - Appointment is confirmed during the three-week follow up call.
  - Ensure treatment pathways are active with follow up appointment reminders.

Limitations

- Staff compliance with scheduling follow up appointments and appointment reminder pathways was not evaluated.
- The generalizability of this study to many practices treating hormone imbalances is lacking.
- The study only analyzed data over eight months, thereby neglecting to control for potential seasonal variations.
- A major limitation in the comparison data was patients lost to follow-up.

Conclusions

The results of the QI project revealed needed areas for improvement with follow-up compliance after an intervention. Implementing dashboards for investigating clinic processes regarding follow up may have a positive impact on compliance after an intervention with subsequent improvements in clinical outcomes and HRQOL.
It is imperative primary healthcare providers expand their horizons in the areas of not only screening for and investigating treatment alternatives to hormone related depression, but also to explore compliance with follow up measures to improve outcomes in this vulnerable population.
Addressing sex hormone deficiency in women as well as the safety and efficacy of various hormone therapies as treatment alternatives for depression in this group needs further exploration and study.

Contact: terrideneui@icloud.com