

Internal motivation to enhance compliance in a hypertensive patient: A case study.

ABSTRACT

Aims: The incorporation of internal motivation questions into a care model can enhance compliance. This case study demonstrates how internal motivation and a single intervention strategy can effectively improve compliance in a hypertensive patient.

Study design: A Case Study

Place and Duration of Study: Office of RoundGlass Corporation, between April 2020-June 2020

Methodology: 46-year old female with hypertension. Utilizing questions to determine internal motivation and create a complementary care plan she was able to maintain compliance and effectively reduce blood pressure readings through a daily walking program.

Results: Over the 2 -month period, patient was able to maintain daily compliance of walking a minimum of 20 minutes and reduce blood pressure readings from a start reading of 145/103 mmHg to 137/95mmHg.

Conclusion: Identification of internal motivation is a valuable asset in enhancing compliance to a complementary care program for a hypertensive patient.

Keywords: [hypertension, walking, internal motivation, compliance]

1. INTRODUCTION

Hypertension is the most common, expensive, and preventable risk of cardiovascular disease. The AHA guidelines ([Whelton et al., 2017](#)). state that hypertension begins at systolic blood pressure (SBP) >130 mmHg and diastolic blood pressure of >80 mmHg. SBP of 120–129 mmHg is now considered elevated blood pressure.

Regular exercise has been shown to reduce blood pressure and is recommended by the American Heart Association as a non-pharmacological intervention shown to reduce blood pressure as much as 11mmHg ([AHA high blood pressure toolkit](#)). Many organizations recommend exercise as the first therapy to help treat, control and prevent hypertension ([Pescatello et al., 2015](#)). ([Wheeler et al., 2019](#)), found that 30 minutes of walking decreased blood pressure readings, both systolic and diastolic.

As many in clinical practice are aware, compliance is often the limiting factors in the care of any chronic health condition. In the area of holistic complementary medicine, there are often many lifestyle factors taken into consideration and a care plan, although comprehensive, can be overwhelming; making it more challenging to maintain compliance. The purpose of this case study was to engage a person's internal motivation as a driver for compliance. The patient was asked to determine what was motivating her in making a lifestyle change, what areas she was interested in, and how drastically she was willing to change her life to do so.

Our case study follows a 46-year-old female patient with hypertension, measuring 145/103mmHg where the only intervention was daily walking. Her BMI was normal at 20.1. She tracked her blood pressure readings for two months, the same time of day. After two

months, her blood pressure reading had dropped to an average of 141/97mmHg (low reading of 137/95) and she had walked consistently every day.

2. CASE PRESENTATION

46-year old female presented with diagnosis of hypertension after a well care visit to her OB/GYN and subsequent reading at a work biometric screening. She had a history of high blood pressure during her first pregnancy that resolved post-partum. Medications were recommended but she did not want to take drugs so decided that she would choose an alternative intervention. As with many patients who are diagnosed with hypertension, there were no outright symptoms but rather an incidental finding during a regular check-up.

Our model is designed to connect with patients via education, promote internal motivation and compliance via regular contact. Patients are asked fundamental questions to gain this awareness:

1. *What is motivating you to make changes?*
2. *What may be standing in the way of you being consistent with implementing changes?*
3. *What area of wellbeing most appeals to you? (Exercise, Nutrition, Mindfulness Practice)?*
4. *How drastically (percentage) are you willing to change your life to deal with this?*

These questions provide clarity on the patient's internal motivation, any perceived barriers, area of lifestyle change that is most resonant with them, and a realistic self-assessment of how willing they are to change their life. It is our hypothesis that all these factors are essential for improved compliance and success in creating lasting lifestyle change.

Patient Response

Q: What is motivating you to make changes?

A: *"My kids; they are still young and I need to stay healthy to continue to support them."*

Q: What may be standing in the way of you being consistent with implementing changes?

A: *"Monitoring my blood pressure and making an effort to track it. Need to be more consistent."*

Q: What area of wellbeing most appeals to you? (Exercise, Nutrition, Mindfulness Practice)?

A: *"Exercise, nutrition, meditation"*

Q: How drastically are you willing to change your life to deal with this?

A: *"75%"*

Management and Outcome

Initial engagement involved a complete history and blood pressure reading, education on the pathophysiology of stress and it's role in elevating blood pressure. The above questions were also recorded and then a discussion determined what intervention strategy would be most relevant, able to perform, and likely to enjoy; in her case walking. She determined that she would walk for about 20-45 minutes per day in the afternoons when she could take her

calls or have some free time after lunch before her afternoon work meetings. Walking pace would be brisk. Although she expressed interest in nutrition and meditation, she was unable to follow through with either of those practices.

Follow up engagements would be bi-monthly via phone to determine progress and discuss successes and challenges she was facing.

Subsequent discussions involved:

1. Progress and changes in symptoms/signs.
2. Effective practices.
3. What is keeping you motivated?
4. Changes in lifestyle that were self-actuated?
5. Recommendations around what she wanted to do next and an action plan

Plan for Care

Consistent with our model, her intervention strategy was an attempt to be in alignment with the results of our questionnaire:

1. Be driven by her internal motivator
2. A practice that resonates with her interest
3. Identify and support through any obstacles or barriers that occur
4. Add-ons or options as the patient feels appropriate or ready to implement after our discussion

Intervention in this case was a 20-45 minute brisk daily walking program. Despite discussion and action plans of other add-on practices (nutrition and meditation), she was not able to consistently comply with them. She was consistent with daily walking. During stressful times at work she walked 20 minutes and at times of less stress, she walked 45 minutes per day. In the third month, we implemented an interval pace change to her walking program.

Effectiveness of walking

Patient was able to maintain consistency in walking practice daily. She reported that it was definitely helping and her blood pressure consistently seemed to be lowering over the next two months, especially her diastolic readings which was more consistently around 95mmHg.

Identification of barriers/challenges

Patient reported that when her stress levels at work increased, there was concurrent elevation in her blood pressure readings. The increased work stress also made it challenging to do her normal 45-minute walk so she adapted to 20-minutes but did not stop walking. (Stress levels were not recorded).

Internal motivator

In all follow up discussions, her internal motivation was the same: *being healthy*.

3. RESULTS AND DISCUSSION

Results

Patient began program with a blood pressure measure of 145/103mmHg. Four follow up meetings occurred over the next two months.

During the first month, she recorded 11 BP readings at exactly 8am PST. The average BP reading over that time was 142/101mmHg; highest 145/103 mmHg and lowest reading 138/97 mmHg.

During the second month, she recorded 14 BP readings at exactly 8am PST. The average BP reading over that time was 141/97mmHg; highest 148/101 mmHg and lowest reading 137/95 mmHg.

All measurements were done at home on a home blood pressure cuff, they were taken in the seated position.

Discussion

This case study's intention is two-fold:

1. Show the significance of internal motivation as a way to enhance compliance.
2. Demonstrate the effectiveness of a walking program on treating patients with hypertension.

This is a preliminary study with a short time frame. However, the trend in blood pressure readings appears positive. We will continue to support and monitor progress.

Interesting insight was the perception of "being healthy" as the primary internal motivator for wanting to make change as well as maintaining compliance to her walking program.

Also, it appears that walking regularly may mitigate some of the physiological effects of stress leading to elevated blood pressure. Although this patient was under significant work stress a couple weeks in the two-month period, her blood pressure levels continued to trend positively and it did not un-motivate her to stop her walking program.

No other changes in signs or symptoms noted.

4. CONCLUSION

Identifying internal motivation for a patient with hypertension improved overall compliance with a complementary care plan. She was able to maintain a daily walking program and as a result evidenced reduction in her overall blood pressure readings.

CONSENT (WHERE EVER APPLICABLE)

"All authors declare that 'written informed consent was obtained from the patient (or other approved parties) for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editorial office/Chief Editor/Editorial Board members of this journal."

ETHICAL APPROVAL (WHERE EVER APPLICABLE)

n/a

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APPENDIX