

Factors Influencing Patients' Receptivity to Influenza, Pneumonia, and COVID-19 Vaccinations at a Specialty Pulmonary Clinic Serving Rural Appalachians

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Background:

Individuals' rationale for not wanting to receive influenza, pneumonia, and/or COVID-19 vaccinations are well-documented in the literature. However, reasons for receiving and/or not receiving these vaccinations have not been explored in a rural Appalachian population receiving treatment at a specialty pulmonary clinic. Given this population's rurality, culture, and existing lung disease, their perspectives on vaccination could differ from other populations. Thus, the purpose of this study was to explore reasons for receiving or not receiving these specific vaccinations within this unique population.

SMARTER Objective:

1. Specific: The goal of this study is to assess patients' perceived susceptibility, severity, benefits, barriers, cue to action, and self-efficacy regarding the influenza, COVID-19, and pneumococcal diseases and vaccines as the main studied Health Belief Models (HBM). This is focused on patients who visit the pulmonary clinic in Appalachia (particularly West Virginia).

2. Measurable: The study is a cross-sectional study which will further sub-divide the aforementioned HBM categories into questions to best assess each category. Following their clinic visit, patients are asked to fill an anonymous survey.

3. Achievable: The goal is better assessment of the patient populations perspective in order to further conduct future quality improvement projects that are more targeted. The application of the project was completely without cost in its implementation and each survey took less than 10 minutes to complete.

4. Relevant: The goal of the project comes in a time when vaccines are established as highly efficacious, especially to this patient population, and highly accessible. However, achieving the goal to vaccinate all patients in this population is still not at target.

5. Time-bound: The study was conducted between May 2024 to September 2024.

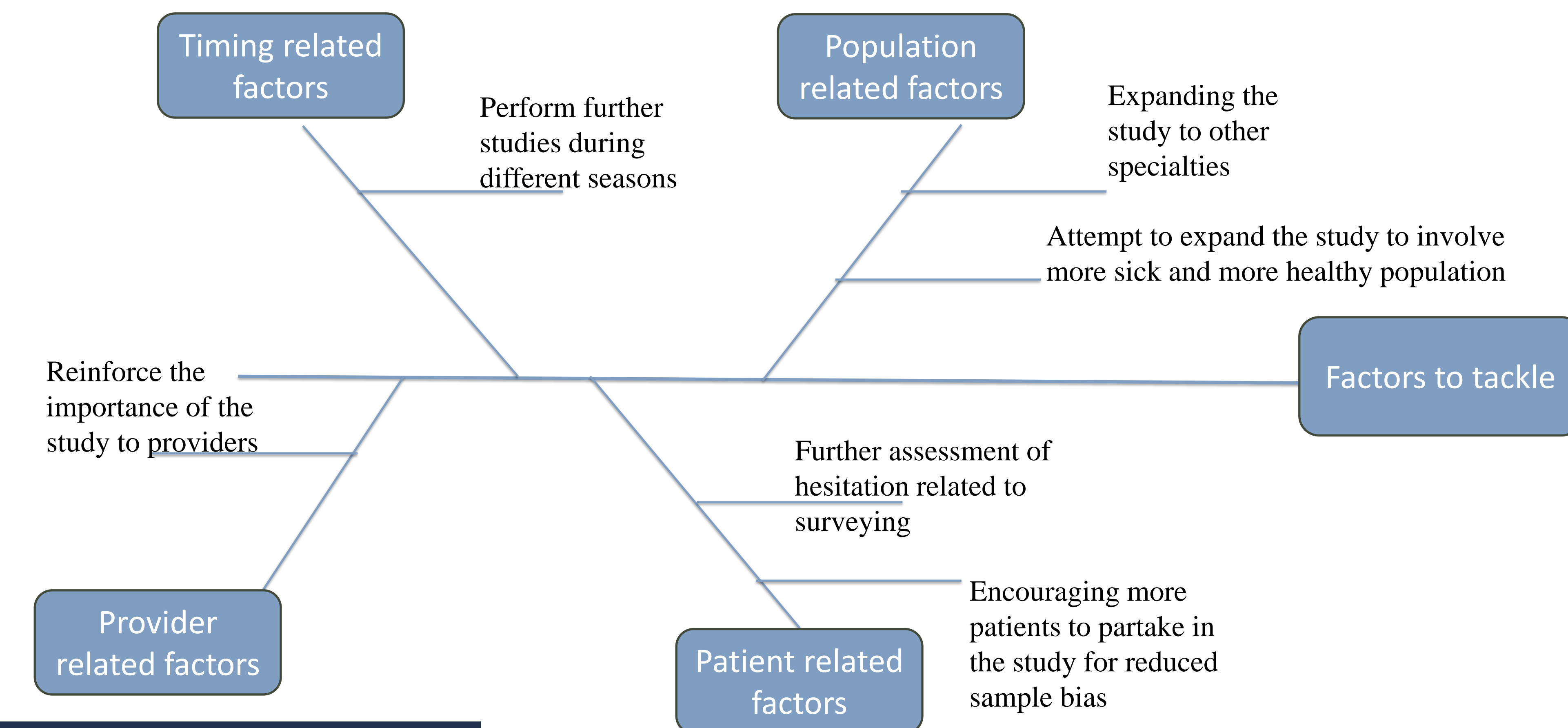
6. Evaluated: In relation to this study, further obtaining participants for best assessment of patient perspective including but not limited to barriers to vaccination as well as personal aspect regarding being at risk for vaccine preventable infections.

7. Revised: Further evaluation with both a larger sample size as well as a wide patient population, particularly to help lessen possible sampling bias.

Improvement Action Plan:

Goals for improvement include attaining further data from the same patient sample, reaching out to other pulmonary clinics in WV to reach a wider variety of this patient population, and expanding to other specialties with modified surveys to tailor to that specific population to attain further understanding regarding the impact of different comorbidities in patient perspective.

Reaching out in specific times also allows for better understanding to the impact of the populations' climate to their perspective (i.e. reaching out to patients during flue season).



Results:

Forty-one individuals completed the survey. Slightly more females participated (60%) and 56% were ≥65 years of age at time of survey. A greater proportion of patients felt that they would get very sick if they developed one of these respiratory illnesses (59%). Most patients wanted to keep their families safe (90%), not become ill (92%), and wanted protection from vaccines as they have chronic diseases (75%). The majority of patients would get vaccinated if their doctor (80%) or nurse (73%) stressed importance. Most patients knew where to find information about these diseases (80%) and knew where they could be vaccinated for them (92%). Perceived barriers to vaccination were minimal.

Table 1. Patients who responded to survey regarding vaccine hesitancy

HBM Construct	Survey Question	Respondent Agreed with Statement	
		N	%
Susceptibility	I will get I/C/P in the next 3 years	16	40.0
Susceptibility	I believe that a greater power will protect me from getting I/C/P	10	25.6
Severity	If I got I/C/P I would get very sick	23	59.0
Benefits	I want to keep my family safe from I/C/P	36	90.0
Benefits	I don't want to get sick from I/C/P	36	92.3
Benefits	I have a chronic health problem such as asthma, chronic obstructive pulmonary disease (COPD), diabetes, etc. and the I/C/P vaccine will protect me	30	75.0
Barriers	I don't know enough about how well vaccines work	15	37.5
Barriers	I am concerned about the side effects from the vaccine	13	32.5
Barriers	I don't trust that the vaccine will be safe	5	12.5
Barriers	I don't think vaccines work well	8	20.5
Barriers	I don't like needles	16	40.0
Barriers	I am in generally good health and don't think I need the vaccine	4	10.0
Barriers	I don't believe that I/C/P is as common as people say it is	5	12.8
Barriers	I am not concerned about getting sick from I/C/P	6	15.0
Barriers	I do not want to pay for the vaccine	13	32.5
Barriers	I am allergic to vaccines	3	7.5
Cue to action	I would get a vaccine if my doctor says its important	32	80.0
Cue to action	I would get a vaccine if a nurse says its important	29	72.5
Self-efficacy	I know where to find information on I/C/P	31	79.5
Self-efficacy	I know where I can get vaccinated for I/C/P	36	92.3

Abbreviation: HBM: Health Belief Model; I/C/P=Influenza, COVID-19, Pneumonia

Scale Up Plan:

This study was initially conducted for patients in the pulmonary clinic. Given their comorbid conditions, their perception may not be applicable to other patient populations. Thus, conducting this study in different specialty clinics and general clinics will help deliver individualized answers to these populations.

Sustainability Plan:

The sample is only made up of 41 participants. Though the results provide good insight to patient perspective regarding vaccination and multiple aspects of it, further expansion of this study will serve as beneficial to attaining better insight to the population.

Lessons Learned

In terms of the Health Belief Model, these findings suggest that these patients saw more benefits to vaccination than barriers due to their existing chronic disease and wanted to protect themselves and their loved ones. This population had high self-efficacy.