

# COVID-19 VACCINE UPTAKE ON THE PSYCHIATRIC INTENSIVE CARE UNIT(PICU)

Dr Sharmistha Ghosh, ST5 in Psychiatry, Leeds and York Partnership Foundation Trust  
Dr David Leung, Consultant in Psychiatry, Leeds and York Partnership Foundation Trust

## INTRODUCTION

Since the national introduction of the Covid-19 vaccine it is noted that acceptance by patients on Psychiatric Intensive Care Unit (PICU) is low. This is concerning given the increased physical comorbidity of our patient population. We were unclear if vaccine refusal correlated with severity of symptoms of mental disorder. We wondered if acceptance of vaccine at a later date by a patient, who had previously refused, reflected improvement of their mental health.

## AIM/OBJECTIVES

The project aims to investigate if there is correlation between Brief Psychiatric Rating Scale (BPRS) scores and Covid-19 vaccine acceptance/refusal among the patients on the PICU in Leeds UK. We hypothesised that vaccine uptake amongst PICU patients would be inversely proportional to BPRS score.

## METHOD

We used the BPRS to determine the severity of the symptoms at the point of offering vaccination and scores were recorded.

We included all patients admitted to PICU over a 3 month period who had not yet consented to their vaccine. We excluded patients who were deemed too behaviourally disturbed to engage in 1:1 assessments, eg. patients needing nursing in seclusion or requiring nursing on eye-sight observations secondary to agitation/distressed behaviour; meaningful discussion would not have been possible at this juncture.

## RESULTS

|    | BPRS score | Response   |
|----|------------|--|
| 1  | 20         | "Sure, let's do it"  |
| 2  | 22         | "Yes. Thank you"   |
| 3  | 23         | "Give me a leaflet"...then agreed  |
| 4  | 23         | "I want to save my life from Covid"  |
| 5  | 24         | "I think I will have it. People are suffering."  |
| 6  | 25         | "Maybe for later, If I worked for the NHS I would take it straightaway, but I don't really meet many people" |
| 7  | 28         | Refused. "My brother tested positive, I did not get it, I must be immune"                                    |
| 8  | 30         | Refused. "I don't want it, why do you want to give it? it's not necessary"                                   |
| 9  | 31         | Refused. "No, no, no, I don't like it, just send me home"  |
| 10 | 32         | Refused. "I don't want it, it's not FDA approved, you cannot make me take it."                               |
| 11 | 33         | Refused. "I have mixed thoughts, not sure I need it, I have already had Covid"                               |
| 12 | 34         | Refused. "Why do you keep asking? It's not needed."  |
| 13 | 35         | Refused. "I don't want it. You are trying to control me with the injection."                                 |
| 14 | 37         | Refused. "I am a strong man, I don't need it"  |
| 15 | 38         | Refused when realised accepting vaccine will not automatically lead to discharge, "I am not mental."         |
| 16 | 38         | Refused. "I don't need it, God will save me, Satan cannot actually harm me however hard he tries."           |
| 17 | 44         | Refused. "What if the vaccine kills me? Is this an experiment? AM I your Guinea pig?"                        |
| 18 | 45         | Refused. "You can't speak to me about this, find an appropriate adult to speak, this is child abuse"         |
| 19 | 49         | Refused. "I don't need it. I am immune to the virus, I am very, very strong."                                |

## TOOL USED – BRIEF PSYCHIATRIC RATING SCALE

CLIENT NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
CLIENT ID#: \_\_\_\_\_ MD: \_\_\_\_\_

**BRIEF PSYCHIATRIC RATING SCALE (BPRS)**

Please enter the score for the term which best describes the patient's condition.  
0 = not assessed, 1 = not present, 2 = very mild, 3 = mild, 4 = moderate, 5 = moderately severe, 6 = severe, 7 = extremely severe

|   |                            |  |                            |
|---|----------------------------|--|----------------------------|
| 1. <b>SOMATIC CONCERN</b><br>Degree of concern over present bodily health. Rate the degree to which physical health is perceived as a problem by the patient, whether complaints have a realistic basis or not.   | SCORE <input type="text"/> | 10. <b>HOSTILITY</b><br>Animosity, contempt, belligerence, disdain for other people outside the interview situation. Rate solely on the basis of the verbal report of feelings and actions of the patient toward others; do not infer hostility from neurotic defenses, anxiety, nor somatic complaints. (Rate attitude toward interviewer under "uncooperativeness"). | SCORE <input type="text"/> |
| 2. <b>ANXIETY</b><br>Worry, fear, or over-concern for present or future. Rate solely on the basis of verbal report of patient's own subjective experiences. Do not infer anxiety from physical signs or from neurotic defense mechanisms.   | SCORE <input type="text"/> | 11. <b>SUSPICIOUSNESS</b><br>Brief (delusional or otherwise) that others have now, or have had in the past, malicious or discriminatory intent toward the patient. On the basis of verbal report, rate only those suspicions which are currently held whether they concern past or present circumstances.  | SCORE <input type="text"/> |
| 3. <b>EMOTIONAL WITHDRAWAL</b><br>Deficiency in relating to the interviewer and to the interview situation. Rate only the degree to which the patient gives the impression of failing to be in emotional contact with other people in the interview situation.                                  | SCORE <input type="text"/> | 12. <b>HALLUCINATORY BEHAVIOR</b><br>Perceptions without normal external stimulus correspondence. Rate only those experiences which are reported to have occurred within the last week and which are described as distinctly different from the thought and imagery processes of normal people.  | SCORE <input type="text"/> |
| 4. <b>CONCEPTUAL DISORGANIZATION</b><br>Degree to which the thought processes are confused, disconnected, or disorganized. Rate on the basis of integration of the verbal products of the patient; do not rate on the basis of patient's subjective impression of his own level of functioning. | SCORE <input type="text"/> | 13. <b>MOTOR RETARDATION</b><br>Reduction in energy level evidenced in slowed movements. Rate on the basis of observed behavior of the patient only; do not rate on the basis of patient's subjective impression of own energy level.  | SCORE <input type="text"/> |
| 5. <b>GUILT FEELINGS</b><br>Over-concern or remorse for past behavior. Rate on the basis of the patient's subjective experiences of guilt as evidenced by verbal report with appropriate affect; do not infer guilt feelings from depression, anxiety or neurotic defenses.                     | SCORE <input type="text"/> | 14. <b>UNCOOPERATIVENESS</b><br>Evidence of resistance, unfriendliness, resentment, and lack of readiness to cooperate with the interviewer. Rate only on the basis of the patient's attitude and responses to the interviewer and the interview situation; do not rate on basis of reported resentment or uncooperativeness outside the interview situation.          | SCORE <input type="text"/> |
| 6. <b>TENSION</b><br>Physical and motor manifestations of tension "nervousness", and heightened activation level. Tension should be rated solely on the basis of physical signs and motor behavior and not on the basis of subjective experiences of tension reported by the patient.           | SCORE <input type="text"/> | 15. <b>UNUSUAL THOUGHT CONTENT</b><br>Unusual, odd, strange or bizarre thought content. Rate here the degree of unusualness, not the degree of disorganization of thought processes.   | SCORE <input type="text"/> |
| 7. <b>MANNERISMS AND POSTURING</b><br>Unusual and unnatural motor behavior, the type of motor behavior which causes certain mental patients to stand out in a crowd of normal people. Rate only abnormality of movements; do not rate simple heightened motor activity here.                    | SCORE <input type="text"/> | 16. <b>BLUNTED AFFECT</b><br>Reduced emotional tone, apparent lack of normal feeling or involvement.   | SCORE <input type="text"/> |
| 8. <b>GRANDIOSITY</b><br>Exaggerated self-opinion, conviction of unusual ability or powers. Rate only on the basis of patient's statements about himself or self-in-relation-to-others, not on the basis of his demeanor in the interview situation.  | SCORE <input type="text"/> | 17. <b>EXCITEMENT</b><br>Heightened emotional tone, agitation, increased reactivity.   | SCORE <input type="text"/> |
| 9. <b>DEPRESSIVE MOOD</b><br>Despondency in mood, sadness. Rate only degree of despondency; do not rate on the basis of inferences concerning depression based upon general retardation and somatic complaints.   | SCORE <input type="text"/> | 18. <b>DISORIENTATION</b><br>Confusion or lack of proper association for person, place or time.  | SCORE <input type="text"/> |

## KEY FINDINGS

Among the 19 vaccine doses offered, 5 were accepted, 1 patient was indecisive about acceptance and 13 vaccination offers were refused.

The BPRS scores for those patients who accepted or were indecisive ranged from 20 and 25. For the 13 patients who refused the vaccine the BPRS scores were between 28 and 49.

Higher BPRS scores appeared to result in greater reluctance to accept the vaccine with associated increase in the bizarre nature for vaccine refusal

Two patients who had previously refused the vaccine accepted this at a later date; it was noted that upon acceptance their BPRS scores had reduced.

Vaccination uptake was thus found to be inversely proportional to BPRS score.

## RECOMMENDATIONS

Despite initial refusal, the Covid-19 vaccine should continue to be offered to patients as their mental health improves

Health care professionals should be aware that their patients are more likely to accept the Covid-19 vaccine upon the symptoms of their mental disorder reducing.