|  |  |
| --- | --- |
| SIR Category | Speech Intelligibility Rating scale |
| 5 | Connected speech is intelligible to all listeners. |
| 4 | Connected speech is intelligible to a listener who has little experience of a deaf person’s speech. The listener does not need to concentrate unduly |
| 3 | Connected speech is intelligible to a listener who concentrates and lip-reads within a known context |
| 2 | Connected speech is unintelligible. Intelligible speech is developing in single words when context and lip-reading cues are available |
| 1 | Pre-recognizable words in spoken language. |

**Table 1**: Speech intelligibility rating scale

|  |  |
| --- | --- |
| **Variable** | **Relative Importance** |
| SIR  Pre-implantation hearing levels  Communication mode  BKB pre-implantation speech scores Progression  Hearing aid use pre-implant  Gender  Age at implantation | 26.9  11.6  9.24  4.35  1.47  1.02  0.61  0.36 |

**Table 2:** Relative importance of variables in the linear regression model for .

|  |  |
| --- | --- |
| **Parameter Relating to Variable** | **p-value** |
| SIR 4  SIR 5  Pre-implantation hearing levels  Communication mode (interpreter requested)  BKB pre-implantation speech scores  Progression (progressive hearing loss)  Gender (Female)  Age at implantation  Hearing aid use pre-implantation (Inconsistent/No hearing aid use) | 0.73  0.001  0.008  0.031  0.058  0.41  0.65  0.81  0.90 |

**Table 3:** Table of p-values for parameters in the linear regression model for regression model for , which relate to variables in the experiment.

|  |  |
| --- | --- |
| **Variable** | **Relative Importance** |
| Communication mode  Hearing aid use pre-implantation  Pre-implantation hearing levels  Gender  Progression  Age at implantation  CUNY pre-implantation speech scores  SIR | 24.0  10.7  3.38  2.69  2.35  1.29  0.92  0.62 |

**Table 4:** Relative importance of variables in the linear regression model for .

|  |  |
| --- | --- |
| **Parameter Relating to Variable** | **p-value** |
| Communication mode (interpreter requested)  Hearing aid use pre-implantation (Inconsistent/No hearing aid use)  Pre-implantation hearing levels  Progression (progressive hearing loss)  Gender (Female)  SIR 4  SIR 5  CUNY pre-implantation speech scores  Age at implantation | 0.018  0.22  0.31  0.33  0.37  0.86  0.83  0.91  0.91 |

**Table 5:** Table of p-values for parameters in the linear regression model for regression model for , which relate to variables in the experiment.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Number of Patients | |
| **Factor** | **Level** | **BKB** | **CUNY** |
| SIR | 3  4  5 | 13  11  8 | 13  9  4 |
| Progression | Non-progressive  Progressive | 21  12 | 18  9 |
| Communication mode | No interpreter requested  Interpreter requested | 29  4 | 23  4 |
| Gender | Male  Female | 12  21 | 9  18 |
| Hearing aid use pre-implantation | Inconsistent/No hearing aid use  Consistent hearing aid user | 5  28 | 4  23 |

**Table 6:** Table showing the number of patients for each level of the categorical variables.

|  |  |  |
| --- | --- | --- |
| **Power** | **2 Level** | **5 Level** |
| 0.5  0.75  0.8  0.85  0.9  0.95 | 9  14  16  18  20  24 | 13  23  26  29  34  42 |

**Table 7:** Table showing minimum number of patients required at each level for a 2 and 5 level factor assuming different powers (rounded to the nearest whole number).