SUPPLEMENTAL 1- SUBGROUP ANALYSIS OF PATIENTS WITH CHRONIC PAIN

Methods

A subgroup analysis was performed to calculate the correlation between the EQ-5D pain and discomfort question and each of the BPI pain severity and pain interference scores for the cohort of patients who had pre-existing chronic pain prior to ICU admission. As with the overall cohort analyses the Pearson correlation method was used to calculate partial correlation coefficients. As all the patients in this cohort had pre-existing chronic pain the correlation coefficients were adjusted for age only.

Results

Baseline Demographics: Patients with Pre-existing Chronic Pain

In the Intervention cohort at baseline, 3 months and 12 months 39 (22.7%), 26 (19.5%) and 23 (19.2%) patients had a pre-existing chronic pain diagnosis, respectively. In the Usual Care cohort at 12 months 23 (21.3%) patients had a pre-existing chronic pain diagnosis.

Pain Scores: Patients with Pre-existing Chronic Pain

For the subgroup of patients with pre-existing chronic pain in the intervention cohort at baseline, 3 months and 12 months, the mean responses to the questions assessing severity of pain in the BPI were 5.07/10, 4.63/10 and 4.64/10, respectively. In relation to pain interference measured via the BPI, the mean responses at baseline, 3 months and 12 months were 6.11/10, 4.55/10 and 4.72/10 respectively.

At 12 months the mean response for the severity of pain question set was 3.97/10 for the subgroup of patients with pre-existing chronic pain in the usual care cohort. In relation to pain interference measured via the BPI, the mean response was 4.91/10.

Chronic Pain Subgroup Analysis of the Correlation Between EQ-5D and BPI Outcome: Pain Severity

For the subgroup of patients with pre-existing chronic pain prior to ICU admission in the intervention cohort at baseline, 3 months and 12 months the partial correlation coefficients comparing the pain and discomfort question of the EQ-5D with the BPI severity of pain score were 0.91 (CI 0.83- 0.95), 0.83 (CI 0.66- 0.92), and 0.85 (CI 0.68- 0.94), respectively. For the subgroup of patients with pre-existing chronic pain prior to ICU admission in the usual care cohort at 12 months the partial correlation coefficient was 0.72 (CI 0.44- 0.87). **Table 1** displays the correlation coefficients.

Correlation (Subgroup Analysis of Patients with Pre-existing Chronic Pain)	**Correlation Coefficient**	**Confidence Interval**	**P Value**
EQ-5D vs BPI pain severity score			
Intervention cohort baseline	0.91	0.83- 0.95	<0.01
Intervention cohort 3 months	0.83	0.66- 0.92	<0.01
Intervention cohort 12 months	0.85	0.68- 0.94	<0.01
Usual care cohort 12 months	0.72	0.44- 0.87	<0.01
EQ-5D vs BPI pain interference score			
Intervention cohort baseline	0.83	0.69- 0.91	<0.01
Intervention cohort 3 months	0.81	0.61- 0.91	<0.01
Intervention cohort 12 months	0.76	0.51- 0.89	<0.01
Usual care cohort 12 months	0.83	0.63- 0.92	<0.01

Table 1- Correlation coefficients comparing the EQ-5D pain and discomfort question and the BPI pain severity and pain interference scores for the subgroup of patients with pre-existing chronic pain prior to ICU admission

Chronic Pain Subgroup Analysis of the Correlation Between EQ-5D and BPI Outcome: Pain Interference

For the subgroup of patients with pre-existing chronic pain prior to ICU admission in the intervention cohort at baseline, 3 months and 12 months the correlation coefficients comparing the BPI pain interference score with the pain and discomfort question of the EQ-5D were 0.83 (CI 0.69- 0.91), 0.81 (CI 0.61- 0.91), and 0.76 (CI 0.51- 0.89), respectively. For the subgroup of patients with pre-existing chronic pain prior to ICU admission in the usual care cohort at 12 months the correlation coefficient was 0.83 (CI 0.63- 0.92). **Table 1** displays the correlation coefficients.