**RESULTS**

At baseline, only 1.6% of EVOKE CL subjects reported good sleep quality (score≤5). At 3 months, this increased to 32.8% and was maintained at 12-months with 30.9% (Figure 1). Additionally, approximately 30% of EVOKE CL subjects improved to normative levels (score≥6.3;110) (Figure 4) at both timepoints. The mean change in PSQI score observed at 12 months was a decrease of 5.7 in EVOKE CL subjects and considered clinically significant (Figure 2). At 12-months, 76.4% of EVOKE CL patients reported a clinically significant change (reduction≥3;11) from baseline (Figure 4). 

**DISCUSSION/CONCLUSION**

Marked improvements in sleep quality were observed in both groups in the Evoke study, with greater improvement trending in the CL group. This is compared to a recent FDA approval study of an implantable fixed-output SCS system, where the change in PSQI score was 3.1 for high-frequency SCS and 2.1 for conventional SCS at 3 months, and 2.6 and 1.8, respectively, at 12 months (Senza SSED, 2015) (Figure 2). The sleep quality improvements seen in CL Evoke Subjects translated to an extra 1.3 hours of quality sleep per night. While the relationship between SCS and supratentorial targets, such as the Nucleus Accumbens, requires further study, we hypothesize that consistent levels of ECL (i.e. without over/understimulation events) may reduce or prevent micro-interruptions in sleep patterns by reducing the variability on the inhibition mechanism. The addition of closed loop to maintain DC activation levels, may increase analgesia; thus, leading to improvements in overall sleep quality and reduced day dysfunction (Figure 3).

**REFERENCES**