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Background

Overnight oximetry studies along with pulmonary function tests are used to determine the need for nocturnal non-invasive ventilation for the ALS patient population. The COVID-19 pandemic changed the way health care is preformed. Virtual Visits became a necessity for our ALS Clinic. This led our team to explore alternative ways to perform tests such as overnight oximetry. A multidisciplinary group was formed to develop a process for mailing oximeters to patients at home. If patients were scheduled for a virtual visit, the oximeter was mailed back. If they were scheduled for a face-to-face visit, the oximeter was downloaded at their appointment.

Methods

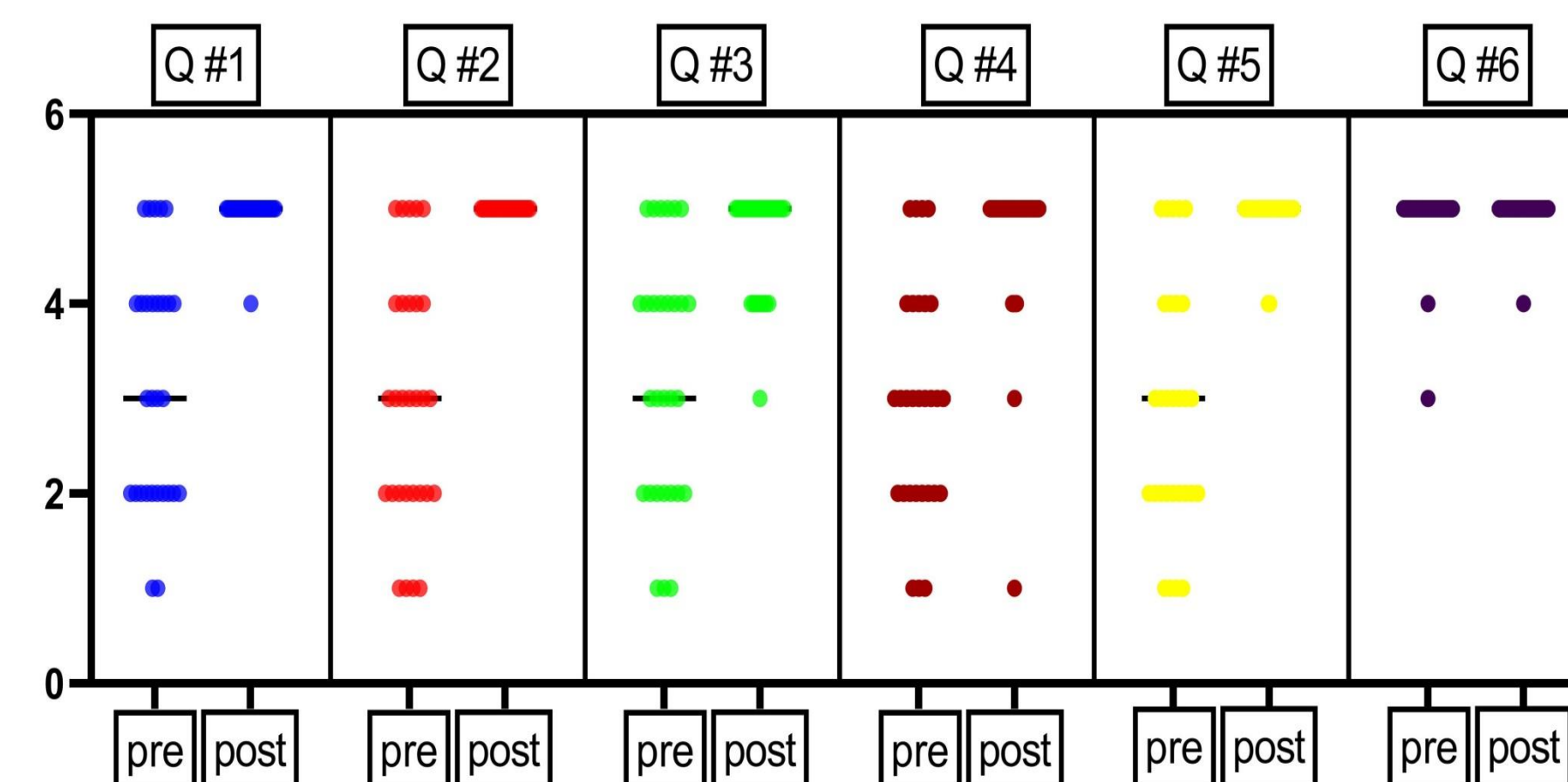
- **Multidisciplinary work group formed.**
- **Process Improvement**
 - Study participant identification
 - 43 participants identified
 - 29 completed both the pre and post survey to date (current data based on this)
 - 12 could not complete the second survey (hospice, forgot, performed locally, etc.)
- **Portable home oximeter evaluation**
- **Survey Development - measure current state process and future state process.**
- **Process development - mailing oximeters to the home.**
- **Data collection/evaluation**



Survey

1. Today, on a scale from 1-5, (1 not satisfied – 5 very satisfied), how would you rate your overall satisfaction with the overnight oximetry process?
2. Today, on a scale from 1-5, (1 difficult – 5 easy), how would you rate the ease by which obtaining and returning the overnight oximetry equipment occurs?
3. Today, on a scale from 1-5, (1 not good – 5 very good) how would you rate your quality of sleep in the environment where the overnight study took place?
4. Today, on a scale from 1-5, (1 not confidence – 5 very confident) how would you rate your confidence that the results of the study reflects a normal night's sleep?
5. Today, on a scale from 1-5, (1 not convenient – 5 very convenient) how would you rate the overall convenience of performing the overnight oximetry test?
6. On a scale of 1-5 (1 not at all – 5 definitely prefer), how would you rate your preference to perform overnight oximetry at home (versus a hotel room).

Survey Results



Results

- 76% of patients rated an increased in overall satisfaction with the overnight oximetry process, while 24% reported no change.
- 82% of patients reported receiving the oximeter in the mail (Fed-Ex) at home was easier than picking up the device at the clinic, while 18% reported it as the same
- 80% of those who performed the test at home vs. hotel reported improved quality of sleep, while 12% reported it the same, and 8% reported it worse (hand numbness, limb/joint pain, etc.).
- Overall test convenience was reported as increased.
- 93% of patients prefer to perform the overnight oximetry at home.

Conclusions

Overall, participants reported getting the oximeter at home via mail (Fed-Ex) and performing overnight oximetry at home was an improvement over the current process. Our institution will make home overnight oximetry standard for all quarterly ALS visits. We are also pursuing other forms of home monitoring (sleep studies, simple spirometry, etc.) as a result of this study to use for future quarterly visits and home video visits.

Disclosures

The NONIN 3150 Wrist-oximeter was used for our study. They were supplied by Nonin at no cost.

References

- www.alsa.org
- <https://www.atsjournals.org/doi/full/10.1164/rccm.201412-2224CI>
- <https://n.neurology.org/content/neurology/73/15/1218.full.pdf>