Levodopa use in fluctuating Parkinson’s disease is complicated by an inconsistent and prolonged onset to clinical improvement. A single orally dissolved carbidopa/levodopa (OD C/L) preparation (Parcopa® UCPharma) is available in the United States, which has the potential to shorten the duration from ingestion to clinical onset. OD C/L is not a true “sub-lingual” preparation, as it is absorbed lower in the GI tract rather than through the oral mucosa. Pharmacokinetic studies found statistically similar results to regular oral C/L preparation, although OD C/L tended to have a shorter time to Tmax. Anecdotal evidence from our patient population suggested that some fluctuating PD patients report a shorter duration to drug onset and a more consistent clinical effect with OD C/L, similar to that of C/L that is dissolved in liquids. The aim of this pilot study was to assess the relative time to clinical onset of OD C/L and oral C/L.

RESULTS
Tapping scores did not show any significant differences, but modestly tended to be greater with OD C/L from 25-60 minutes. (Fig. 2A) Subjective time to initial “on” was 22.1(19.1) minutes with OD C/L vs. 26.2(17.4) with oral C/L, (NS). Subjective time to full on was 33.9(10.1) minutes with OD C/L vs. 38.4(14.1) minutes with oral C/L, (NS). As expected in a fluctuating population, improvement in UPDRS part III scores was similar in both groups: 23.7(10.3) on OD C/L vs. 23.7(7.8) on oral C/L. The baseline “off” UPDRS part III scores were also similar: 36.8(11.9) oral C/L vs. 36.6(8.3) OD C/L. As observed in a previous study (Ondo et al. 2010), 50% of patients reported their subjective latency to “on” and noted drug preference and adverse events. They also underwent a UPDRS motor examination at baseline and 60 minutes after dose. Twenty subjects (15 male, age 68.7(9.7) years, PD duration 13.4(6.8) years) completed the study.

CONCLUSION
Given our results, larger appropriately powered studies might show significant differences, although the effect would likely be modest. Since individual subjects often strongly preferred one or the other preparations, OD C/L could be considered on an individual basis, especially if the duration to onset is relatively prolonged with oral C/L preparations.

REFERENCES