

# Investigating Triggers of Sundowners Syndrome in Dementia Patients in an Institutional Setting, Year Two

Blew, Cassandra (School: Lakeland Christian School)

Sundowners syndrome is a clinical diagnosis given to dementia patients. People who suffer from this experience heightened neuropsychiatric symptoms (depression, anxiety, agitation, confusion, etc.) as the sun sets. It is unknown as to why this phenomenon occurs, so there is no guaranteed remedy. The purpose of this study is to identify a trigger for the syndrome. This is an intensive research study. The process began with rigorous research on sundowning and any related topic. As the study progressed, some focus shifted to how the brain works, why different diagnoses are given, and how neurotransmitters play a part in everyday function (including mood, dementia, circadian rhythms, etc.). A hypothesis was formed that dementia patients who were on both “anti-dementia” medications and antidepressants would have a greater risk of sundowning due to the interaction of the medications and neurotransmitters. Once a deeper understanding of sundowners syndrome and the brain was fulfilled, medical records of dementia patients were obtained. All dementia patients’ records were collected and compared. Any identifiable information was redacted before studied. A total of 50 medical records were acquired. The collected data showed if the patients were on an “anti-dementia” medication and/or an antidepressant and if they were a reported sundowner. Statistics based off this data were then calculated. Final calculations support the hypothesis. Out of all patients who sundown, 54% are on both “anti-dementia” medications and antidepressants. Statistics support the theory that there is a potential link between sundowners syndrome, these two medications, and natural neurotransmitters in the brain.

## Awards Won:

Fourth Award of \$500