Noggin Oregon SenateTestimony in favor of Permanent Standard Time
MARC CHENARD: Neuroscience and Policy Change

As a graduate student at Portland State University, and a volunteer at NW Noggin (nwnoggin.org), I support permanent standard time. I want to share some things I've learned about the neuroscience of sleep, developing brains, circadian health, and hope to provide you with a college student's perspective on this policy.

Last spring I wrote and defended an honors thesis which compiled the neuroscience research supporting a potential start time shift to an hour later for high schools in the Vancouver Public School district. Based on that thesis and other volunteer efforts, Vancouver Public Schools made high schools start later, impacting just south of 10,000 teenagers. The school district was able to overcome logistical hurdles (like having to re-implement bus schedules and sports practices) in order to focus on supporting their students' health and wellbeing (backed by neuroscience!).

In working on that thesis, and by doing neuroscience education outreach through NW Noggin, I have learned how essential adequate and regular sleep is to the mental health and performance of adolescent students. Permanent standard time in Oregon, and the sleep benefits that will accompany it, will have positive impacts on the health, well-being and success of Oregonian students.

Standard time leads to better alignment of our circadian rhythms which are regulated by exposure to low-angle morning sunlight. Exposure as soon as possible after waking helps synchronize many cellular processes with the external environment and this morning exposure is also a prerequisite for maintaining a consistent sleep-wake cycle.

This phenomenon is especially important to manage in teenage students due to a natural shift in circadian rhythms that occurs in the second decade of life during adolescence. This shift in the circadian rhythm of adolescents is well documented but not fully understood. There are many fascinating theories rooted in evolutionary biology that might explain why teenagers need to stay up later at night and sleep in later.

A high school start time shift that preceded the one in Vancouver Public Schools, documented in the study called 'Sleepmore in Seattle', indicated that even 45 minutes of extra sleep led to significantly decreased rates of diagnoses for depression, ADHD, anxiety and suicidal ideation in teenage students.

This to me demonstrates how any policy decisions that will promote better sleep for teenagers can be seen as a lever to improve their mental health and wellbeing.

Teenagers often get left out of discussions about the schedules they're required to follow - even if those discussions have huge implications for their mental health and wellbeing. It's important that we remember this and make policy decisions that stand to help Oregon's teenage population.

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Daylight savings time reduces student exposure to morning sunlight. This dramatically impacts levels of alertness and with that, the ability to learn. I remember showing up to high school in the dark and feeling groggy and ineffective. Missing out on morning sunlight also delays melatonin production at night making it harder for students to fall asleep. It's not hard to imagine how this can cause a cycle where a student is always tired, perhaps experiencing a well-known condition called chronic sleep deprivation.

This cycle is further exacerbated in an era where blue light from phones is the norm for highschoolers until late at night which wasn't a factor that required consideration in decades past.

There is ample research showing that adequate and regular sleep is essential for optimal brain function and learning, mood regulation, and overall well being. With these things in mind, NW Noggin and I support permanent standard time in Oregon.

We need to protect the health and wellbeing of our teenagers (along with all state citizens for that matter) and be open to solving logistical problems. Instead of fearing change or worrying about these logistical challenges, we need to enthusiastically push for a science-supported solution that supports our circadian health.

Marc Chenard
Graduate in Psychology/Interdisciplinary Neuroscience, Portland State University
PSU Neuroscience Club, Northwest Noggin volunteer