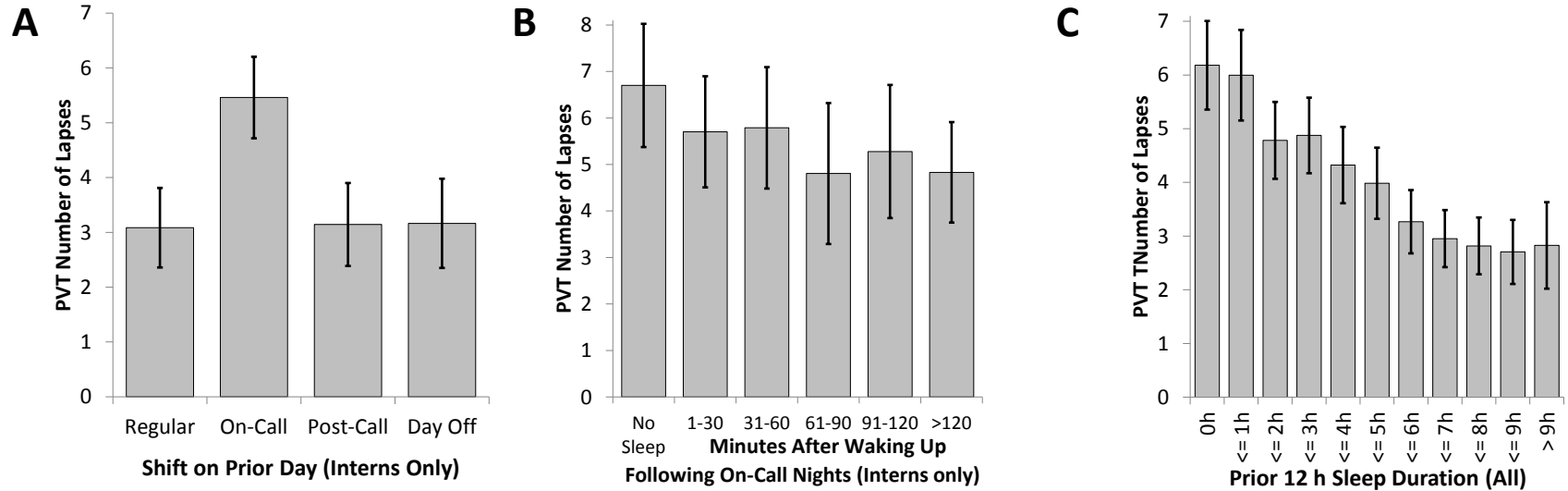
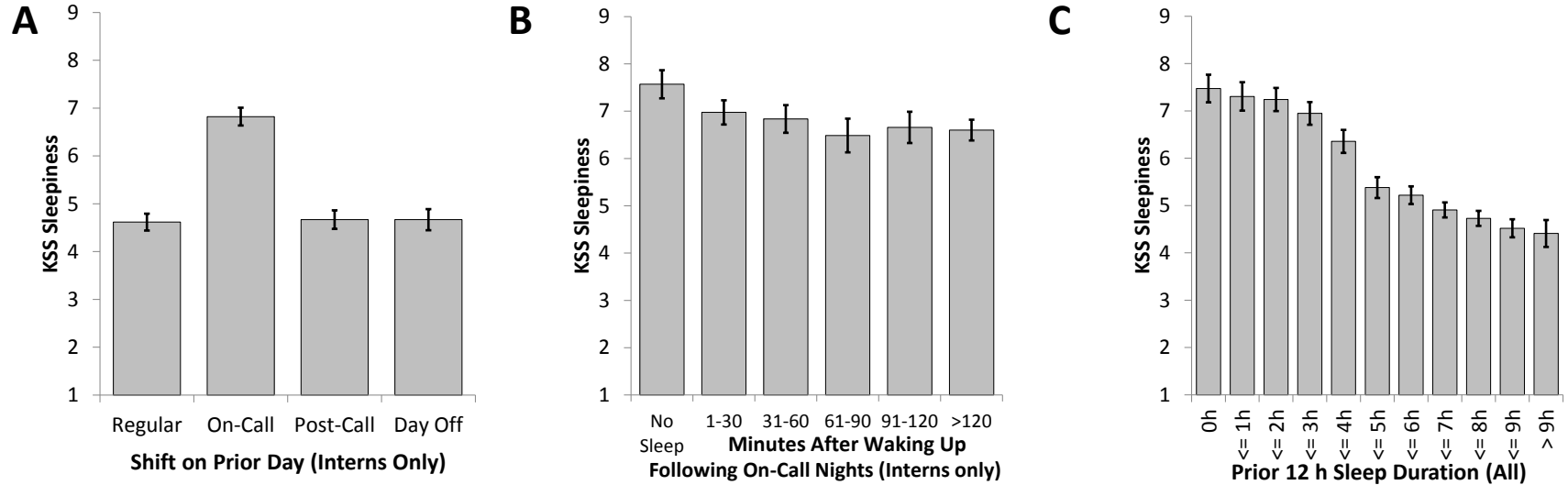


Supplement Figure S1: Psychomotor Vigilance Test (PVT) lapses analyses



A 3-minute PVT was performed each morning in the hospital (average time PVT was taken was 7:56am). Lapses on the 3-min PVT are defined as reaction times ≥ 355 ms. A higher number of lapses reflects poorer performance and lower levels of alertness. Error bars reflect 95% confidence intervals. **(A)** The number of lapses on the PVT was significantly higher in interns after on-call nights compared to all other shifts (all $p < 0.001$). **(B)** PVT lapses in interns depending on minutes elapsed after waking up and relative to those who did not sleep in the 12 hours prior to PVT administration. The number of lapses was highest in those who did not sleep at all. In those who did sleep on-call, the number of lapses was increased in the first hour after waking up due to sleep inertia. It did not differ significantly during this first hour compared to response speed of interns who did not sleep at all ($p > 0.12$). **(C)** The number of PVT lapses in interns and residents decreased steadily with sleep obtained in the 12 hours prior to PVT administration. It was highest in those who did not sleep at all (0 h).

Supplement Figure S2: Karolinska Sleepiness Scales (KSS) analyses



A KSS was filled out each morning in the hospital. The KSS scale ranges from 1-9 where high values reflect higher levels of sleepiness. Error bars reflect 95% confidence intervals. **(A)** Sleepiness was significantly higher in interns after on-call nights compared to all other shifts (all $p < 0.001$). **(B)** Sleepiness in interns depending on minutes elapsed after waking up and relative to those who did not sleep in the 12 hours prior to survey administration. Sleepiness was highest in those who did not sleep at all compared to all other categories (all $p < 0.001$). **(C)** Sleepiness in interns and residents decreased steadily with sleep obtained in the 12 hours prior to PVT administration. It was highest in those who did not sleep at all (0 h).