Discussion
There is a higher prevalence of poor sleep quality in SWNs compared to NSWNs. OH should be aware of any form of shiftwork as an important risk factor for poor sleep, as well as Trust managers acknowledging this workplace hazard. OH can provide staff with support for good sleep practice which aims to lead to healthier nurses.

109 STRATEGIES OF TIME MANAGEMENT IN THE DAILY ROUTINE OF MEDICAL RESIDENTS OF INTERNAL MEDICINE IN A PUBLIC UNIVERSITY HOSPITAL

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Introduction
Becoming a doctor is a complex process that usually consolidates during medical residency. This phase includes full immersion in professional activities with long working and studying hours. Junior doctors take care of patients in complex and difficult-to-manage care situations, both for their severity and institutional shortcomings. Although medical residency is recognised as an efficient form of professional training, there are several criticisms about work overload and long working hours.

Objective
To identify strategies of time management in the daily routine of medical residents of Internal Medicine in a university hospital in São Paulo, Brazil.

Method
In-depth interviews were conducted with eight randomly selected residents about their daily lives during the first year of residency.

Results
The mean age was 25 y, being 4 men. Average hours of residency are 60 h/week. This excludes night shifts and work performed during days off. Over 8 months there is a 12 hour weekly night shift; and during 2 months there are 2 to 3 shifts per week. The reported highlights were: little time to accomplish domestic activities and commuting time to and from the hospital/home. Reduced time for leisure, sleep and study activities. Six out of eight participants reported activities during night shifts for supplementation of income. Some strategies for managing time were: moving to places close to the hospital/home, hiring cleaning ladies, eating out at the hospital restaurant, keeping a social circle restricted to other residents. The need for income supplementation was reported as a time management constraint.

Discussion
Time management strategies during residency include measures to save time such as hiring third persons to perform domestic activities, and living close to the hospital. Some of the reported consequences are: the reduction of time to study, the restriction in the social relations and working odd-hours/days to supplement their income.

1585 ASSOCIATION OF SHIFT-WORK, DAYTIME NAPPING, AND NIGHTTIME SLEEP WITH CANCER INCIDENCE AND CANCER-CAUSED MORTALITY IN DONGFENG-TONGJI COHORT STUDY

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Introduction
More than 30% of cancer deaths could be prevented by modifying or avoiding risk factors, such as unhealthy living habits, including night-shift work, daytime napping, and nighttime sleep. We aimed to investigate the independent and combined effects of these three sleep habits on cancer incidence and cancer-caused mortality among middle-aged and older Chinese in the Dongfeng-Tongji Cohort Study (27,009 persons). A total of 1251 cancer cases and 379 cancer-caused deaths were identified during the first follow-up period from June, 2013 to October, 2013). During 14162 person-years of follow-up, we identified a total of 1251 cancer cases and 379 cancer-caused deaths.

Methods
Information on sleep habits, cancer incidences and mortalities were collected at baseline 2008. Self-reported cancer incidences and cancer-caused deaths were confirmed from DMC’s health-care service system, which consists of five DMC-owned hospitals that covers all retired employees. Cox proportional hazards models were used to calculate the adjusted hazard ratios and 95% confidence intervals (HRs, 95% CIs).

Results
Males experienced ≥20 years of night-shift work, or no daytime napping had increased cancer incidence, when compared to males who did not have night-shift work or had daytime napping for 1–30 min (HR(95% CI)=1.27(1.01–
1.59), 2.03 (1.007–4.13), respectively]. Males who slept ≥10 hours/night had a 40% increase in cancer incidence and 59% increase in cancer-caused mortality than males who slept 7–8 hours/night [HR (95% CI)=1.40(1.04–1.88) and 1.59 (1.01–2.49), respectively]. There was an interaction effect between night-shift work of ≥20 years and sleep of ≥10 hours/night on cancer incidence (P_{interaction}=0.027).

Conclusion For male subjects, both long night-shift work (≥20 years) and nighttime sleep duration (≥10 hours) were independently and jointly associated with higher cancer incidence.

**SHIFTWORK AND BREAST CANCER: EPIDEMIOLOGY, BURDEN, AND IMPLICATIONS FOR PREVENTION**

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Introduction Approximately one in five workers globally work night, evening, or rotating shifts. Shiftwork involving circadian disruption is a probable carcinogen for breast cancer. Our objective was to synthesise the current state of the epidemiological literature, report on shiftwork-associated breast cancer burden in Canada, and discuss implications for prevention.

Methods A search was conducted for meta-analyses accompanied by a systematic review, published from 2010–2017, that included at least one meta-risk estimate (mRE) for breast cancer associated with any permanent/rotating night work exposure metric. For each included meta-analysis, heterogeneity values were extracted and an eight-point checklist was used to evaluate quality. An attributable fraction (AF) range for breast cancer, based on mREs from high quality meta-analyses and Canadian shiftwork survey data, was calculated using Levin’s equation.

Results Seven meta-analyses collectively included 30 cohort and case-control studies spanning 1996–2016. Most reported statistically significant heterogeneity. In 5 meta-analyses that scored ≥6 points on the quality assessment checklist, mREs for ever/never night shiftwork exposure ranged from 1.15 (95% confidence interval [CI]: 1.05 to 1.25, n=9 studies) to 1.40 (95% CI: 1.13 to 1.73, n=9 studies). Using these mREs as lower and upper values in Levin’s equation, the AF for breast cancer among the 1.5 million Canadian women who ever worked night/rotating shifts during 1961–2001 ranged from 2.04%–5.23%. This corresponds to an estimated 460–1180 annual incident breast cancers probably due to shiftwork; nearly half (200–510) are diagnosed among women in health care and social assistance.

Discussion Summaries of 20 years of epidemiological evidence support shiftwork as a probable breast carcinogen, but considerable heterogeneity between studies poses a challenge for precisely evaluating breast cancer risk and burden. Given the potentially substantial burden of breast cancer due to shiftwork, applied research on workplace-based prevention of circadian disruption is acutely needed to identify effective solutions for sectors where shiftwork prevalence is high.