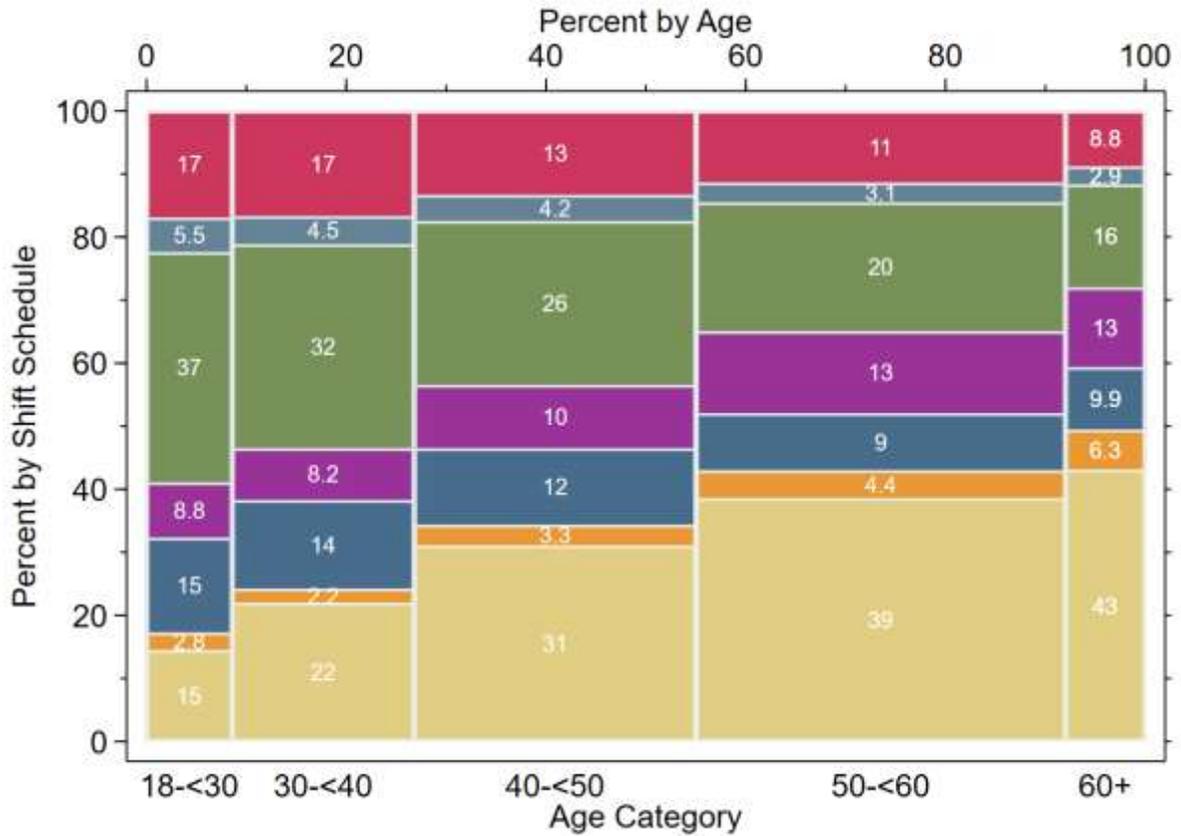


Appendix

Appendix Table 1: Definitions of Working Hour Characteristics in the American Manufacturing Cohort (AMC) 51 Plant Shift Work Cohort

| Domain | Working Hour Characteristic | Definition | |
|------------------|-----------------------------|--|--|
| Working Time | Work shift | A shift ≥ 3 hours and < 18 hours of active work | |
| | Work week | A week, beginning on Monday and ending on Sunday that includes at least one work shift | |
| | Time off-work | A scheduled shift with non-active work time assigned, which included shifts not worked due to sick leave, vacation, occupational injury and other unpaid or paid time off. | |
| Shift Type | Morning | A shift that starts after 03:00 and not later than 05:30, and is not a night or evening shift | |
| | Day | A shift that starts after 05:30 and ends no later than 21:00, and is not a night or evening shift | |
| | Evening | A shift with three hours between 18:00 and $< 02:00$, and is not a night shift | |
| | Night | A shift with three hours between 23:00 and 06:00 | |
| | Non-day Non-night | A shift that is classified as morning, evening, or night A shift classified as morning, evening, or day | |
| Intensity | Quick return | A shift with ≤ 11 hours between the previous shift and current shift | |
| | Very quick return | A shift with ≤ 8 hours between the previous shift and current shift | |
| Duration | Long shift | A shift ≥ 12 hours in duration | |
| | | A shift ≥ 13 hours in duration | |
| | Long work week | A work week with ≥ 40 hours; based on start time A work week with ≥ 48 hours; based on start time A work week with ≥ 60 hours; based on start time | |
| Rotation Pattern | Rotation | A shift with ≥ 6 hour difference in start times between the previous shift and current shift and ≥ 6 hours since the end time of the previous shift | |
| | Rotation Direction | Forward | A rotational shift with a difference in start times between 6 and 10 hours |
| | Backward | A rotational shift with a difference in start times between -6 and -10 hours | |
| | Flipped | A rotational shift with a shift time difference is between 10 and 12 or -10 and 12 hours | |
| Social Aspects | Weekend shift | Shift that began on a Saturday or Sunday | |

Supplemental Figure 1: Distribution of Annual Shift Schedule by Age in the American Manufacturing Cohort; 51 Plant Sub-Cohort 2003-2014, USA (N= 98,771 person-years)



Supplemental Figure Captions

Supplemental Figure 1: Distribution of Annual Shift Schedule by Age in the American Manufacturing Cohort; 51 Plant Sub-Cohort 2003-2014, USA (N= 98,771 person-years)