

Productivity in Radiology: Remote vs On-Site Work Environments

Jared Lange, B.A.¹, Carissa Walter, MPH², Yanming Li, Ph.D.³, Katherine Young, Ph.D.³, Lauren Clark, M.S.³, Vanessa Williams, M.D.², Kirk Miller, D.O.⁵

¹University of Kansas School of Medicine-Kansas City, Kansas City, KS

²University of Kansas Medical Center, Kansas City, KS, Department of Radiology

³University of Kansas Medical Center, Kansas City, KS, Department Biostatistics & Data Science

Received Aug. 21, 2024; Accepted for publication Aug. 26, 2024; Published online Aug. 27, 2024

<https://doi.org/10.17161/kjmvoll7.22668>

Introduction. Since the COVID-19 pandemic, there has been a shift to remote and hybrid work schedules in radiology. Remote and hybrid work schedules have become a key factor in recruiting new employees. Diagnostic accuracy has been shown to be preserved in remote work. However, differences in productivity between work environments within a hybrid work schedule has not been studied.

Methods. This study included data from 22 radiologists of the body, chest, and ultrasound divisions at a single academic medical center where data was retroactively observed. Radiologists' locations (on-site vs remote) and relative value unit (RVU) data was recorded for a six-month period from July to December 2022. A random intercept model was used to account for the correlation between productivity by the same physician.

Results. Radiologists working remotely generated on average 2.31 more RVUs per day than while working on-site ($p = 0.0004$). Observing individual divisions, for body imagers, work location was not statistically significant ($p = 0.6807$). For chest imagers, work location was significant ($p = 0.0213$). Chest imagers working remotely generated on average 1.58 more RVUs per day than while working on-site. For ultrasound imagers, work location was significant ($p = <0.0001$). Ultrasound imagers working remotely generated on average 7.04 more RVUs per day than while working in person.

Conclusions. Radiologists may be more productive while working remotely than on-site. Differences between individual divisions are likely due to limitations including differences in resident support between remote and on-site locations, internet connectivity issues for remote workers, and small sample size.