Give This XO Some Rack Time

A Fatigue Scenario

Photo by Allan T. Amen

You've been in the Gulf awhile and are long overdue for your first port call. With great anticipation, you'll pull into port tomorrow for a well-earned, six-day visit, beer in the Sand Box, and all the other benefits of beach-side life. But one of your wing flight surgeons approaches you with a problem. Turns out that the new executive officer of the Dark Clouds is reporting aboard today, and the Carrier Air Group commander wants him to get his day carrier quals before going into port tomorrow.

Oh, by the way, the prospective XO just has traveled from CONUS, with a nine-hour transmeridian time shift. He has been up for the past 45 hours, except for four hours of sleep he snatched last night in the Dubai airport, before reporting aboard this morning. You and your wing flight surgeons suspect fatigue will be an issue, and it would be better to convince CAG to give this poor aviator a nap, instead of a day CQ.

"CAG, sir, I've heard that Cdr. (Roger) Ball arrived this morning by helo, and you plan to have him do his day CQ this afternoon. Are you crazy, sir?"

You explain what you know about fatigue physiology, sleep deprivation, circadian shifts, and the resulting performance decrement and increased risk of mishaps, but CAG tells you that: a) no, he's not crazy; he's CAG; b) that Cdr. Ball is a senior, experienced naval aviator, a great stick, and he can hack it, and that; c) this fatigue stuff doesn't apply to naval aviators, who are not made of mere mortal flesh.

Muttering under your breath, you retreat to your office and crank up the computer. You enter what you know about the XO's sleep schedule before he reported aboard, as well as the latitude and longitude of Norfolk (his point of origin), London (where he changed planes), and Dubai (his ultimate destination), nine time zones to the east. FAST automatically calculates this information, based on the coordinates of the origin and destination. You enter all times into the program, based on local time in Norfolk. When you enter the sleep period in the Dubai airport, you rate it as "poor," based on your extensive experience sleeping in airports. FAST gives a predicted performance plot for Cdr. Ball.

As you suspect, FAST predicts that Cdr. Ball is significantly fatigued, and at the time of his scheduled flight, he'll be about 55 percent of baseline effectiveness, and much worse than the equivalent legally intoxicated line of 0.08 BAC. FAST predicts the whole day the new XO is aboard ship, his performance will be more impaired than if he legally were drunk! You go back to CAG and give him the plot, showing your numbers.

"CAG, sir, you can put this information into your operational risk-matrix worksheet concerning Cdr. Ball's flight," and you harrumph off.

CAG, being an aviator, may ignore the best of medical advice, but he cannot ignore a number. He decides to postpone Cdr. Ball's day CQ until after the port call.

Editor's note—FAST is the Fatigue Avoidance Scheduling Tool. The article on page 6 describes this valuable tool.