

Telework That Works

Teleradiology and the Emergence of
Nighthawk Radiology Firms

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Working From Home

TELECOMMUTING IS OFTEN TOUTED AS THE WAVE OF THE FUTURE...IN FACT, TO HEAR THE FUTURISTS TELL IT, THERE'S NO LONGER ANY REASON TO BE PHYSICALLY PRESENT AT WORK...

OKAY--I WANT TO UNLOAD 3COMM AND IBM--

--AND INVEST EVERYTHING IN MR. BUBBLE!

WHAT?

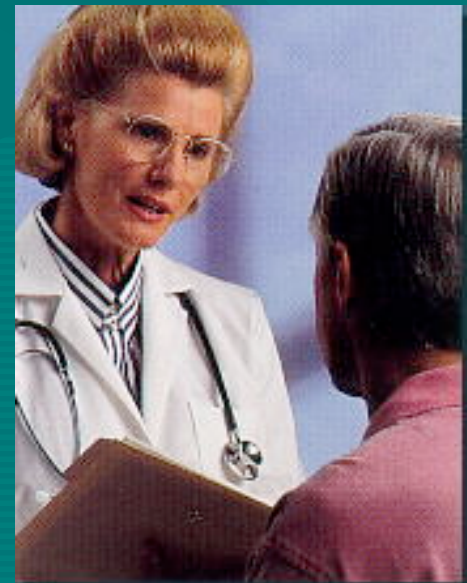


Telework in the United States

- 10-30 million teleworkers in America
 - Majority working from home only a few days a month
- Full time telework on the rise, but made more difficult by additional costs of online collaboration and other intangibles – e.g. trust, likelihood of promotion, etc.
- Distinction between workers whose remote work substitutes for previously existing work, and those where remote work is additional.

Research Context - Radiology

- Radiologists
 - Highly paid professionals
 - History of working remotely
 - Teleradiology
- Methods
 - 35 interviews,
 - 7 site visits (home offices, teleradiology headquarters, centralized reading rooms)
 - Observation
 - 2003 National Survey conducted by the American College of Radiologists (ACR)



Research Context: Shortage of Radiologists

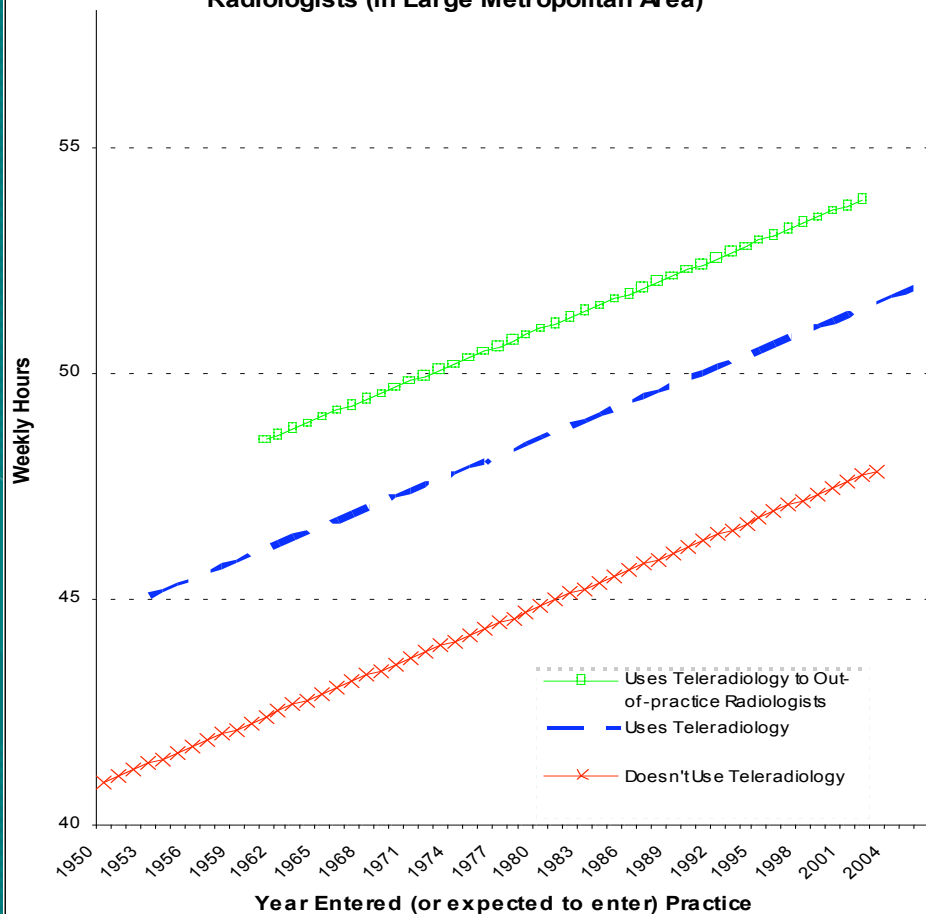
- Recent shortage of radiologists in the United States
- Increase in diagnostic radiology tests
 - Attributed to new medical technologies
 - Defensive Medicine
 - Self-referral
- No increase in supply of radiology residents
 - Number of residents capped in 1996.
 - Med School students capped at 17,000 spaces for three decades

Research Context: Teleradiology and Scarcity

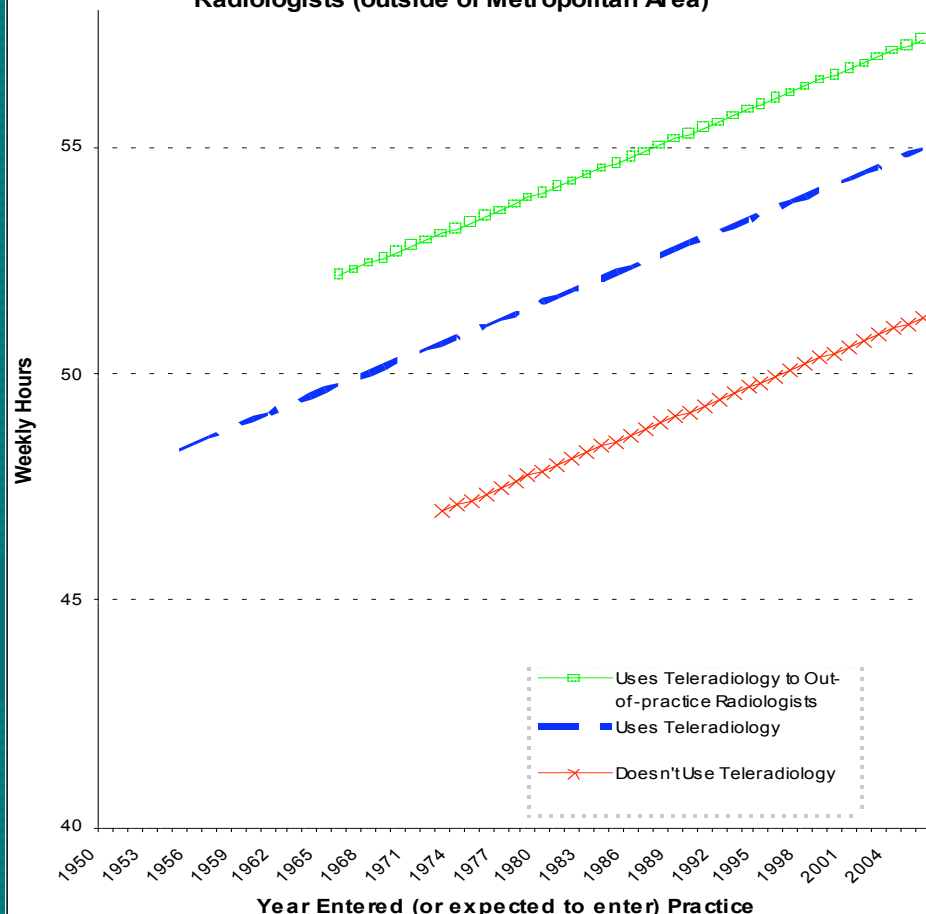
- “The [emergency room] physicians would pull the trigger much faster, because you didn’t have to come in. So there was a disadvantage as well as an advantage. Before teleradiology, they would think twice because they didn’t want us to be going back and forth four or five times. But once you get teleradiology they think, ‘oh, he’s at home. He can look at it.’”
- “That’s why I’m part time. The call just got so barbaric. You’re up basically all night because of the technology changes.”

Working More Hours from More Places: Radiology Work

Predicted Hours Worked by Private Practice Radiologists (in Large Metropolitan Area)

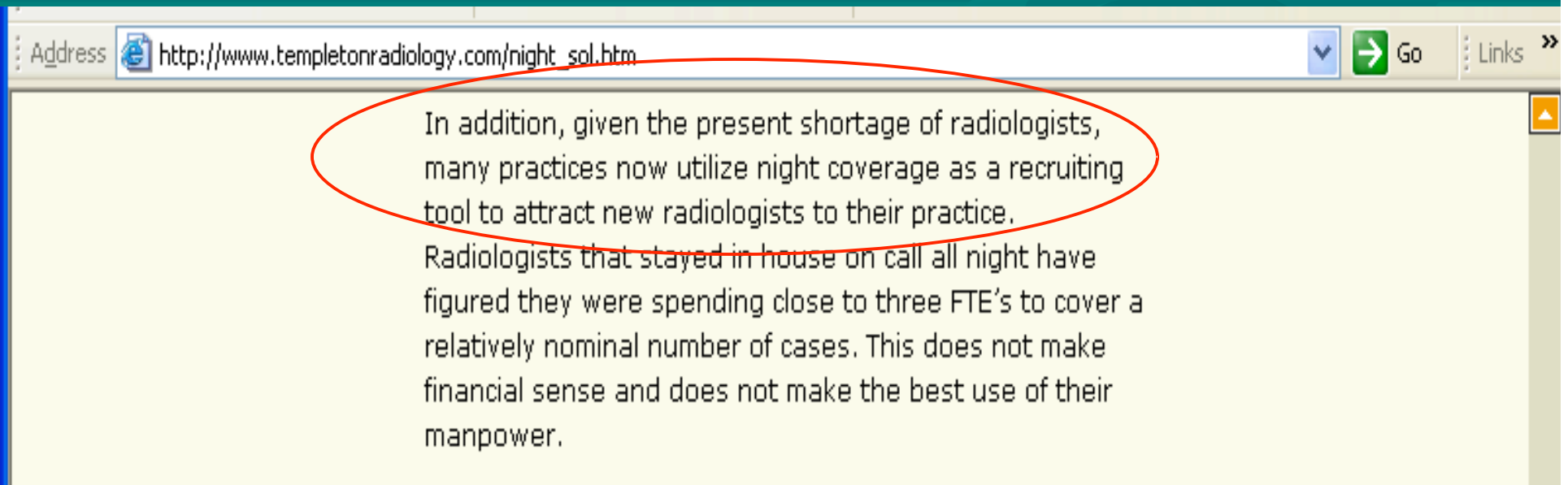





Predicted Hours Worked by Private Practice Radiologists (outside of Metropolitan Area)



Telework That Works: using teleradiology to solve shortage

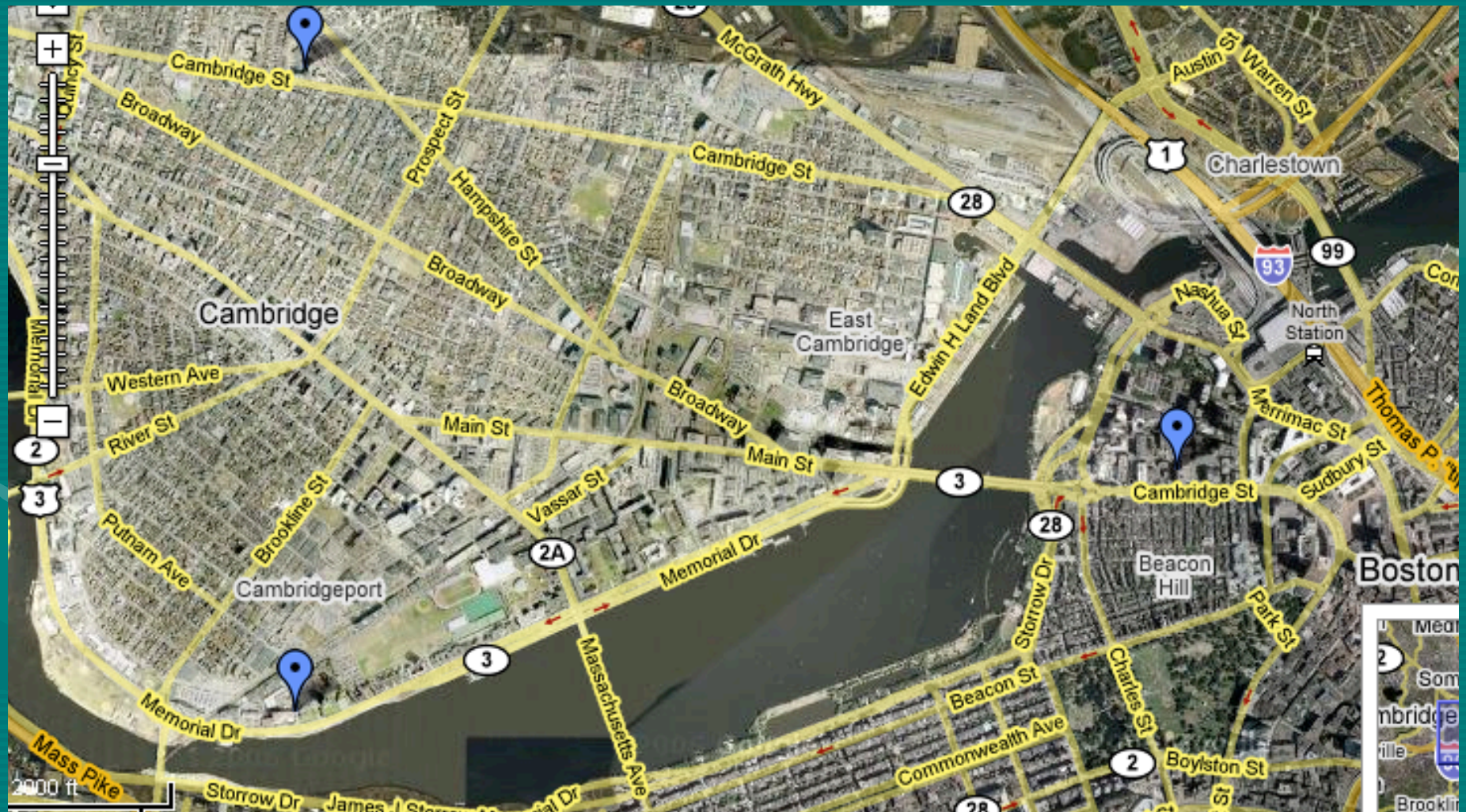
“Call ruins your life. If you’re in a small hospital in rural America and you have 2 or 3 partners – just you and a few other guys. Staying up all night every fourth night for the rest of your life ... it sucks. It ruins marriages. It ruins everything.”



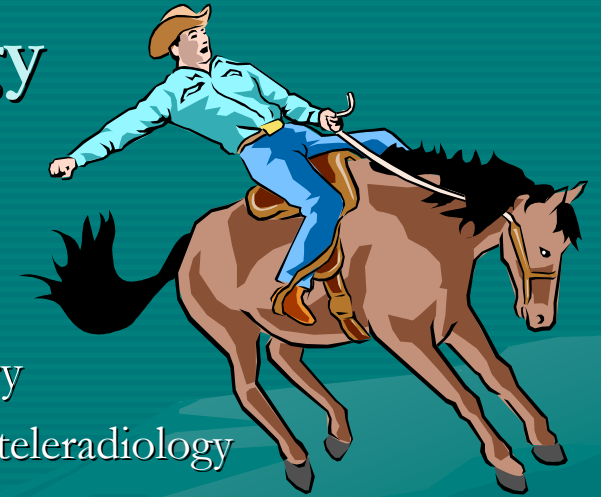
Address  http://www.templetonradiology.com/night_sol.htm  Go  Links >>

In addition, given the present shortage of radiologists, many practices now utilize night coverage as a recruiting tool to attract new radiologists to their practice. Radiologists that stayed in-house on call all night have figured they were spending close to three FTE's to cover a relatively nominal number of cases. This does not make financial sense and does not make the best use of their manpower.

How does nighthawk radiology work?: A local example

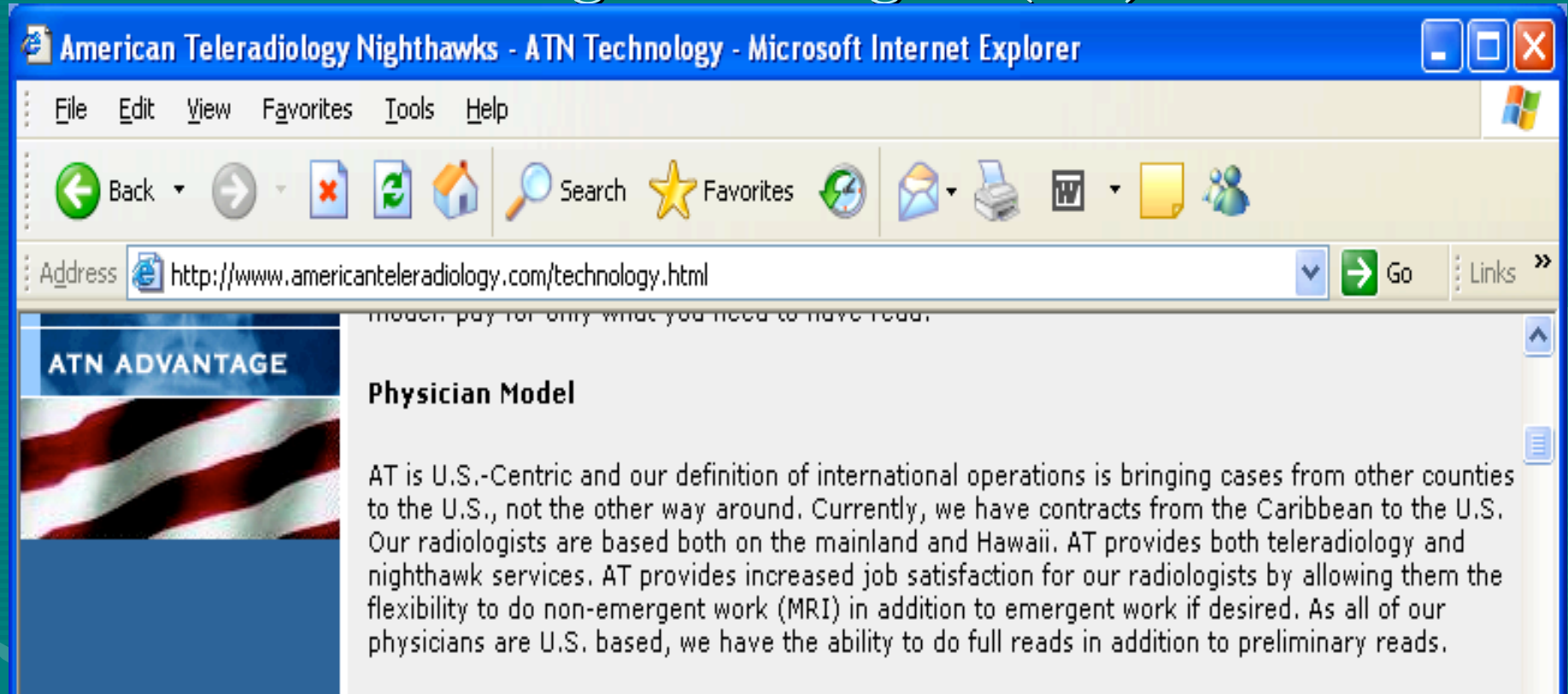


The Not-so-Wild West: Radiologist Control of Nighthawk Radiology



- Nighthawk practices
 - “The Wild Wild West” - rapid growth of the industry
 - 2003: about 15% of all U.S. radiologist practices use teleradiology to outside of practice radiologists
 - 2005: Three leading firms cater to over 1000 hospitals (out of 5764)
 - 2007: Largest firm alone caters to 1300 hospitals (about 25% of all U.S. hospitals). Collectively night hawk group catering to almost half of all U.S. hospitals.
 - Send night images elsewhere to be read.
(In the U.S. or elsewhere.)
- Teleradiology used to consolidate demand for night readings
 - > Possible offshoring threat

Why Radiology Jobs Have Not Been Offshored to Foreign Radiologists (Yet)



- Formal: state licensure, board certification, hospital credentials
- Informal: social pressure / economic pressure from client practices, malpractice insurance, structure of industry (radiologists contract with nighthawk providers)

How does nighthawk radiology work?

Quality – the formal process:

- Conventional radiology groups contract with nighthawk groups to do their night time reads – primarily preliminary or “wet” reads.
- Wet reads at night followed by final or “dry” reads in the morning.
- Discrepancies initiate quality assurance process -> other radiologists offer third and fourth opinions.
- Comparison of this quality assurance process to process that would otherwise exist for night reads.

How does nighthawk radiology work?

Quality – the informal process:

- Radiologists share opinions and ask for help through their “virtual reading room.”

“A really great benefit of working in this remote environment [is that] you have such a deep bench of radiologists on. It’s more than you would ever have in a regular standard practice. In a reading room you might have two or three radiologists there, but you’re never going to have fifteen - twenty- other radiologists to ask their opinion in a reading room at one time. The only way you could possibly do that is to have a remote environment.”

- IM, e-mail and phone calls to share opinions

Efficiency

- Consolidation of work

“Our value is that we can take one of our radiologists and keep them very busy and professionally satisfied. They do that by covering say - thirty or fifty hospitals - depending on the size of the facilities. That way we’re aggregating across a broad span of the market to the individual.”

- Efficiencies in workflow

Modifying RIS and PACS system to remove all time spent on anything aside from image interpretation (e.g. time spent waiting on hold to speak to ER physician).

Efficiency

- Less Distractions

“One person comes in to chat and everyone stops working. A surgeon comes in to ask another radiologist about an interpretation. Or someone starts talking about the ball game last night. Either way it becomes really hard to concentrate.

“The ideal thing is to work like a monk in a cell and just call people when you have a question. But that’s not very fun.”

Quality of Life: Working Alone

“To some point we all like doing radiology we just don’t want to deal with the headache and the politics and we just want to left alone and do our work. We don’t want to be subject to the whims of the ER physicians or the administration ... We find ourselves working very hard on the weekends and at the end of the day we are physically exhausted, but we feel great about it.”

“Before, I had business people telling me how to do radiology, and they don’t know squat about it... All around, in terms of doing radiology which is what I trained to do and being a doctor, that was the least of what I did every day. And it was no longer any fun.”

“I actually like it. I sit there in my little study. I look out the window at the mountains. I have a little television on in the corner. If I get hungry, I go to the kitchen and make myself a sandwich. I have a weight machine in the basement and I go lift weights if I get tired. It’s quite enjoyable. Radiologists are a weird breed. Financially we do well, but it breeds greed. In the hospital everyone can just be trying to work as much as you possibly can. This - you can pace yourself.”

Quality of Life: Family Balance

“I think that it’s balanced by the fact that I’m home here when I’m working, I think I’m really spending more quality time with them... They usually camp out right down here and sleep down here right by where I’m working at night. Because that’s what they like to do.

They’ll sleep on the floor or whatever to be close to me while I’m working. Actually my daughter has taken to sleeping in this leather recliner, and my son will sleep on - I’ve got these big pillow things on the floor right by where his PlayStation is - he sleeps right on those next to his PlayStation. That’s what they like to do.”

“You get off, you see your kids off to school. While they are in school, I slept and when they get back home I’ve had my sleep. I’m up I can feed them when they are home, have dinner with them, make dinner for them. Then after dinner, homework, they are off somewhere on the phone with their friends, go to sleep, you start working.”

Quality of Life: Family Balance

“The whole family you know is around and doing their thing. It’s just so nice to be around when they’re here. I don’t know if I can say enough about that.”

“I’m there for them at breakfast time when some of people [working the night shift]- their kids may be out of the house by then because their shift just ended. So this has given me the opportunity to spend a lot more time with my husband and my kids then I did in the past, and I think the kids love it.”

“You get off, you see your kids off to school. While they are in school, I sleep and when they get back home I’ve had my sleep. I’m up I can feed them when they are home, have dinner with them, make dinner for them. Then after dinner, homework, they are off somewhere on the phone with their friends, go to sleep, you start working.”

Conclusions

- The establishment of nighthawk radiology groups was associated with improvements in:
 - Quality of night interpretations
 - Productivity of radiologists doing night interpretations
 - Quality of life of radiologists doing night interpretations.
- All of these were made **possible** by the consolidation enabled by the use of teleradiology and organizational changes.
- The actual distribution heavily dependent on radiologists' professional power.