Radiology professionals are prone to common illnesses like seasonal colds and flu just like everyone else. For healthcare professionals, making the decision to take a sick day or going to work despite their illness is often a difficult decision. There are a variety of reasons that might compel radiology professionals to go to work even when they are sick. The act of going to work even when an illness justifies the use of sick leave is known as presenteeism.1,2

In many situations it might be best for the employee to take time off from work to recover from an illness. However, radiology professionals may be difficult to replace given their specific training, skills, and/or licensures. They also may feel it is unfair to their coworkers who may be forced to take on extra duties. Furthermore, their feelings of responsibility to their teams and scheduled patients may be stronger than an illness.1,3 Although a strong work ethic is admirable, managers of radiology departments should be aware of the costs associated with presenteeism.4,7 To effectively manage any counterproductive costs associated with presenteeism, radiology managers should investigate and understand its phenomena and its potential impact on radiology departments.

Understanding Presenteeism

Presenteeism, or the act of going to work when sick, is a common occurrence in any workplace including radiology departments. Illnesses that might prompt presenteeism can range from acute conditions such as colds or flu to chronic conditions such as arthritis or diabetes.8 Various studies have found anywhere from 63% to 83% of employees have reported coming to work sick at least once during the previous year.9 The incidence of presenteeism has been found to be higher for those occupations that care for or interact with other people such as healthcare professionals and educators.2 Research suggests that the risk of presenteeism for healthcare professionals and educators may be more than quadrupled of other industries.1 In Britain, for example, 71% of nurses and midwives between the ages of 21 and 30 have reported presenteeism compared to just 45% of workers of the same age group in other industries.10 For physicians, the incidence of presenteeism has been found to be as high as 80% to 90%.11

Presenteeism is a particularly important topic for healthcare workers in all professions given some researchers hypothesize that those in human service
organizations may be particularly vulnerable to presenteeism given the nature of their work. Like other healthcare professionals, work tasks for those in radiology departments involve caring for, assisting, teaching, or providing services to other people. The nature of their position may generate a greater tendency to work even when they are sick given the service component of their jobs. Given the high incidence of presenteeism in healthcare, astute radiology managers may want to give more than just a cursory glance at the topic.

Compared to other industries, the healthcare industry experiences some of the highest rates of presenteeism. The reluctance of healthcare workers to take time off when they are sick stems from a variety of reasons including job role, social status, job and financial security, and patient care demands. Due to the specialized nature of many healthcare positions, it is often difficult to find a qualified replacement and many workers would rather work through their illness rather than pass off their work to coworkers. Healthcare organizational demands already require staff to do more with less and workers are reluctant to further burden their coworkers. In addition, organizational polices have been developed that discourage absenteeism either through negative annual performance reviews or by providing bonuses for unused sick time.

Factors that may contribute specifically to physician presenteeism are the supervision requirements set forth by various agencies such as the Centers for Medicare and Medicaid Services (CMS). In radiation oncology, for example, CMS rules require a physician to be within the immediate area during a patient procedure. In order for patients to receive their daily treatment, the radiation oncologist with an illness must either find a colleague to cover their shift or report for duty despite the sickness. More often than not, the sick physician will choose to go to work rather than ask a colleague to cover for them. In a free-standing clinic with only one physician, the physician may have no choice but to go to work ill until a replacement can be found. Varying specialties and skillsets may make finding a suitably qualified replacement a challenge.

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**TABLE 1. Reasons for Presenteeism**

<table>
<thead>
<tr>
<th>Work Related Factors</th>
<th>Personal Circumstances</th>
<th>Personal Attitudes toward Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time pressure to get tasks done</td>
<td>Financial needs due to lack of paid sick leave</td>
<td>Sense of duty</td>
</tr>
<tr>
<td>Control over work tasks</td>
<td>Family issues making it easier to go to work than stay home</td>
<td>High sense of responsibility at work</td>
</tr>
<tr>
<td>Relationship with colleagues</td>
<td>Psychological factors limiting the ability to say &quot;no&quot;</td>
<td>Considerate of patient and coworker needs</td>
</tr>
<tr>
<td>Employment conditions</td>
<td>Self-diagnosis and treatment</td>
<td>Fear of doing the job poorly</td>
</tr>
<tr>
<td>Inability to find qualified replacement</td>
<td>Neglect for one’s own health</td>
<td></td>
</tr>
<tr>
<td>Competitive nature in certain professions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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The United States is home to one of the world’s most productive workforces. However, when employees become sick, productivity levels decline. Although estimates vary, some experts indicate employee absences due to illness may result in a productivity loss of approximately 23% and cost the United States economy $118 billion annually. Presenteeism, on the other hand, may result in a productivity loss of approximately 77% and cost the United States economy about $180 billion annually. Therefore, the employee absent from work when ill may actually cost the organization less than the one that shows up for work when sick.

Among the healthcare professions, nursing reports the highest level of sickness related absences which results in large financial costs to the healthcare industry in order to guarantee continuity of care for patients. The costs associated with absenteeism can be measured directly through the costs associated with finding replacement staff. However, it is more difficult to measure the costs associated with presenteeism since in many cases, the costs must be indirectly measured through reduced employee
Calculating the Costs of Presenteeism

Although some research has provided varying estimates of potential organizational loss as associated with presenteeism, the challenge for properly analyzing the issue is significant. This is especially true in the healthcare field where expected outcomes are difficult to identify and measure. Although there currently is no standard metric for calculating the financial burden of presenteeism, some experts calculate the financial cost of presenteeism using a formula that first multiplies the average number of hours of employee unproductivity per 40 hour work week by the average hourly wage plus benefit costs for the employee. This result is then multiplied by the number of employees experiencing the same health condition. This calculation results in a value that is then associated with the costs of presenteeism. How meaningful the values are is questionable considering the formula assumes productivity of the sick employee is equal to zero even though the employee may be somewhat productive even if it is at a lesser degree than normal.8

The difficulty in measuring presenteeism-related cost factors has been demonstrated through research efforts. One study using the aforementioned formula used data from medical records, employment records, and a variety of self-report surveys associated with absenteeism and presenteeism. The researchers discovered a wide range of variability existed when trying to determine the total costs for presenteeism based on the medical condition. They suggested the reason for such a wide range of cost estimates was likely due to the different methods used by various surveys to measure productivity since there is no established standard metric for measuring presenteeism-related productivity.8,23

Chronic versus Acute

While researchers have studied various chronic illnesses when estimating the costs of presenteeism and absenteeism, acute respiratory infections (such as seasonal cold and flu), have been found to account for a large amount of lost worker productivity. In the United States, it has been estimated the costs associated with acute respiratory infections to be in the tens of billions of dollars with as much as 75% of those costs resulting from lost productivity.26 The first comprehensive study in the United States to research the effect of acute respiratory illnesses on worker productivity was carried out by researchers during the winter of 2007–2008. The goal of this research was to observe the impact of worker illness on productivity loss from both absenteeism and presenteeism perspectives. Data was gathered from 2,013 participants using a monthly survey over a period of seven months. Results showed that 21% of absences from work were a direct result of either the employee, or a family member of the employee, being sick from an acute respiratory related infection. Presenteeism was found to be significantly higher due to acute respiratory infections as well. It was found that on average, respondents reported being less productive at least 1.8 hours out of an 8 hour work day each day they worked while exhibiting symptoms of an acute respiratory illness. Those workers who went to work with influenza reported being less productive on average 4.8 hours each day while symptomatic.27

Impact on Coworkers

Presenteeism has been found to result in lost productivity and increased costs. Not only does presenteeism have a negative effect on productivity, it also presents a safety risk to patients and their families, coworkers, and the sick employee themselves.28 Various studies have found those suffering from the common cold to have reduced reaction times and reduced mental alertness.29,30 Furthermore, colds not only reduce mental alertness and reaction time but also lower hedonic tone meaning those who are sick tend to be less happy and sociable.28 Research also indicates both patients and colleagues are put at risk of acquiring influenza or other contagions from sick healthcare workers.28 Some have suggested infected staff are largely responsible for the introduction of influenza in some healthcare settings.15 Presenteeism has also been linked to having a negative impact on coworker performance as well. A recent research study investigated the impact of presenteeism on the emotional and behavioral reactions of coworkers. Their research found presenteeism to have a negative impact on the emotions and behaviors of coworkers, especially those from similar demographic groups. The fear of contracting an illness was found to be the underlying reason for changes in coworker behavior. The negative behaviors exhibited by coworkers out of fear of becoming sick varied from extending less effort and working more slowly to acting rudely toward the sick coworker. This study illustrates how presenteeism affects the productivity of the entire organization, especially those organizations that are highly collaborative in nature. When the costs associated with coworker response to presenteeism are factored in, the overall cost of presenteeism related to productivity loss could be much higher than originally estimated.7

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The Organizational Impact of Presenteeism

Effects on Patient Safety and Quality of Care

With the rates of presenteeism being particularly high in the healthcare industry, especially for healthcare professionals who have direct patient contact, one must consider the effects on patient safety and quality care. As discussed earlier, research has demonstrated presenteeism results in less productive workers who are at an increased risk of making errors as well as spreading their illness to others. In the healthcare setting, this is particularly worrisome as life-threatening errors could inadvertently be made.

Linking patient safety and quality of care to presenteeism has been the goal of many researchers. One particular study surveyed 1,171 registered nurses in order to determine the costs associated with presenteeism. Nurses rated their degree of presenteeism related to musculoskeletal pain or depression over a 14 day period by indicating on a scale of 0 to 10 how their physical or emotional health affected their job performance. They were then asked to use the same scale to rate their perceived ability to deliver quality patient care during that same time. In addition, the nurses were asked to indicate how many medication errors and patient falls occurred under their care during the same time period. The survey results showed an average quality care score of 8.4, on a scale of 0–10 with 0 being poor and 10 being excellent. Medication errors, at least once during the 14 day period, were reported to have been made by 6% of survey participants while patient falls were reported by 3% of participants. Using a Poisson regression model, the researchers found a significant association between presenteeism and both patient falls and medication errors. They calculated an 18% increase in the number of patient falls and medication errors for each unit increase in presenteeism. An estimate was therefore calculated indicating patient falls and medication errors resulting from nurse presenteeism cost the United States healthcare industry over $2 billion per year.32

While this research gives some insight into the relationship between presenteeism and patient safety, additional research needs to be conducted. With physicians, there is a recognized relationship between presenteeism and patient safety, but little data to quantify the relationship.20

Methods for Discouraging Presenteeism

With healthcare workers exhibiting some of the highest rates of presenteeism, radiology departments must find ways to discourage such behavior when possible. In the past, occupational health research was focused more towards serving the needs of employers rather than employees when it came to illness with little interest given to the health concerns of employees.6 Attendance programs are often designed to reward employees for having perfect attendance and therefore rather than being absent, workers go to work even when ill.3,20,22 Now, interest in presenteeism is growing as it has been shown to have a negative effect on productivity and, in many healthcare occupations, has been linked to a reduction in quality patient care. In addition to decreased productivity and patient care, research has found workers who experience presenteeism have a higher rate of future absenteeism. Research indicates that employees with more than five episodes of sickness presenteeism during the previous year were likely to have greater rates of absences due to illness in the future.9

To appropriately discourage presenteeism, radiology managers need to first recognize the effect of poor employee health on patient care and outcomes. This is particularly important since research shows that organizations that prioritize staff health and well-being were found to have improved patient care, higher staff retention levels, and less absence due to sickness. These factors were linked to increased productivity and lower personnel costs.19 In addition to recognizing the impact of poor employee health on patient care, radiology managers may need to examine and modify their own attitudes toward sickness related absence. Perfect attendance is perceived to mean employees have a high organizational commitment, but this perception may be inappropriate.11,20 Rather than encouraging such behavior, radiology managers may want to work with their employees to address their own health and well-being.11

Health Promotion Programs

One method organizations utilize to reduce productivity losses resulting from employee presenteeism and absenteeism is through the establishment of health promotion programs. Over 90% of workplaces in the United States with greater than 50 employees have some form of health promotion program in place.33 Health promotion programs are utilized by some organizations as a means to encourage employee health, promote job satisfaction, and increase productivity. More often than not, health promotion programs are established out of a need to reduce employee expenses resulting from increased health care costs and lost productivity.3,34

Regardless of the reasons for establishing a health promotion program, they have been shown to have a positive effect on employee health.3,34,35 Research was conducted to determine the short-term effectiveness of a health promotion program. With educators having some of the highest rates of presenteeism of any occupation, the information gained by this research could be applicable to the

With healthcare workers exhibiting some of the highest rates of presenteeism, radiology departments must find ways to discourage such behavior when possible.
he healthcare industry as well. Researchers offered 11 different wellness program options all offered in an online format. These options varied from promoting healthy dental hygiene habits to replacing television viewing with fitness activities. Results showed higher rates of absenteeism of employees who did not participate in the wellness programs over the two year period. No difference in healthcare costs between those workers who participated in wellness programs and those who did not participate during the two year period was observed.

Based on this study and previous work carried out by others, the researchers suggest health promotion programs may not have immediate short-term health cost savings benefits. However, it is believed they are likely to have long term cost savings benefits as chronic diseases may be prevented in those employees who participate in health programs.33

Another study found similar results. Conducted over a 12 month period, control and intervention groups were used to evaluate the efficacy of a health promotion program on health risk status and productivity. Each group took a baseline followed by a 12 month post baseline health risk assessment. The intervention group received a multi-component health promotion program during the 12 month period. Results of the study showed improved health risk status scores, reduced absenteeism, and increased work productivity. The researchers note their findings are consistent with other studies that found improved health risk factor scores and reduced number of sick days by health promotion program participants.35

**Conclusion**

Some of the highest rates of presenteeism are found among healthcare workers. In many cases, these individuals choose to ignore their own health in order to be available to provide care for their patients. While the act of going to work in situations where it would be best to consider staying home to recuperate may be admirable, it carries costs for both the employee and the organization. Lost productivity, patient safety concerns, and long term health consequences are a few of the costs associated with presenteeism among healthcare professionals. When expressed in dollar amounts, the financial impact of presenteeism on the economy has been found to be greater than the costs associated with absenteeism.

In order to reduce the negative effects of presenteeism, radiology managers should make a commitment to the health and well-being of their employees. While encouraging employees to take advantage of sick leave requires a paradigm shift of what being a committed employee means, this may actually be the ideal solution for reducing productivity related losses and promoting employee health. This is challenging in radiology departments due to the nature of the work and the desire to serve patients which may be innately held by most radiology professionals. However, managers can utilize health promotion programs to encourage healthy lifestyle behaviors, which have been shown to decrease rates of presenteeism resulting in a more productive workforce.35

**References**

The Organizational Impact of Presenteeism

QUESTIONS

Instructions: Choose the answer that is most correct.

1. The act of going to work even when an illness justifies the use of sick leave is known as:
   a. Presenteeism
   b. Existentism
   c. Currentism
   d. Hypochondriacism

2. Radiology professionals may be difficult to replace when ill given their specific:
   a. Training
   b. Skills
   c. Licensures
   d. All of the above

3. Various studies have found the percentage of employees who have reported coming to work sick at least once during the previous year:
   a. 35–45%
   b. 58–79%
   c. 63–83%
   d. 90–98%

4. Research suggests that the risk of presenteeism for healthcare professionals and educators may be more than double other industries.
   a. True
   b. False

5. Compared to other industries, the healthcare industry experiences some of the:
   a. Lowest rates of presenteeism
   b. Equal rates of presenteeism
   c. Highest rates of presenteeism
   d. Comparable rate of presenteeism

6. Regarding Table 1, “Work Related Factors” as reasons for presenteeism include:
   a. Time pressure to get tasks started
   b. No control over work tasks
   c. Ability to find a qualified replacement
   d. Relationships with colleagues
7. According to Table 1, the following is NOT considered a “Personal Circumstance:”
   a. Family issues making it harder to go to work than stay home
   b. Financial needs due to lack of paid sick leave
   c. Self-diagnosis and treatment
   d. Neglect for one’s own health

8. Some experts indicate employee absences due to illness may result in a productivity loss of approximately 23% and cost the United States economy:
   a. $100 million/annually
   b. $118 billion/annually
   c. $160 million/annually
   d. Unknown

9. It is more difficult to measure the costs associated with presenteeism since in many cases the costs must be indirectly measured through:
   a. Increased employee productivity
   b. Decreased rates of error
   c. Increased likelihood of infecting coworkers and patients
   d. Ability to meet the productivity standards of the organization

10. Researchers studying chronic illnesses have found a large amount of lost worker productivity is due to:
    a. Acute respiratory infections (such as cold and flu)
    b. Conjunctivitis
    c. Ear infections
    d. Low grade fever

11. Not only does presenteeism have a negative effect on productivity, it also presents a safety risk to:
    a. Patients and their families
    b. Coworkers
    c. Sick employees themselves
    d. All of the above

12. Colds not only reduce mental alertness and reaction time, but also lower hedonic tone, meaning those who are sick tend to be:
    a. Less caring
    b. Less happy and sociable
    c. Less compassionate
    d. Less sensitive

13. Presenteeism has also been linked to having an impact on coworker performance that is:
    a. Positive
    b. Neutral
    c. Negative
    d. Partial

14. An estimation indicating patient falls and medication errors resulting from nurse presenteeism cost the United States healthcare industry over:
    a. $2 billion per year
    b. $1 billion per year
    c. $2 million per year
    d. $1 million per year

15. Attendance programs are often designed to reward employees for having perfect attendance and therefore rather than being absent, workers go to work even when ill.
    a. True
    b. False

16. Research indicates that employees with more than ___ episodes of sickness with presenteeism during the previous year were likely to have greater rates of absences due to illness in the future.
    a. 6
    b. 5
    c. 4
    d. 3

17. Research shows that organizations that prioritize staff health and well-being were found to have improved:
    a. Patient care
    b. Higher staff retention levels
    c. Less absence due to sickness
    d. All of the above

18. Perfect attendance is perceived to mean employees have:
    a. Healthy habits
    b. Good insurance
    c. High organizational commitment
    d. Strong family genes

19. The percentage of workplaces in the United States with greater than 50 employees have some form of health promotion program in place:
    a. Under 25%
    b. Over 90%
    c. Between 50–65%
    d. Around 15%

20. Results showed higher rates of absenteeism of employees who did not participate in the:
    a. Wellness program
    b. Company gym membership
    c. Healthy habits informational meeting
    d. Staff picnic