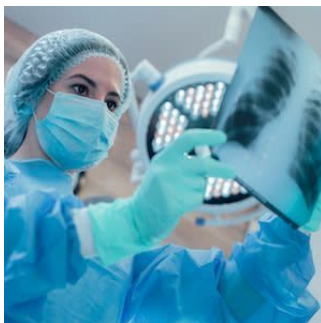


## Increasing Efficiency Without Affecting Patient Outcomes



The economic and clinical fragilities of healthcare systems around the globe have never been more visible than during the COVID-19 pandemic. In particular, the importance of resource allocation has been at the forefront. Weighing safety against costs when dealing with critically ill patients has been a source of dilemma for many healthcare professionals.

When we evaluate the use of imaging in the ICU, we see that daily chest radiographs (CXR) are not only expensive but also sometimes inefficient with underappreciated harms, including the use of inappropriate interventions that are based on inaccurate results.

Krivopal et al. (2003) conducted a study more than 15 years ago. They found that despite fewer CXRs in the non-routine arm, there was no increase in the duration of mechanical ventilation, length of ICU stay, length of hospital stay or mortality. Another review of 9 studies (Ganapathy et al. 2012) also showed no harm associated with a restrictive CXR strategy. Yet another study evaluated an intervention to reduce CXRs in a cardiac surgery ICU and showed similar results. All these clinical findings suggest that it is possible to reduce routine CXRs in the ICU. Some findings might be missed, but data suggest that it will most likely not have an impact on patient outcomes. However, despite this evidence, routine CXRs in ICUs continue to be used.

Frequent laboratory tests are a common clinical care practice, but as is evident, the unnecessary use of CXRs in the ICU deserves some attention. During the COVID-19 pandemic, it has become even more obvious that the use of finite healthcare resources must be improved. Every time a chest radiograph is done, it requires personal protective equipment, and it also exposes healthcare staff to potentially contagious patients. Not only that, there are costs involved, risk of radiation exposure and significant time and effort put in to perform the task.

It might be time to reflect on this practice and to evaluate the clinical utility of the number of CXRs ordered in the ICU and whether this number could be reduced without compromising care. As the pandemic continues, there might come a time when healthcare systems may not have the ability, the time, or the resources to maintain the status quo, especially when doing so could put staff and patients at risk. This is not to say that the pandemic should lower the standard of care, but there is a need to redirect healthcare resources to procedures and interventions that actually have an impact on patient outcomes.

There is no doubt that high-value care should always be the goal in the ICU. But at the same time, it is important to evaluate practices and reduce unnecessary CXRs whenever it is safe to do so.

Source: [JAMA](#)

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