

We must take into consideration the impact of technology

The adoption of electronic medical records (EMR) and the associated rise in the use of computers affects caregivers as well as their relationship to patients. With the global uptake of EMRs on the rise, Heather Fennimore, President, Global Healthcare at Humanscale, urges that the impact of this technology on people calls for clinicians to be trained on its appropriate use and for the architectural layout and the room design of healthcare institutions to be improved.

How has the implementation of EMRs affected the healthcare workspace in the US? What can Europe learn from the US?

As more and more countries in Europe and elsewhere are about to start adopting EMRs, the US has to offer lessons to learn from implementing this technology on a large scale: EMRs can only deliver the hoped for results, when the impact of technology on caregivers and patients is taken into consideration.



Heather Fennimore, Humanscale

What is the scientific evidence of the use of computers on clinicians' work situation?

A US study published in 2012 found out that doctors use computers for an average of 5.1 hours in any given 12-hour shift and nurses spend an average of 5.8 hours per shift in front of a computer. It also reported that over 60% of physicians and nurses admitted that the frequency

of their musculoskeletal discomfort had increased since the introduction of EMRs. This confirms the findings of an earlier investigation, which found that 32% of nurses using a computer had an upper extremity musculoskeletal disorder.

Doctors are disenchanted with using computers as they spend up to 50% of their working day interacting with technology. Patients are starting to complain that doctors do not care about them. Many clinicians feel that computers take away time from interacting with patients. A study by professors at Cornell University confirms this. It found that in the past year, 56% of doctors and 71% of nurse practitioners (NP) and physician assistants (PA) stated that their computer use at work had risen, with 22% of doctors and 19% of NP/PA reporting less time spent on face-to-face interactions with patients.

In short, what we have learned is that when you introduce an EMR you also need to ergonomically re-design the physical workspace so that it optimizes the efficiency of the healthcare professional.

How can we implement EMRs in a way that does not interfere with the patient-caregiver relationship?

Often technology is haphazardly placed wherever there is space with no thought of workflow or the caregiver-patient interaction. It is imperative that the so called "triangle of care" between patient, caregiver and computer is respected; caregiver and patient always need to be able to maintain eye contact to encourage dialogue and build a trusting relationship. This concern must be reflected in the architecture, the room design, and how the technology is placed. We need to educate architects, the design community and IT distribution companies about this and the value of ergonomic design.

When considering how little influence clinicians have on the design of their workspace, this becomes an even more pressing issue. The aforementioned study by the faculty of Cornell University also found that only a small minority of doctors and nurses had any detailed knowledge of ergonomics; moreover, only 18.3% of interviewed doctors and 11.1% of NP/PAs were involved in the design of their clinical workplace and respectively 18.9% of doctors and 3.2% of NP/PAs in that of their computer workstation. Clinicians also need to be involved in selecting the most usable software and get trained on how to use technology and how to interact with patients at the same time, otherwise institutions will not see the hoped for improvements in efficiency, reductions in errors and a greater return on investment. **||**

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Humanscale
info@humanscale.co.uk
www.humanscale.com

