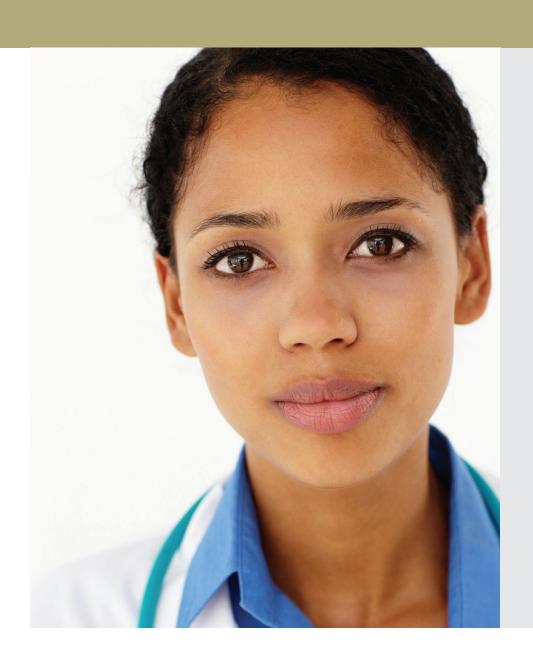# How Digital Healthcare Helps and Hurts Nurses

60 percent of nurses worry that their job is negatively impacting their overall health, and 1 in 10 nurses were injured on the job in the past year.

Nurse injuries have been well documented, but what is often not addressed is how their injuries and physical discomfort directly affect patient care.

Executive summary:

As the healthcare system in the United States continues its digital transformation to improve patient and caregiver health, the nursing population finds itself stuck between two worlds. Nurses remain mired in legacy burdens of the job and now face new challenges as a result of the massive electronic health record (EHR) restructuring. According to the independent survey commissioned by Ergotron, such burdens are impacting nurses' own health and in turn the quality of patient care they are able to give.

A staggering 60 percent of nurses are concerned that their job is negatively impacting their overall health, with 76 percent reporting physical discomfort and 12 percent being injured on the job over the last year. Of this 76 percent, 65 percent reported that the discomfort impacted their ability to deliver quality patient care, citing they felt they were less friendly, welcoming and engaging with patients (22 percent), that they had to modify or limit their activity and movement (22 percent), or that it required them to ask for more assistance from other staff (14 percent). Coupled with new technology demands and an industry shortage of healthcare professionals, an overwhelming 88 percent of nurses are concerned about their expanding workloads.

The survey, conducted in March 2014 with 250 full-time U.S. nurses, highlights many of the day-to-day difficulties nurses face with medical equipment, clinical workflow, EHR use and physical strain or injury.

The nurses were asked about charting habits, the use of devices to improve patient care and personal health risks on the job, among other issues.

Profile of the U.S. nursing population

Of those surveyed, 91 percent were female, from a broad spectrum of certifications and degrees—largely Registered Nurses (64 percent) and Bachelors of Science in Nursing (32 percent). Sixty-six percent were between the ages of 45 to 64. Nursing appears to be a lifelong career, with 60 percent of respondents having already surpassed 20 years of experience, and 37 percent having more than 30 years of experience. A significant portion of nursing population is facing long hours on the job, with 45 percent working nine to twelve hour shifts

and five percent working longer than 12 hours per day, the survey found. A high percentage of nurses are digitally connected at some point during their workflow, with the majority using standard desktop computers (81 percent) and laptops (31 percent); though smartphones (11 percent) and tablet device usage (7 percent) is emerging.

Clinical workflow and patient engagement

The typical nurse's day is active and multi-faceted. A nurse may walk up to five miles in a ten-hour shift (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3037121/), all the while facing fluctuating conditions throughout his or her workflow: collaborating with doctors and therapists, consulting with patients, attending to and working around patient families, and interacting with other hospital staff. Nurses navigate these waters on a daily basis, and not surprisingly, this busy environment is not always conducive to supporting caregiver health, resulting in discomfort and injury. Back pain (52 percent), exhaustion (38 percent) and sore neck (33 percent) were among the common discomforts nurses experienced over the last year.

> The impact of clinical design and ergonomic principles on the nurse or caregiver are often overlooked

When nurses were asked what they would change in their work environment to support the prevention of discomfort, pain or injury to themselves and fellow nurses, all agreed some form of change would be beneficial. Twenty-eight percent of the nurses felt some re-design of the physical space within patient rooms and on floor was required to help them better align with clinical workflow and patient needs. Of this re-design, updating furniture at the nursing station was important (25 percent), as was updating medical equipment and furniture in the patient room (24 percent) and including more point-of-care solutions throughout the floor with sit-to-stand functionality (22 percent). Twenty-eight percent of the nurses were concerned about proper ergonomics with the equipment they were required to use regularly; 37 percent of nurses reported occasional discomfort while inputting charting information into their computerized point-of-care solution and 12 percent reported regular discomfort. Twenty-eight percent desire access to a dedicated ergonomics team to help ensure equipment is ergonomically supportive for the staff.

Biggest challenges nurses face today

Nurses face many daily challenges in their pursuit to deliver quality care. Expanding responsibilities and expectations, longer shifts, even training may interfere with their ability to successfully provide outstanding care. When queried, the nursing shortage was ranked as the biggest challenge they face on the job (90 percent), with expanding responsibilities and expectations as a result of these shortages concerning 88 percent. Fifty-four percent of those nurses surveyed cited that increasing nursing staff would help alleviate workloads. Technology

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concerns are prevalent, especially as nurses have to learn emerging technologies on top of existing workloads. Insufficient training on point-of-care computing solutions was ranked next (66 percent), followed by how the technology was integrated throughout the workflow (65 percent) and placement of technology throughout the workflow (61 percent). Sixty-four percent expressed insufficient training on how to protect themselves.

The spread of electronic health records

Electronic healthcare records (EHRs) are designed to streamline patient information delivery and caregivers' access to it throughout their digital workflow, helping to improve documentation processes and hopefully improve patient care. But a number of factors—from the type of system deployed to the position and ease of use of the equipment—may be negatively impacting nurses, including increasing the level of stress on the job (50 percent). While many nurses said their stress levels increased, they also pointed out the positive outcomes from the implementation of EHRs for record keeping, pointing to: decreased required documentation time (45 percent), increased efficiency, productivity (50 percent) and improved clinical workflow (46 percent). What's more, 32 percent of nurses said the use of EHR has increased their time available for patient care at the bedside.

> 28 percent of nurses surveyed would instate a dedicated ergonomics team to help ensure equipment is ergonomically supportive to the staff

Ergotron sees Sitting Disease as a global crisis and commissioned this JustStand® Survey to heighten awareness and educate the populace on its dangers. What's more, Ergotron designed the JustStand Index to benchmark Americans future sentience around sitting. Today, the vast majority of people are not aware of Sitting Disease:

Device and equipment use and its challenges
when it comes to patient care

Electronic devices are quickly replacing paper charting and 60 percent of nurses are comfortable inputting charting information at a computerized point-of-care solution. Most commonly, desktop computers (81 percent) and laptops (31 percent) are the primary means used for capturing patient information. And despite the rising adoption of tablets, only 7 percent of nurses use tablets in their daily workflow. Fifty-three percent of nurses still do the bulk of their charting at a nurses station, with only 19 percent charting the majority of the time at the patient's bedside. Eighteen percent chart on other areas of the floor.

Despite the benefits like real-time patient interaction, the ability to quality check responses and reducing the number of details a nurse needs to commit to memory, there are a number of reasons why nurses are opting to do charting elsewhere than at the patient bedside. A number of factors contribute to the barriers of using computerized devices at the patient bedside, the biggest being the lack of space to maneuver the solution to the bedside (42 percent). Other

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considerations included: placement of fixed computer equipment (39 percent) outside of the room, inability of IT to understand the information the nurse needs to capture at the patient bedside (21 percent), lack of a solution that brings it close to the patient (17 percent), lack of long-lasting powered solutions (14 percent) and lack of available power for the computerized workstation (10 percent).

Conclusion

Nurses play a crucial role in the delivery of patient care and their insights will help us better understand the state of nursing today and improve clinical patient care and confidence moving forward. The changing healthcare climate has resulted in unique nursing challenges and the intersection of technology, the nurse and the patient is a critical one.

Care happens in real-time. Nurses are seeing the advantages of EHRs and the majority of them feel comfortable using technology. The biggest challenge is creating an environment that caters to the needs of the nurse, like comfort and ergonomics and easy access to equipment, in a way that will continue to improve their quality of care and interaction with the patient.

When technological advancements are carefully planned and implemented in the healthcare facility, both the patient and caregiver experience significant gains in access to data, treatment facilitation, improved safety and reduced medical errors.

These challenges require thoughtful study by healthcare organizations to implement solutions that help protect the health of their key nursing resources, and also help create the kind of environment that allows them to contribute to patient health and satisfaction at the highest level possible, bringing the patient and caregiver together for increased interaction, satisfaction, safety and efficiency.

Methodology

The 2014 Nursing Survey was fielded by independent research firm GMI Research from March 21 to March 28, 2014. The responses were generated from a survey of 250 U.S. medical professionals who self-identified as full-time credentialed nurses who work in a healthcare setting in the continental United States, with experience. The margin for error for the survey is plus or minus 3.1 percent. This is Ergotron's first survey exploring challenges nurses face on the job.

What is your gender?

	Total
Total	N=250
Male	9%
Female	91%

What is your age?

	Total
Total	N=250
Under 18	0%
18-25	2%
26-34	12%
35-44	18%
45-54	29%
55-64	37%
65+	2%

More specifically, which of the following certifications/degrees apply to you?

	Total
Total	N=250
Advance Practice Nurses (APN)	3%
Bachelor of Science in Nursing (BSN)	32%
Certified Nurse Educator (CNE)	0%
Certified Nurse Midwives (CNM)	1%
Certified Registered Nurse Anesthetists (CRNA)	1%
Chief Nursing Officer (CNO)	0%
Clinical Nurse Leaders (CNL)	0%
Clinical Nurse Specialists (CNS)	1%
Doctor of Nursing Practice (DNP)	0%
Family Nurse Practitioner (FNP)	2%
Master of Science in Nursing (MSN)	5%
Nurse Executive Advanced-Board Certified (NEA-BC)	0%
Nurse Practitioners (NP)	2%
Registered Nurses (RN)	64%
Registered Practical Nurse (RPN)	6%
Other, please specify	16%
Count	1.34

What electronic device do you use during your daily workflow as a nurse?

	Total
Total	N=250
PC computer	81%
Laptop	31%
Tablet	7%
Smartphone	11%
None	0%
Count	1.3

What is your type of work?

	Total
Total	N=250
Full-time	100%
Part-time	0%
Other	0%

How many hours is your typical work shift?

	Total
Total	N=250
Less than 8 hours	2%
8 hours	48%
9 hours	10%
10 hours	7%
11 hours	0%
12 hours	28%
Longer than 12 hours	5%

How many years of experience as a nurse do you have?

	Total
Total	N=250
Less than 10 years	20%
10-19 years	20%
20-29 years	23%
30 or more years	37%

What is your primary employment setting?

	Total
Total	N=250
Hospital	51%
Home Health/Hospice	8%
Physician Office	14%

	Total
Ambulatory Care	4%
Nursing Home/Extended Care	10%
Other	12%

What area of the hospital is your primary area of care?

	Total
Total	N=127
OR/PACU	9%
Critical Care	14%
Medical/Surgical	12%
ER/Trauma	11%
Management	5%
Telemetry/PCU	8%
Geriatrics/LTC	1%
Psychiatry	3%
Home Health/Hospice	0%
Women's Health/L&D	5%
Pediatrics/PICU	6%
Oncology	2%
NICU/Neonatal	2%
Rehab	3%
Other	19%

In the past year, have you been injured on the job? By injured we mean anything from mild aches and pains to a severe injury.

	Total
Total	N=250
Yes	12%
No	88%

Are you concerned that your job is negatively impacting your overall health?

	Total
Total	N=250
Top 2	25%
Extremely concerned about the impact it is having	8%
Concerned about the impact it is having	17%
Somewhat concerned about the impact it is having	35%
Not concerned	40%
Bottom 2	75%

What are common physical/bodily problems you suffer from on the job?

Check if yes (check as many as you like)	Total
Total	N=250
Back pain	52%
Muscle sprain or strains	19%
Wrist sprains	8%
Ankle and foot injuries	11%
Sore neck	33%
Over exhaustion	38%
RSI disorders	1%
Other (Specify)	26%
Count	1.88

When you are experiencing physical discomfort, pain or injury how does it impact your ability to deliver quality patient care?

Check if yes (check as many as you like)	Total
Total	N=250
I'm distracted	17%
I've made mistakes before or missed something because of it	4%
I'm less friendly, welcoming, engaging with my patients	22%
It negatively impacts my level of care	6%
I'm rushing my work with the patient, so I can go find relief elsewhere	6%
I had to modify/limit my activity/movement	22%
I need more assistance from other staff	14%
It doesn't affect my level of care	35%
I do not experience physical discomfort, pain or injury while working	24%
Count	1.48

Which of the following would you change in your work environment in order to support the prevention of discomfort, pain or injury for you and your fellow nurses?

Check if yes (check as many as you like)	Total
Total	N=250
Update medical equipment and furniture in the patient room	24%
Update furniture at the nursing station	25%
Re-design physical space within patient rooms and on floor to better align with clinical workflow and patient needs	28%
Instate a dedicated ergonomics team to help ensure equipment is ergonomically supportive for the staff	28%
Increase nursing staff to alleviate workloads	54%
Implement more point-of-care solutions throughout floor with sit-to-stand functionality	22%

Other (Specify)	11%
Count	1.94

What do you consider to be the biggest challenges nurses face today?

Nurse to patient ratios (nursing shortage)	Total
Total	N=250
Very big challenge for nurses1	52%
A challenge for nurses2	38%
Not a challenge for nurses3	6%
N/A	4%
The integration of technology throughout the workflow	Total
Total	N=250
Very big challenge for nurses1	16%
A challenge for nurses2	49%
Not a challenge for nurses3	27%
N/A	8%
The placement of technology throughout the workflow	Total
Total	N=250
Very big challenge for nurses1	16%
A challenge for nurses2	46%
Not a challenge for nurses3	32%
N/A	7%
Expanding responsibilities and expectations	Total
Total	N=250
Very big challenge for nurses1	58%
A challenge for nurses2	30%
Not a challenge for nurses3	8%
N/A	4%
Longer Shifts	Total
Total	N=250
Very big challenge for nurses1	33%
A challenge for nurses2	43%
Not a challenge for nurses3	17%
N/A	7%
Insufficient training on point-of-care computing solutions	Total
Total	N=250
Very big challenge for nurses1	24%
A challenge for nurses2	42%
Not a challenge for nurses3	26%
N/A	8%
Insufficient training on how to protect themselves	Total
Total	N=250

Very big challenge for nurses1	20%
A challenge for nurses2	44%
Not a challenge for nurses3	28%
N/A	8%

Please indicate whether you agree or disagree with the following statements regarding the uses of electronic health records (EHRs) and their influence on your delivery of care, with '1' being strongly disagree and '5' being strongly agree.

Positively impacted ability to deliver quality care	Total
Total	N=250
Bottom 2	18%
Strongly disagree1	5%
Disagree2	13%
Neither agree nor disagree3	27%
Agree4	40%
Strongly agree5	15%
Top 2	55%
Reduced frequency of medical errors	Total
Total	N=250
Bottom 2	14%
Strongly disagree1	2%
Disagree2	12%
Neither agree nor disagree3	30%
Agree4	43%
Strongly agree5	13%
Top 2	56%
Increased efficiency, productivity	Total
Total	N=250
Bottom 2	21%
Strongly disagree1	5%
Disagree2	16%
Neither agree nor disagree3	28%
Agree4	37%
Strongly agree5	13%
Top 2	50%
Decreased time required for documentation	Total
Total	N=250
Bottom 2	35%
Strongly disagree1	10%
Disagree2	26%
Neither agree nor disagree3	20%

Agree4	32%
Strongly agree5	13%
Top 2	45%
Increased time available for patient care (able to spend more time at patient's bedside)	Total
Total	N=250
Bottom 2	42%
Strongly disagree1	10%
Disagree2	31%
Neither agree nor disagree3	26%
Agree4	24%
Strongly agree5	9%
Top 2	32%
Improved clinical workflow	Total
Total	N=250
Bottom 2	21%
Strongly disagree1	5%
Disagree2	16%
Neither agree nor disagree3	33%
Agree4	38%
Strongly agree5	8%
Top 2	46%
Decreased level of stress on the job	Total
Total	N=250
Bottom 2	45%
Strongly disagree1	12%
Disagree2	33%
Neither agree nor disagree3	34%
Agree4	16%
Strongly agree5	5%
Top 2	21%
Increased level of stress on the job	Total
Total	N=250
Bottom 2	15%
Strongly disagree1	3%
Disagree2	12%
Neither agree nor disagree3	35%
Agree4	38%
Strongly agree5	12%
Top 2	50%

Improved patient interaction and engagement	Total
Total	N=250
Bottom 2	36%
Strongly disagree1	10%
Disagree2	26%
Neither agree nor disagree3	40%
Agree4	18%
Strongly agree5	6%
Top 2	24%

Where do you do the bulk of your charting?

	Total
Total	N=250
At the patient's bedside	19%
In the room with the patient	21%
At the nurses station	53%
In the hallway	12%
In other area designated for charting	18%
Other (Specify)	7%
Count	1.3

What is your average level of comfort while inputting charting information into your computerized point-of-care solution (more specifically meaning, when the nurse is entering patient data or interacting with patient data, could be in the patient room, hallway, surgery, radiology, etc.)?

	Total
Total	N=250
Bottom 2	12%
Very uncomfortable	8%
Uncomfortable	5%
Sometimes uncomfortable	24%
Comfortable	32%
Very comfortable	27%
Top 2	60%
N/A	4%

What do you think is the biggest barrier to using computerized devices at the patient bedside?

	Total
Total	N=250
Lack of available power	10%
Lack of long-lasting powered solutions	14%
Lack of space to maneuver solution to bedside	42%

Placement of fixed computer equipment	39%
Lack of a solution that brings it close to my patient	17%
Inability of IT to understand the information I need to capture at the patient bedside	21%
Other (Specify)	15%
Count	1.58

Please rank the following equipment in order of importance to your ability to effectively deliver digital information to your patient's bedside '1' through '6', with '1' being the most important and '6' being the least important.

Tablet	Total
Total	N=250
1st	28%
2nd	18%
3th	17%
4th	20%
5th	10%
6th	4%
7th	1%

Nursing cart	Total
Total	N=250
1st	12%
2nd	16%
3th	21%
4th	24%
5th	16%
6th	10%
7th	0%

Computer Cart or Workstation on Wheels (WOW)	Total
Total	N=250
1st	24%
2nd	27%
3th	23%
4th	12%
5th	10%
6th	3%
7th	0%

Fixed computer in the patient room	Total
Total	N=250
1st	22%
2nd	21%
3th	17%
4th	21%
5th	14%
6th	5%
7th	0%

Paper-based solution and pen	Total
Total	N=250
1st	10%
2nd	7%
3th	10%
4th	12%
5th	28%
6th	31%
7th	1%

Smartphone	Total
Total	N=250
1st	2%
2%	2nd
3th	11%
4th	10%
5th	20%
6th	46%
7th	2%

Other (Specify)	Total
Total	N=39
1st	13%
2nd	5%
3th	0%
4th	3%
5th	3%
6th	5%
7th	72%

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