

TELEMEDICINE SEEN AS A BOON TO CRITICAL CARE NURSING**According to this study:**

- Most nurses believe that telemedicine in ICUs improves patient care, increases productivity and collaboration, and makes their jobs easier.
- They also find technical problems and attitudes of staff toward telemedicine (among other factors) to be barriers to implementation.

Telemedicine in the ICU (tele-ICU) nursing is a growing subspecialty of critical care nursing, with the potential to positively affect patients, families, and the health care team. Little is known, however, about its impact on nursing care. In phase 1 of a national survey of nurses working in telemedicine facilities in the United States, nurses working in tele-ICUs and in ICUs that work with tele-ICUs completed an online survey assessing their perceptions of the benefits and barriers to implementation of telemedicine and its impact on nursing care. In phase 2, a smaller, multiple-round survey, nurses from the larger group anonymously identified “areas of priority focus.”

A majority of the 1,213 nurses who responded in phase 1 agreed or strongly agreed that tele-ICU systems provide an opportunity to improve patient care (79%) and that such systems are useful (75%). The nurses also agreed or strongly agreed that using tele-ICU enables them to accomplish tasks more quickly (63%); improves collaboration (66%), job performance (64%), and communication (60%); helps them perform nursing assessments (60%); and improves patient care by providing more time for it (46%).

Benefits cited included the ability to monitor trends in vital signs, detect unstable physiologic status, provide medical management, and

enhance patient safety. Among the barriers to implementation were technical problems, interruptions in care, perceptions that tele-ICU is an interference, and attitudes of staff.

The 60 respondents in phase 2 ranked the original respondents’ priority areas of care, narrowing the 25 areas of focus to 15. Those deemed most important were critical thinking skills, being an expert ICU clinician, skillful communication, mutual respect for “bedside and tele-ICU colleagues,” and emergency care management.

These findings could be helpful in further delineating the competencies needed for optimal tele-ICU nursing and in shaping future research, the authors conclude.

Kleinpell R, et al. *Am J Crit Care* 2016;25(1):e14-e20.

EXERCISE EFFECTIVE IN PREVENTING LOW BACK PAIN**According to this study:**

- Exercise alone or in combination with education is likely to reduce the risk of low back pain, at least in the short term.
- Back belts, shoe insoles, and ergonomics do not appear to prevent low back pain.

Low back pain is common and costly and the recurrence rate is high. Research on effective methods of treating low back pain has yielded inconsistent results. The authors of a recent report conducted a systematic review of the literature to evaluate the effectiveness of six interventions for the prevention of low back pain—exercise, education, exercise and education, back belts, shoe insoles, and “other prevention strategies”—and their effects on rates of sick leave caused by low back pain.

Two independent reviewers searched four electronic databases—MEDLINE, EMBASE, the Physiotherapy Evidence Database

Scale, and the Cochrane Central Register of Controlled Trials—and evaluated the quality of the evidence using the Grading of Recommendations Assessment, Development, and Evaluation system. Twenty-three published reports on 21 different randomized controlled trials involving a total of nearly 31,000 unique participants were included in the analysis. The evidence ranged in quality from very low to moderate.

Pooled results of the corresponding studies indicate that exercise in combination with education is likely to reduce the risk of an episode of low back pain (a 45% reduction in risk) but not the use of sick leave. Exercise alone may reduce the risk of an episode of low back pain (35% risk reduction) and the use of sick leave (78% risk reduction). It appears, however, that the effects of both interventions diminish after a year. Other interventions, including education alone, back belts, shoe insoles, and ergonomic adjustments, likely do not prevent low back pain or the use of sick leave. Because improvements achieved with exercise and education appear to be short lived, the authors write that ongoing exercise is needed to maintain protective effects.

Steffens D, et al. *JAMA Intern Med* 2016; 176(2):199-208.

THE PREVALENCE OF CHILDHOOD ASTHMA IS NO LONGER INCREASING**According to this study:**

- The overall prevalence of childhood asthma in the United States stopped increasing as of 2009.
- Stark differences in prevalence and trends remain between sociodemographic subgroups.

According to existing data, the prevalence of childhood asthma doubled from 1980 to 1995 and then continued to increase more slowly from 2001 to

2010. In the 1980s there was little or no disparity in asthma prevalence between black and white children, but by 2009 the rate was twice as high in black children. To augment the older statistics, researchers used data from the National Health Interview Survey to determine trends in childhood asthma prevalence from 2001 to 2013. Data on more than 150,000 children, ranging in age from zero to 17 years, were included in the analysis. Multivariate

or Puerto Rican children or among children living in the Northeast or West. However, rates among Puerto Rican children, which show a slowly increasing trend throughout 2013, were even higher than those in black children, and both are still far higher than those in white and Mexican children. Asthma prevalence increased and then decreased among children ages zero to four years, nonpoor children, and those living in the Midwest.

Recent asthma prevalence in children increased from 2001 to 2009 and has since plateaued.

models were used to evaluate differences between demographic subgroups (race or ethnicity, age, family income in relation to the federal poverty level, urbanity, and geographic area).

Recent asthma prevalence in children increased from 2001 to 2009 and has since plateaued, at least generally; although it declined significantly in 2013, from 9.3% in 2012 to 8.3%, evaluation over time will determine whether the plateau is holding.

Some of the most striking trends, however, were seen when the researchers adjusted for sociodemographic characteristics. Multivariate analysis showed increasing rates, rather than plateaus, among 10-to-17-year-olds, poor children, and children living in the South. Asthma prevalence increased then plateaued among children five to nine years old, “near-poor” children (those with family incomes between 100% and 200% of the federal poverty level), and non-Hispanic black children.

Asthma prevalence did not change significantly among white

The plateauing asthma prevalence among black children is largely responsible for the overall plateau in racial disparities, although those disparities remain stark. More data will be needed to determine whether these trends continue, the authors note.

Akinbami LJ, et al. *Pediatrics* 2016;137(1):1-7.

IMPROVED WELL-BEING AFTER GASTRIC BYPASS SURGERY

According to this study:

- Most patients who have undergone gastric bypass surgery report improved well-being, but many experience symptoms and seek medical care.
- Despite the patients' relative well-being, quality-of-life scores were inversely associated with adverse symptoms.

Roux-en-Y gastric bypass (RYGB) surgery is an effective treatment for morbid obesity, but untoward sequelae can include symptoms that require medical, nutritional, or surgical treatment.

Researchers studied patients' well-being symptoms after RYGB surgery, as well as the frequency, severity, and predictors of common adverse effects and their association with quality of life.

Surveys were sent to 2,238 patients who underwent RYGB surgery in Denmark between 2006 and 2011 and to a comparison cohort of 89 patients matched according to sex and body mass index who didn't undergo surgery.

Surveys were completed by 1,429 patients a median of 4.7 years after RYGB surgery. Among these patients, 1,266 (89%) reported one or more symptoms, compared with 70 (79%) of those in the comparison cohort. The most common symptoms among those who underwent RYGB surgery were fatigue, gastric dumping (the rapid movement of food into or through the gastrointestinal tract, which itself is accompanied by a host of symptoms), and abdominal pain. Approximately two-thirds of patients who underwent RYGB surgery reported having contact with the health care system because of symptoms, compared with about a third of those in the comparison group, and 29% of the RYGB group and 7% of the comparison group, respectively, had been hospitalized.

Symptoms leading to health care contact were more common in women, patients younger than 35 years, smokers, those who were unemployed, and those who had surgical symptoms (those requiring surgical, as opposed to medical, treatment) before RYGB surgery.

Despite the high prevalence of symptoms, 88% of patients felt better after surgery; only 8% felt worse. Quality of life, as measured by a validated questionnaire, was inversely associated with the number of symptoms.

Gribsholt SB, et al. *JAMA Surg* 2016 Jan 6 [Epub ahead of print]. ▼