

Nursing Agenda – Section 3 – Work Design

Issue 3.1: Nurse staffing at many health care facilities is inadequate/inappropriate for patient and nurse safety.

Issue	Recommended Action			Action Indicator
	Who	Does What	When	
3.1.1: Safe Working Hours¹ are often not the basis for decision-making on the (voluntary or mandatory) length of nursing shifts/work-weeks. High levels of nurse fatigue & stress are detrimental to the health and safety of both patient and nurse. Nurses often do not have sufficient input into staffing/scheduling decisions².	CNE, MCN, Nursing Organizations, MHA, Patient Safety Commission, Nurse researchers, Legislature	Set up collaborative staffing methodology to determine safe staffing per facility/service per day. Ensure appropriate nursing input into staffing/scheduling decisions through shared governance/decision-making.	By 2007	Systems and information technology are in place to assist healthcare entities as they progress from reactive staffing to prescriptive staffing to flexible Safe Working Hours staffing approaches.
		<ul style="list-style-type: none"> ▪ Utilize research findings/evidence to determine Safe Working Hours to improve both patient & nurse health & safety.³ ▪ Develop frameworks within which nurse-employers progress from: <ul style="list-style-type: none"> ○ A) reactive staffing approaches; to ○ B) prescriptive methods, such as staffing ratios, etc.; to ○ C) flexible staffing approaches to meet the needs of patients & anticipate loads. ▪ Use Magnet Hospital concepts⁴, Best Practices to generate Safe Working Hours options. <ul style="list-style-type: none"> ○ Consider synergy model⁵, in which patients' needs are matched to nurses' preparation and competency. ○ Develop self-scheduling guidelines. 	2007	Patient & nurse health & safety are improved.
		<ul style="list-style-type: none"> ▪ Support development of multidisciplinary councils or professional nurse councils (facility specific) to collaboratively determine staffing needs, staffing algorithms, and supportive information system software. ▪ Support research and information systems development for prediction of staffing needs on a real time basis. 	2007	Professional nurses have increased input to staffing decisions through shared governance/decision-making.

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Issue 3.2: The efficiency and effectiveness of many nursing work processes are poor.

Issue	Recommended Action			Action Indicator
	Who	Does What	When	
3.2.1: Work processes often are not designed to support patient-centered care or the efficiency & effectiveness of nurses.	Nursing organizations, MDCH, MHA, Patient Safety Commission, review & regulatory agencies, manufacturing and business entities, schools of business architecture, nursing, other partners, consultants	Redesign work processes for all health professionals to be focused on patient-centered care; maximize nursing efficiency & effectiveness. <ul style="list-style-type: none"> ▪ Develop multidisciplinary teams to collaboratively redesign work processes used by physicians, nurses, nurse aides, pharmacists, and other relevant health professionals. <ul style="list-style-type: none"> ○ Develop & provide best practices & models, (e.g., <i>High Reliability Organizations</i>⁶) to achieve focus on patient safety in the organization & planning of care⁷. ○ Develop & provide guidelines, tools, & templates to be used in nurse-employer entities to support work process CQIP⁸. 	By 2007	Healthcare researchers, healthcare stakeholders, and collaborative multidisciplinary teams redesign work processes. Tools for implementing redesigned work processes are disseminated.
		<ul style="list-style-type: none"> ▪ Multidisciplinary teams identify necessary supports for nursing patient-centered care tasks (support staff; access to information, functioning equipment, medications, etc.). <ul style="list-style-type: none"> ○ Provide nurses and all relevant care staff (on all shifts) with access to appropriate clinical care supports (staff, information, functioning equipment, medications, etc.). ○ Develop & provide guidelines, tools, & templates to be used in nurse-employer entities to support work process CQIP. 	By 2007	Multidisciplinary teams identify necessary supports for nurses providing patient-centered care. Tools for implementing support system are disseminated. Nursing direct-care time increases; nursing job satisfaction increases.

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Issue	Recommended Action			Action Indicator
	Who	Does What	When	
3.2.1 (cont.)		<ul style="list-style-type: none"> ▪ Work with representatives of manufacturing industries to improve work process efficiency & effectiveness. <ul style="list-style-type: none"> ○ Develop research capacity & partnerships among schools of business and nursing, healthcare entities, business partners, and MEDC. 	By 2007	Multiple business & nursing stakeholders collaborate in work process redesign.
		<ul style="list-style-type: none"> ▪ Identify and fund hospitals/units as laboratories for work design testing and translation of research into practice. <ul style="list-style-type: none"> ○ Provide incentives to nurse-employers and nurses who follow this path. 	By 2008	Selected hospitals/units test redesigned work processes.

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Issue 3.2: The efficiency and effectiveness of many nursing work processes are poor.

Issue	Recommended Action			Action Indicator
	Who	Does What	When	
3.2.2: The poor ergonomics of many nursing tasks contribute to injuries & stress. The physical stress of lifting/ moving patients and equipment is injurious to the health & safety of both patients & nurses	Nursing Organizations CNE, MHA, Patient Safety Commission, MDCH, MIOSHA, Public & Private Workers' Compensation agencies, OFIS, MEDC, universities, consultants	Institute national/state guidelines on ergonomics (OSHA, AHRQ, ANA, MIOSHA, state agencies) to prevent both patient and nurse injury. Use equipment for lifting and moving patients.	By 2007	Ergonomic guidelines are adopted and implemented in all Michigan nurse-employers.
		<ul style="list-style-type: none"> ▪ Use ergonomic guidelines, best practices and national models to develop safe lifting approaches for health care entities⁹. <ul style="list-style-type: none"> ○ Disseminate safe-lifting guidelines to all nurse employers and all practicing nurses through a state website, semi-annual communications, etc. ▪ Promote alternative approaches to moving/lifting patients. Use specialized furniture & equipment to lift/move patients.¹⁰ ▪ Educate all caregiver staff (nurses, physician assistants, nurses aides, porters, volunteers, etc.) on equipment-assisted lifting/moving of patients. 	By 2008	
		<ul style="list-style-type: none"> ▪ Work with educational institutions to ensure that nursing faculty, allied health faculty, and students in these fields receive this instruction as a component of curriculum. 	By 2008	Education programs on assisted lifting/moving of patients are widely available in worksites and education institutions.
		<ul style="list-style-type: none"> ▪ Provide incentives for nurse-employers that follow guidelines & decrease patient and nurse injuries. <ul style="list-style-type: none"> ○ State support competitions for Nursing Workplace Safety; engage State Accident Fund & MHA insurance entity. 	By 2008	Incentives are in place.

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Issue	Recommended Action			Action Indicator
	Who	Does What	When	
<p>3.2.2 (cont.)</p> <p>[Also see Section 1.1.5 on retention & rehabilitation.]</p>	<p>Nursing Organizations CNE, MHA, Patient Safety Commission, MDCH, MIOSHA, public & private workers' compensation agencies, OFIS, MEDC, universities, consultants</p>	<ul style="list-style-type: none"> ○ Educate CEOs, CFOs, COOs, Nurse Executives & Medical Directors on ergonomic guidelines and cost-benefit of implementation. ▪ Engage the medical equipment manufacturing community to innovate in the development of ergonomic medical equipment [Stryker; entrepreneurs]. <ul style="list-style-type: none"> ○ Explore shared-risk approaches to equipment development [MEDC]. ○ Promote benefit to Michigan economy through national & international healthcare market sales. 	<p>By 2007</p>	<p>Medical equipment manufacturing entities innovate lifting moving equipment for healthcare entities.</p>

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Issue 3.2: The efficiency and effectiveness of many nursing work processes are poor.

Issue	Recommended Action			Action Indicator
	Who	Does What	When	
<p>3.2.3: The knowledge and expertise of professional nurses often are not fully utilized; delegation of tasks impacts the efficiency & effectiveness of nurses, since nursing as a profession has accumulated tasks that should be delegated to other staff categories.</p> <p>See also Section 6, Scope of Nursing Practice, Issue 6.1.3 and Section 4, Nursing Education.</p>	<p>CNE, Board, MCN, Nursing Organizations, MHA, ANA, Nursing schools, other partners, consultants</p>	<p>Utilize best practices & national models to educate nurses and inform nurse employers as to which tasks nurses should retain and which tasks nurses should delegate – and to whom – with flexibility for differing circumstances.</p> <ul style="list-style-type: none"> ▪ Use best practices and national models to develop delegation algorithms and guidelines¹¹. <ul style="list-style-type: none"> ○ Explore use of specialized assistants (volunteers or staff). ○ Explore use of robots/robotics (increase or decrease efficiency?) ▪ Use best practices and national models to develop delegation education (NIC-based model¹²). <ul style="list-style-type: none"> ○ Prepare nurses pre-licensure for competency in delegation. ○ Prepare nurses post-licensure for competency in delegation. (See Section 4, Nursing Education, Issue 4.2.3 re: nursing internships/residencies.) ▪ Use Collaborative Multidisciplinary Teams (see above) to educate health professionals on delegation. ▪ Encourage appropriate distribution & utilization of nurses’ time, and matching of nurses’ capacities to patient needs to improve efficiency & effectiveness. 	<p>By 2008</p>	<p>Delegation algorithms & guidelines are implemented by nurse employers. Nurses are educated pre- and post-licensure on appropriate delegation. Multidisciplinary Teams are educated on appropriate delegation.</p>

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Issue	Recommended Action			Action Indicator
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<p>3.2.4: Electronic health information systems (EHIS) are often designed & implemented without adequate input from nurses responsible for patient care and quality assurance. As a result, EHIS often do not produce expected benefits in cost/efficiency/quality. Standardized formats & nursing terminology are not used in EHIS, which decreases the continuity, safety, and quality of patient care locally & nationally.</p>	<p>CNE, Nursing Organizations, MHA, MCN. Patient Safety Commission, ANA, federal agencies, IT businesses, consultants, HANDS Research Project</p>	<p>Enhance electronic health information systems locally & nationally to: improve the quality of nursing communication & decision-making in practice; promote continuity and safe patient care across nurses, providers, and care settings; and support interoperability of systems generating reliable nursing data used in evaluation and improvement of nursing care.</p> <ul style="list-style-type: none"> ▪ Assure that nurse executives, and nurse clinicians of all levels are involved in design, selection, implementation, evaluation, and improvement of electronic health information systems (EHIS). ▪ Collaborate with & build on existing efforts to produce national nursing documentation terminology & data collection standards¹³. ▪ Promote learning & use of standardized nursing terminology by nursing students, faculty, administrators, and clinicians. ▪ Integrate standardized nursing terminology in EHIS nationally & locally to ensure consistency of nursing data and interoperability of EHIS. ▪ Require education & periodic re-education of all users of EHIS to ensure reliability and validity of data. ▪ Track reduction in healthcare error rates due to improved communication of information. ▪ Track reduction in documentation time of nurses and other healthcare professionals due to improved integration of EHIS.¹⁴ 	<p>By 2010</p>	<p>Appropriate infrastructure and integrated electronic health information systems with standardized nursing terminology are in place and all users are appropriately trained.</p>

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- ¹ Safe Working Hours is a concept that takes into account the health and safety of both patients and nurses; it balances patient load and needs with the capacities of nursing staff, and is a flexible response to the needs of patients, nurses, and healthcare facilities. See references below.
- ² The October 12 to October 30, 2005 strike of nurses at Ingham Regional Medical Center in Lansing, Michigan was settled with ratification of a three year contract addressing the issue of nurse staffing through additional hiring for three units in the hospital, plus a Nursing Council to have input to staffing. [Lansing State Journal, November 1, 2005.]
- ³ Safe Working Hours must consider the detrimental effects of both mandatory and voluntary extended shifts and work weeks. The health and safety of both the patient and the nurse are negatively affected by the fatigue and stress associated with long work hours; for the nurse, this includes sleep deprivation, impaired decision-making, and other inescapable consequences of attempting to work too long and too hard. We regulate the shift length and time-between-shifts of pilots, bus drivers, and truck drivers, so that they will not endanger the health & safety of their passengers or others; surely nurses are no less significant to the health and safety of healthcare consumers. [Rogers, A.E., Hwang, W., Scott, L.D., Aiken, L.H., & Dinges, D.F. (2004). The working hours of hospital staff nurses and patient safety. *Health Affairs*, 23, 202-212.] [JONA, 2004] [Institute of Medicine. (2004). *Keeping patients safe: Transforming the work environment of nurses*. Committee on the Work Environment for Nurses and Patient Safety. Washington, D.C.: National Academy Press.] [Aiken, L.H., Havans, D.S., & Sloan, D.M. (2000). The magnet nursing services recognition program: A comparison of two groups of magnet hospitals. *American Journal of Nursing*, 100(3), 26-35.] [Malangoni, M., Como, J., Mancuso, C., & Yowler, C. Life after 80 hours: the impact of resident work hours mandates on trauma and emergency experience and work effort for senior residents and faculty. *Journal of Trauma-Injury Infection & Critical Care*. 58(4):758-61, 2005 Apr.]
- ⁴ The Magnet hospital program recognizes workplaces that foster nursing excellence and support professional nursing practice. Such a workplace culture has been shown to improve patient outcomes, increase levels of patient/resident/client satisfaction, and significantly lower rates of nurse burnout. [American Nurses Association (2005). *ANA's Health Care Agenda 2005*.] [McClure, M.L. & Hinshaw, A.S. (2002). *Magnet hospitals revisited: Attraction and retention of professional nurses*. Washington, D.C.: American Nurses Publishing.] [Capuano, T., Bokovoy, J., Halkins, D., Hitchings, K. Work flow analysis: eliminating non-value-added work. *Journal of Nursing Administration* 34(5):246-56, 2004 May.]
- ⁵ Hardin, S.R., Kaplow, R. (ed). (2005). *Synergy for clinical excellence: The American Association of Critical Care Nurses synergy model for patient care*. Boston: Jones & Bartlett.
- ⁶ High Reliability Organizations are discussed and resource materials provided at: www.highreliability.org, <http://healthcare.isixsigma.com>, <http://www.ncbi.nlm.nih.gov>, <http://www.ihl.org>, and <http://psnet.ahrq.gov>.
- ⁷ See the work of hospital architect Craig Johnson (funded by the Robert Wood Johnson Foundation) of Georgia Technology Institute for ways in which hospital design can improve the efficiency and efficacy of work for all health professionals, and particularly the work processes of nursing.
- ⁸ A Continuous Quality Improvement Process (CQIP) involves educating all relevant workers/participants to identify problems that decrease quality, efficiency, & effectiveness, and propose solutions. Problems and potential solutions are brought to a CQIP committee (including administrators and staff), which prioritizes and implements solutions. Quality measures are collected and analyzed continuously to evaluate CQIP effectiveness. Once instituted, the CQIP approach becomes a permanent feature of the workplace, "continuous" rather than episodic [See Berwick, D.M., Godfrey, A.B., and Roessner, J. (1990). *Curing health care: New strategies for quality improvement*. San Francisco: Jossey-Bass.]
- ⁹ See: Homola, J., Ergonomic program benefits, *Employee Safety & Disability Management Services News & Views*, June, 2001; American Nurses Association (2003). *Position Statement on Elimination of Manual Patient Handling to Prevent Work-Related Musculoskeletal Disorders*.
- ¹⁰ The use of trained volunteers or alternative staff to lift/move patients is not a solution to the ergonomic stress problem. Forty years of back injury prevention education and body mechanics training have not provided effective management of this problem, since those who lift/move patients eventually sustain back

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injury, adding further to the cost of healthcare. [D. Tyler, Project Communication, 2005.] See Swirczek, P., Uplifting possibilities: A multifaceted success story on the use of ceiling lifts in healthcare. *Employee Safety & Disability Management Services News & Views*, June 2001. This article call attention to the multiple advantages of appropriate moving/lifting equipment: improvements in patient and nurse health/safety; decreases in injuries, lost time, and associated costs; and improved recruitment and retention of nursing staff. Also see: Nielsen, K., Trinkoff A. (2003). Applying ergonomics to nurse computer workstations: review and recommendations. *Computers, Informatics, Nursing* 21(3):150-7, 2003 May-Jun.

¹¹ National Council of State Boards of Nursing: delegation algorithm. See: www.ncsbn.org.

¹² NIC is a nursing intervention classification terminology. It is often mentioned in company with NOC, a nursing outcomes classification terminology. Both have been developed over the past ten years by national nursing workgroups. See: <http://nursingworld.org/nidsec/prtlist.htm>.

¹³ The Hands-on Automated Nursing Data Systems (HANDS) Care Planning Method integrates NANDA, NOC, and NIC terminologies, adheres to ANA NIDSEC data standards, and thereby ensures interoperability.

¹⁴ Keenan, G., & Yakel, E. (in press). Promoting safe nursing care by bringing visibility to the disciplinary aspects of interdisciplinary care. *American Medical Informatics Association Fall 2005 Conference* (submitted paper). American Medical Informatics Association: Washington, D.C.

Keenan, G., Stocker, J., Geo-Thomas, A., Soporkar, N., Barkauskas, V., & J. Lee (2002). The HANDS project: Studying and refining the automated collection of a cross-setting clinical data set. *Computers, Informatics, Nursing*, 20(3):89-100.

Keenan, G. Principal Investigator (2004-2007). RO1 award from DHHS (NIH, AHRQ), *Health Information Technology (HIT): Support for Safe Nursing*.

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