

Recommendations

These recommendations take into consideration testimony originally coded to EdP (13)¹, as well as other sources, as noted.

- M1. Michigan health-care professionals should be educated and licensed in ways that promote safer care. In particular, every health professional should be educated to:
 - o M1a. Deliver patient-centered care as a member of an interdisciplinary team.
 - o M1b. Emphasize evidence-based practice applied within a systems perspective.
 - o M1c. Use a variety of patient safety and quality improvement methods and approaches.
 - o M1d. Broadly apply and utilize informatics.
- M2. Regulatory agencies and licensing boards should, as a condition of initial licensure and license renewal, require all health-care professionals to demonstrate knowledge and performance skills related to patient safety through approved and appropriate discipline-specific patient safety education.² Such curricula should support recommendation M1 and be grounded in research. Specifically, health professions education and continuing education curricula should include training to:
 - o M2a. Understand patient safety from a systems perspective for all health-care settings.
 - o M2b. Cooperate, communicate and integrate care in teams to ensure that care is continuous and reliable.
 - o M2c. Identify errors and hazards in care in a variety of health-care settings.
 - o M2d. Design interventions to improve the safety of systems and processes of care.
 - o M2e. Use basic safety design principles such as standardization and simplification.
 - o M2f. Apply clinical evidence to health-care operations within a systems perspective.
 - o M2g. Use informatics which, in its broadest application, supports communication, manages knowledge, and supports decision making using information technology.
- M3. Professional societies and organizations should:
 - o M3a. Align to promote standardization across all curricula for all health-care settings that impede safety and might lead to harm.
 - o M3b. Provide leadership, guidance and support to members to develop, implement, and evaluate working in interdisciplinary teams.
 - o M3c. Identify relevant evidence-based research and disseminate it for application in health-care operations.
- M4. The Michigan Department of Education (MDE) should:
 - o M4a. Inventory existing health-care education and continuing education programs, their oversight bodies, and related accreditation, licensing and regulatory requirements to gain a deeper understanding of their inter-related functions. Conduct a comprehensive review of newer health-care practices, particularly in ambulatory care settings, that might warrant additional oversight in this context.
 - o M4b. Recommend modifications to the structure and function of the health professions education system to achieve recommendations M1 and M2. To the extent that legislative or administrative rule changes are required, work with legislative and agency leaders to design such measures.

- o M4c. Oversee a voluntary collaboration of professional schools and organizations to develop competency-based education integrating patient-centered care, interdisciplinary teamwork, evidence-based practice, systems perspective, a variety of patient safety and quality improvement methods, and broad application of informatics. MDE should evaluate on an annual basis and over a five-year period whether significant progress has been made toward the main goals stated above. If MDE determines that progress has been insufficient, legislation should be proposed to mandate development, implementation, and evaluation of curricula that will yield the desirable results.
- o M4d. Require registration of all training programs in the State of Michigan.
- o M4e. Require that educational programs attain national accreditation in applicable disciplines for which national accreditation is available.
- M5. The Michigan Partnership for Safe Health Care should convene a task force of undergraduate, graduate, and continuing education providers for medicine, nursing, pharmacy, and other professional training programs and associations to
 - o M5a. Develop competency or outcome-based educational programs.³
 - o M5b. Review and develop multi-disciplinary curricula, assess “best practices,” determine successful implementation strategies, and evaluate and test multiple collaboration based-approaches and outcomes in a variety of health-care settings.
 - o M5c. Communicate regularly with MDE about status and progress of this initiative.

Clarification

In preparing for Round Two, the Analytic Team has minimized overlap between the areas of Professional Education and Regulation and Licensing. All recommendations, rationale and research previously included in Regulation and Licensing that address the education of individual health professionals have been included in this report.

Rationale

The challenges posed by a changing health-care environment require a renewed focus on the training of tomorrow’s health-care professionals. The time has come for leaders across the professions, local, state, and national governments to work together to effect reform in clinical education and related training environments. The cultural changes necessary to support such reform efforts should also be given careful consideration. Educational institutions have an essential part to play in instilling a sense of being a lifelong learner and employers have a role in shaping ongoing professional development of health professionals.

The Health Professions Bureau in the Michigan Department of Community Health regulates 340,000 health professionals in 32 health-care occupations.⁴ Currently, courses in patient safety are not included in the educational requirements for initial licensure or license renewal for any of these professions, though enacting such requirements is within the Bureau’s administrative rulemaking authority.⁵

The current lack of coordinated oversight across the continuum of health-care education results in fragmented responsibilities for undergraduate and graduate education, licensing, and certification. The variation in standards, expectations, and quality of education are an additional barrier to developing and maintaining a well-educated and appropriately trained workforce, throughout the continuum of care.⁶ A comprehensive overview of health professions educational standards, requirements and oversight, and perhaps changes to the existing structure, would provide the context needed to ensure such consistency.

Evidence for harm reduction

A continuing education program for radiologists that incorporated patient safety principles reduced potential harm to patients by improving stroke diagnosis error rates from 18 percent to 1 percent and reducing “inconclusive” readings on breast cancer exams from 14 percent to 6 percent, saving 1,600 other women from undergoing a second exam and getting others into treatment earlier.⁷ Anesthesiologists are widely recognized as leaders within medicine in improving patient safety. Incorporation of safety principles and practices has contributed to a decline in deaths due to anesthesia-related errors from 1 death per 5,000 cases to 1 per 200,000.⁸ Both costs related to harm and malpractice premiums have also declined.⁹ Despite a decline in hospital deaths due to anesthesia errors, office-based anesthesia results in harm and death too often. Many physicians and nurses delivering anesthesia are inadequately trained and poorly equipped to handle emergencies.¹⁰ Regulations enacted in a number of other states restrict provision of deep sedation, general anesthesia and certain regional anesthesia to practitioners with appropriate training and to follow national safety guidelines.^{11 12}

Though the IOM noted a paucity of research documenting the impact of accreditation, licensure, or certification on clinician performance or health outcomes,¹³ setting educational and competency standards as a condition of licensure remains a critical lever for change and there is considerable room for improvement regarding competency development. It is critical, for example, that accreditation standards imposed on educational programs are reinforced in licensing exams.

Assessment

Advantages

- Integrating a core set of competencies shared across the professions into the health professions oversight spectrum would provide the most leverage in terms of reform of health professions education.¹⁴
- The Public Health Code already permits licensing boards to evaluate health professionals’ competence and require specific types of continuing education. Thus, some of the recommendations require only changes to administrative rules, a less cumbersome process than statutory changes.
- Health-care professionals are already required to take mandatory continuing education; strengthening and focusing license renewal requirements should improve knowledge and skills related to patient safety.

Barriers

- The current lack of coordinated oversight and variation in standards, expectations and quality of education is a considerable barrier.
- The licensing boards’ activities are governed by administrative rules specific to each health-care occupational group. Thus, changes to each occupational group’s licensing board’s administrative rules may be required.
- To develop, implement and monitor compliance with new continuing education requirements, licensing boards will require additional financial and human resources. Financial and human resources will also be needed by education providers to review curriculum and teaching methods and develop and adopt improvements.¹⁵ Health-care professionals already assume some level of financial responsibility related to continuing education, so there may be no additional costs for them.
- Professionals may not choose to take continuing education courses in patient safety unless they are a requirement for licensure/re-licensure. The time available for continuing

education is limited and time spent on patient safety will reduce time available for other important practice-specific topics. In addition, unless a sufficient number of hours are required, understanding of basic patient safety concepts and the depth of knowledge may be inadequate and, if only cognitive approaches are used, technical skills may be lacking.

- The greatest challenge to improving the teaching of professionalism for safe health care lies in the health-care culture. The current emphasis on throughput has eroded the clinical learning environment and diminished the time available for appropriate on-the-job education. The resulting poor communication and increased number of hand-offs increase the risk of patient harm. Decreasing the commercial emphasis and improving the service orientation of health care will not be easy, however, in light of the current commercial forces in health care.¹⁶

Implementation

Further research

- Investigate mechanisms by which regulated health-care professionals should be required to demonstrate competence in the knowledge, judgment, technical skills and interpersonal skills relevant to their jobs through their careers^{17 18 19}
- Develop and test educational approaches that support current expectations for collaborative and cooperative multi-disciplinary relationships.
- Determine the best approach to integrate safety topics in professional education to improve outcomes.
- Identify the best way to incorporate the “culture of safety” in training, apprenticeship, and maintaining in a practice environment.

Legislation and/or administrative rules

- Review the Public Health Code pertaining to the registration of training programs, recommended accreditation of schools, and assessment of licensing boards and licensing requirements.

Resources

The following needs for resources were raised:

- Development of cross-cutting educational programs that aim to incorporate the above mentioned six points, including development, testing, implementation and measurement of outcomes to evaluate the impact of tested curriculum changes.
- Inventory of all health professions, training programs and requirements, associate licensing and accreditation status requirements and the extent of patient safety related education included in curricula and licensing requirements.

Incentives

- Publish “success stories”—accomplishments and experiences with proven patient safety curricula and continuing education courses—on a prominent Web site. This resource could also serve to promote the incorporation of patient safety topics in health professions education.

Specific steps and target dates

Following adoption of these recommendations, the following steps will take place.

- Within 12 months, licensing boards will develop patient safety continuing education requirements for all regulated health-care professionals. Boards should determine the specific content and how many hours are required for most professionals to gain at least a minimal awareness of patient safety issues.
- Within 36 months, the Michigan Department of Education will conduct its inventory of health professions education programs.
- Within 42 months, the Michigan Department of Education or the Michigan Partnership for Safe Health Care will develop and promote a Web site containing links to online courses pertaining to the four goals. The list will include generic training materials, applicable for multiple health-care professionals, and profession-specific educational materials.
- Within 5 years, the Michigan Partnership for Safe Health Care will develop and test various multi-disciplinary educational approaches with the purpose of attaining the above-mentioned goals.

Summary of additional research

The Institute of Medicine (IOM) and others have found that very few licensing boards focus on competence related to patient safety or have promulgated standards focused explicitly on the science of safety.^{20 21} State commissions in Missouri and Florida also identified deficiencies. As in Michigan, mandatory patient safety continuing education was not required for license renewal in Missouri; unlike Michigan's, Missouri's boards were not allowed to make the requirement by law.^{22 23 24} Florida was in a similar situation. Its safety commission recommended legislation requiring certain health professionals to take a course in medical errors and patient safety as a requirement for initial licensing and re-licensing. The recommended course would include root cause analysis, error reduction, error prevention and patient safety practices.²⁵

As for general competence, the Pew Health Professions Commission found that ensuring the competence of health-care professionals throughout their careers is a serious problem: continuing education doesn't guarantee competence, most licensing boards do not require periodic demonstrations of competence for continued licensure, and most legislatures have not allowed or required licensing boards assess continuing competence.²⁶ The Commission recommended that states require regulated health-care professionals to demonstrate competence in the knowledge, judgment, technical skills and interpersonal skills relevant to their jobs throughout their careers.²⁷ Agreeing with the Pew Commission, the IOM also found that most states do not assess competence after initial licensure.²⁸ The IOM recommended that performance standards and expectations for health professionals focus greater attention on patient safety. It also recommended that health professional licensing boards work with certifying and credentialing organizations to implement periodic re-examinations as a condition of re-licensure focused on competence and knowledge of safety practices for physicians, nurses, and other key providers²⁹ and that boards develop more effective methods to identify unsafe providers and take action.³⁰

Testimony overview

Summary

The recommendation is compiled from 31 testimony recommendations pertaining to professional education. A total of eleven (11) recommendations were double-coded, where the recommendation fits more than one description. The double-coded recommendations included: education and collaboration (1), human design (1), education of consumers (3), inclusion of

patients (2), need for resources (1), adoption of medication safety practices (1), professional licensing (1), and guiding principles for safe care (1).

Key findings

- Provide patient-centered care.
 - o A forum should be established to align professional societies and organizations to promote standardization across education and training curricula.³¹ In addition, enhanced and increased clinical nursing education was recommended.³²
 - o Educational requirements and standards for front line mental health care workers are deemed necessary.³³
 - o In adult living facilities, Methicillin Resistant Staphylococcus Aureus (MRSA) is a growing concern as the infection is very serious and treatment is difficult. Education about its management and control is important³⁴.
 - o Patient safety cannot be effective unless the State of Michigan addresses the crisis in nursing homes. We should begin to build a partnership with the state's teaching facilities to provide training for Certified Nurse Assistants.
 - o Occupational therapy and physical therapy should also play an active part in training staff on safe patient transfer techniques to limit both patient and staff injuries.³⁵
 - o Special consideration should be given to serious safety issues related to practitioners not trained in anesthesia who are delivering office-based anesthesia.³⁶
 - o Special consideration should be given to serious safety issues related to the oversight and use of ionizing radiation by practitioners who lack recommended radiation safety training.³⁷
- Work in interdisciplinary teams.
 - o As part of team-focused work environment, HCO staff must be educated and skilled to conduct error analyses in a technologically complex work environment. For example, the application of root cause analyses (RCA) or health care failure mode and effect analyses (HF-FMEA).³⁸
 - o Core competencies for direct care providers must emphasize a science-based approach to preventing health-care errors.³⁹
- Employ evidence-based practice.
 - o Development of additional educational programs focused on patient safety to assist clinicians to be better equipped to protect the safety of patients in our care.⁴⁰ Patient safety should be an ongoing educational process.⁴¹
 - o Professional schools should have as requirement patient safety courses and training as a basic curriculum requirement prior to graduation.⁴² Recommend the promotion of funding for education of nurses and nursing educators.⁴³ In addition, Schools of Nursing need to graduate more RN's as many will be retiring soon and more nursing staff at the bedside is needed to replace those approaching retirement.⁴⁴
 - o It is important that providers and consumers find ways to educate both clinicians and consumers about a systems-based approach to patient safety and to develop awareness that health-care systems are intrinsically dangerous.⁴⁵
 - o A system is needed in each state that is responsible for patient safety. In order to be successful, these bodies must include consumers, including family members, and health-care providers. Families need to be involved every step along the way.⁴⁶
 - o Involving patients or their caregivers in the process of care increases the responsibility and ability to participate in the care process and to act as a final check

- point to avoid a potential misadventure. Learning how to communicate with the patients and care givers in a language they understand.⁴⁷
- o Professional societies and groups can help to reduce medical errors by assisting as advocates for health care patient safety efforts and by identifying current relevant research and applicability to health-care operations.⁴⁸
 - Apply quality improvement
 - o Recommendations spoke to the need of continuous education of clinicians, using peer review processes.⁴⁹ In addition, peer-education was recommended to train HCO staff to better support new staff as a means to retain new staff.⁵⁰
 - o A patient safety continuing education requirement for all Michigan licensed health-care professionals should be mandatory as part of the continuing medical education requirement for licensure as has become practice for some other states (e.g. Florida).⁵¹ Patient safety training should be required as part of an organizations annual staff competency program.⁵²
 - o Patient safety issues should be identified and used to develop a priority index relevant to each aspect of care in the clinical continuum, i.e. hospital, home care, nursing home, pharmacy, etc. Each provider has its own priority index and a communications plan is in place to make providers aware of the index and rationale behind it. Effective education about the topic is developed to address each item in the priority index.⁵³
 - o The patient safety culture needs to develop from a long tradition of punitive responses to clinical errors and adverse outcomes in health care. These issues must be overcome by leadership, education, and an infrastructure of organizational policies that support a non-punitive reporting of errors.⁵⁴
 - o Several initiatives can improve patient safety statewide, such as combating problems associated with health literacy and cultural competency.⁵⁵
 - Utilize informatics
 - o The utilization of simulators for complex health-care situations should help increase patient safety and reduce the risk of medical errors.⁵⁶ From a pharmaceutical perspective, information and warnings about post polio reactions must be included in all pharmaceutical databases, so that it will be readily available.⁵⁷
 - o Purchasers of care could provide focus for health-care organizations by requiring clinician training regarding human factors theory and communication techniques.⁵⁸
 - o To accomplish a change in the culture of safety in a variety of settings, substantial training and re-engineering of clinical processes should take place.⁵⁹

Review Panel Round One

Scoring summary

In Round One, the Review Panel was asked to score each recommendation area on a scale of 1 to 5, where 5=extremely viable, 4=very viable, 3=somewhat viable, 2=potentially viable with changes, and 1=not viable for this project.

Score regarding the relevant recommendation considered in Round One:

- Educate Health-Care Professionals (Code 13, EdP): Average score was 3.6.

Notes

- The Review Panel expressed a need to include non-licensed health professionals in educational curricula.
- The Panel was supportive of the general approach of interaction of Boards with academia.
- They also noted that health professional organizations should be enlisted to support the recognition of patient safety within the actions of the profession.

Endnotes

¹ Code 13 (EdP). The submitted testimony recommends development and implementation of curricula to educate health-care professionals and other health-care organizations personnel in patient safety topics and in the implementation of patient safety programs within health-care organizations.

² Testimony 204W:103-106.

³ Carraccio, C., Wolfsthal, S., Englander, R., et al. Shifting paradigms: From Flexner to competencies. *Academic Medicine*. May 2002; 77(5):361-367.

⁴ Department of Community Health, Bureau of Health Professions. General overview. Retrieved July 13, 2005, from http://www.michigan.gov/mdch/0,1607,7-132-27417_28139_28150---,00.html.

⁵ http://www.state.mi.us/orr/emi/admincode.asp?AdminCode=Single&Admin_Num=33810101&Dpt=CH&RngHigh= - Accessed April 25, 2005.

⁶ Crossing the quality chasm: A new health system for the 21st century. (2001) Institute of Medicine. National Academies Press. Washington, D.C.

⁷ Green J. (2001). New approach uses CME to reduce medical errors. *AMNews*. Retrieved April 5, 2005, from www.ama-assn.org/amednews/2001/02/19/prsa0219.htm.

⁸ Hallinan, J.T. (June 21, 2005). Once seen as risky, one group of doctors changes its ways. *Wall Street Journal*, pp. A1, A8, A9.

⁹ Hallinan, J.T. (June 21, 2005). pp. A1, A8, A9.

¹⁰ Smith, T. (May 22, 2005). Regulations have made office-based anesthesia safer: the case of woman dying during an abortion prompted changes. *Richmond Times Dispatch*. Retrieved July 8, 2005, from http://www.timesdispatch.com/servlet/Satellite?pagename=RTD/MGArticle/RTD_BasicArticle&cid=1031782853963

¹¹ American Society of Anesthesiologists. State legislative and regulatory activities. Retrieved April 26, 2005, from <http://www.asahq.org/Washington/rulesregs.html>

¹² American Society of Anesthesiologists. (October 27, 2004). Guidelines for office-based anesthesia.

¹³ Patient safety: Achieving a new standard of care. (2003) Institute of Medicine. National Academies Press. Washington, D.C.

¹⁴ Greiner, A.C., Knebel, E. (2003). *Health Professions Education: A Bridge to Quality*. Institute of Medicine. National Academies Press. Washington, D.C.

¹⁵ Griner, P.F.M., Danoff, D.M. (2000). Sustaining change in medical education. *Journal of Medical Association* 283 (18): 2429-31.

¹⁶ Ludmerer, K.M. (1999). Instilling professionalism in medical education. *Journal of Medical Association* 282 (9): 881-882.

¹⁷ Finnocchio, L.J., Dower, C.M., Blick, N.T., & Gragnola, C.M. (1998). *Taskforce on health care Workforce Regulation - Strengthening Consumer Protection: Priorities for health care Workforce Regulation*. San Francisco: Pew Health Professions Commission.

¹⁸ Kohn L.T., Corrigan J.M., Donaldson M.S. (Eds.). (1993). *To err is human: building a safer health system*. Washington, DC : National Academy Press. (pp. 135).

¹⁹ Missouri Commission on Patient Safety (July 2004). *Missouri Commission on Patient Safety : Report Presented to Governor Bob Holden, July 2004*. Retrieved July 13, 2005, from <http://www.insurance.mo.gov/aboutMDI/issues/patsafety/PatientSafety.pdf>. (pp. iv)

²⁰ Kohn, Corrigan & Donaldson, 1999. (pp. 132).

²¹ Kohn, Corrigan & Donaldson, 1999.

²² Missouri Commission on Patient Safety. 2004, (pp. 20).

- ²³ Missouri Commission on Patient Safety. 2004, (pp. iv).
- ²⁴ Missouri Commission on Patient Safety. 2004, (pp. 22).
- ²⁵ Commission on Excellence in Healthcare. (2001). *A Comprehensive Statewide Strategy for Improving the Healthcare Delivery System through Meaningful Reporting Standards, Data Collection and Review, and Quality Measurement*. Department of Health and Agency for Health Care Administration. (pp. 22).
- ²⁶ Finnocchio, Dower, Blick, & Gragnola (1998).
- ²⁷ Finnocchio, Dower, Blick, & Gragnola (1998).
- ²⁸ Kohn, Corrigan & Donaldson, 1999. (pp. 135).
- ²⁹ Kohn, Corrigan & Donaldson, 1999. (pp. 134).
- ³⁰ Kohn, Corrigan & Donaldson, 1999. (pp. 134).
- ³¹ From testimony 212W.
- ³² From testimony 809O.
- ³³ From testimony 201O.
- ³⁴ From testimony 819B.
- ³⁵ From testimony 827W, lines 94-96.
- ³⁶ From testimony 826W, lines 161-166.
- ³⁷ From testimony 829W, lines 30-33.
- ³⁸ From testimony 808B.
- ³⁹ From testimony 102W, lines 115-117.
- ⁴⁰ From testimony 811O.
- ⁴¹ From testimony 827W, lines 118-119.
- ⁴² From testimony 827W, lines 106-108.
- ⁴³ From testimony 809O, lines 86-88.
- ⁴⁴ From testimony 402W, lines 94-98.
- ⁴⁵ From testimony 405O, lines 201-205 and 207-208.
- ⁴⁶ From testimony 403O, lines 28-33.
- ⁴⁷ From testimony 204O, lines 88-97.
- ⁴⁸ From testimony 110W, lines 79-83.
- ⁴⁹ From testimony 202O.
- ⁵⁰ From testimony 208O, lines 9-75.
- ⁵¹ From testimony 204W, lines 100-103.
- ⁵² From testimony 411W, lines 101-102.
- ⁵³ From testimony 204W, lines 76-83.
- ⁵⁴ From testimony 103O, lines 22-37.
- ⁵⁵ From testimony 904W, lines 68-69.
- ⁵⁶ From testimony 826W.
- ⁵⁷ From testimony 823-O.
- ⁵⁸ From testimony 110W.
- ⁵⁹ From testimony 605B, lines 31-32.