

Michigan Nursing Programs

Prepared by MDCH, Office of the Chief Nurse Executive (517/241-9841)

Boilerplate Report, P.A. 213 of 2008

2008 STATUS OF NURSING EDUCATION PROGRAMS IN MICHIGAN

55 of nursing degree programs at Michigan post secondary institutions

- 36 Programs, Associate Degree in Nursing (ADN)
- 19 Programs, Pre-licensure Baccalaureate in Nursing (BSN)
- 15 Programs, BSN completion programs (for ADN graduates)
- 9 Programs, Masters in Nursing or Nursing Education (MSN)
- 3 Programs, Doctorate in Nursing Program (PhD, RN)
- 1 Programs, Doctorate in Nursing Practice (DNP)

Nursing Seats

There are approximately 6,297 nursing seats available annually.

Nursing Faculty

Faculty needed to maintain and expand nursing education program seats.

The rapidly aging nursing faculty and nurses in practice demand action too.

Analysis of Barriers to Employment of Nurses.

This analysis assumes that the intent of the boilerplate is to identify barriers to the admission and completion of nursing education and timely entry into the healthcare workforce. There are problems and solutions at the following levels:

1. Program Admission

There are differences in admission policies particularly in ADN programs. Some schools have “open admission” policies that allow all interested students to apply and be admitted in turn. Other schools require “qualifying” criteria that make it more likely that a student will be able to successfully complete the program. In both cases, supported retention programs are needed in all schools to assure success and alleviate “wasted” seats that also create decreased faculty productivity. The looming faculty shortage is exacerbated by student attrition.

2. Faculty nursing education requires both classroom faculty and clinical (hospital, home care, long term care) faculty.

The Michigan Nursing Corps proposal (attached) identifies solutions for faculty needs for increasing nursing seats. It does not identify the need or numbers needed to replace retiring and resigning faculty.

Michigan nursing education programs (as well as at the national level) report that 50-75% of their faculty are eligible to retire today. Another 50% will be eligible to retire in the next 10 years.

This is the real crisis in the nursing shortage.

3. Clinical placements

Clinical placements have also been a barrier to timely completion of nursing education in Michigan. Some students and parents have reported as high as six years wait for clinical placements. This is a problem of lack of facilities and clinical faculty.

Progress has been made in this area through the Michigan Accelerated Healthcare Training Initiative (MiAHCTI). This 3 year program was a partnership of the Michigan Department of Community Health (MDCH) and the Michigan Department of Labor and Economic Growth (MDLEG). Community Partners include nursing programs, hospitals, long term care facilities and Regional Skills Alliances.

A web-based clinical placement and student “passport” system were funded in Southeast Michigan. This system is already opening up additional clinical slots. MiAHCTI also funded training for hospital nurses to become part time clinical instructors. Over 3,500 additional clinical slots and clinical instructors are now available across the state as a result of the MiAHCTI.

4. Technology in Nursing Education

A key area for quality, safety and nursing education capacity improvement is in high fidelity simulation and technology. The Michigan Nursing Corps proposal (attached) identifies outcomes and resources needed for such an investment. Community based and mobile units are needed to make these improvements.

Conclusion

While the current appropriation support for the Michigan Nursing Corps (2008 and 2009) helps prepare small numbers of classroom and clinical faculty, Michigan will not be able to maintain, much less increase nursing education capacity without an aggressive program to educate more classroom and clinical faculty.

The estimated number of nursing faculty needed now and into the future are:

Master’s Prepared Faculty Needed: 1,300

Doctoral Prepared Faculty needed: 400

Further data and analyses are needed to determine the number of Clinical Faculty needed.

What We Still Need To Do About the Michigan Nursing Shortage

Why Is There Still So Much To Do?

Old solutions to nursing shortages will not work in this new and complex environment of demographic extremes, emergency preparedness, health systems issues, and economic issues. These times call for bold, rapid actions and responses, such as the *2005 Accelerated Health Care Training Initiatives* and the *Michigan Nursing Corps*. The *Nursing Agenda for Michigan* includes the short-range, mid-range, and long-range action steps we must take to ensure an adequate supply of well-prepared, professional nurses -- the nurses who will care for Michigan residents in the future. See the complete *Nursing Agenda* online at www.micomon.org. Contact the Office of the Michigan Chief Nurse Executive at: (517) 241-9841. [May 2007]

Nursing Education Initiatives Needed in 2007/2008

- Governor Granholm has proposed the Michigan Nursing Corps, an initiative to prepare 500 new nursing educators to educate 3,000 nurses. This \$45 million three-year initiative will:
 - Prepare 300 Master's degree nursing faculty in 12-month accelerated programs who will teach in Michigan's nursing schools & colleges.
 - Prepare 200 clinical nursing faculty through a certificate program and a uniform statewide curriculum; these clinical faculty will ensure the availability of clinical placements for nursing students
 - Produce 20 doctorally prepared nursing faculty to teach in Michigan universities, educating nurses seeking Master's degrees
 - Recruit and support 200 displaced Michigan workers with appropriate Bachelor's degrees to participate in one-year accelerated BSN programs.
- Educate qualified Licensed Practical Nurses to become Registered Nurses through appropriately supported and structured nursing education programs.
- Work with the Michigan Center for Nursing and other healthcare partners to maximize

clinical placements through a web-based clinical placement & student passport system to ensure that nursing students graduate in a timely manner.

- Develop appropriate education programs for new nursing graduates to begin their careers in home health services and community care delivery to meet growing needs.
- Develop sponsored regional workshops for nursing faculty and hospitals, to provide mutual updates on a) innovations in the hospital nursing environment and b) nursing research.
- Work with Michigan Community Colleges and Michigan Legislators to maximize the retention and success of currently enrolled Community College nursing students.

Nursing Recruitment and Retention Actions Needed in 2007/2008

- Improve the organization and design of nursing tasks to make them more efficient and effective, and to improve nurse retention.
- Improve the ergonomics of nursing tasks to improve the health and safety of patients and nurses.
- Work with Michigan hospitals to set up collaborative multidisciplinary teams to manage and deliver patient care and increase shared decision-making.
- Create a more respectful and supportive nursing workplace to improve retention of the existing nursing workforce.
- Develop sponsored workshops for mid-career nurses to facilitate adjustment to changing work design and work environment in healthcare systems.

Nursing Regulatory and Licensure Actions Needed in 2007/2008

- Convene a Task Force on Nursing Education and Regulation to review the status of nursing in Michigan in the light of national standards for: nursing education, including accreditation and unified curriculum; credentials; practice; and regulation. The Task Force will produce recommendations with respect to changes in nursing education and credentials, enhanced standards of nursing practice, and appropriate regulation.

What Have We Done About the Michigan Nursing Shortage?

What is the Problem? Michigan and the nation have a rapidly worsening nursing shortage. The Michigan Department of Labor and Economic Growth estimates that by 2015, Michigan will need 18,000 additional RNs. A nursing shortage has implications for the availability and quality of healthcare, as well as the safety of patients and nurses. Education of new nurses is reduced by a shortage of qualified faculty (average age 51.1) and of clinical education sites and instructors; in 2006, Michigan nursing education programs turned away 4,200 qualified applicants. Recruitment and retention of practicing nurses requires changes in regulations, and a safer, more respectful and supportive nursing workplace.

What Have We Done So Far to Fix the Problem? Michigan's strategic plan for addressing the nursing shortage, *The Nursing Agenda for Michigan: 2005-2010* was developed by the Coalition of Michigan Organizations of Nursing, COMON (www.micomon.org) and the Michigan Department of Community Health Office of the Chief Nurse Executive, (www.michigan.gov/mdch/ocne). The *Nursing Agenda* includes new approaches to a) nursing education, b) recruitment and retention of practicing nurses, and c) regulation and licensure of nurses. The implementation of this strategic plan has engaged the 38 Michigan nursing organizations of COMON, multiple State agencies¹, Regional Skills Alliances, the Michigan Legislature, educators, and health care stakeholders.



Nursing Education Initiatives in 2006/2008

- Governor Granholm allocated \$30 million over three years to the Accelerated Health Care Training Initiative², innovative programs to produce additional nursing graduates, including:
 - More than 210 second-degree bachelor's nursing graduates from nine (9) accelerated programs.
 - More than 650 nursing graduates from 15 accelerated programs.
 - Two hundred and thirty-nine staff nurses prepared as clinical instructors, so that students have more opportunities to gain clinical experience, and staff nurses are provided with an interesting new role and future opportunities.
 - Twenty-two students enrolled in a Doctor of Nursing Practice program, many of whom will become nursing faculty.
- The Michigan Legislature Joint Appropriations Subcommittee for Community Colleges called for a workgroup to increase the number of Community College nursing graduates, including strategies for maximizing graduation rates for existing nursing students
- Improved access to additional scholarships for nursing master's students, supported by \$250,000 added to funding for the Michigan Nursing Scholarship Fund (PA 444, SB 1371).
- Targeted access to nursing student scholarships supported by \$178,000 provided annually by Michigan nurses licensing fees (Nursing Professional Fund).
- Promoted diversity in the Michigan nursing population through faculty and education program development to improve recruitment and retention of diverse nursing students (supported by the W. K. Kellogg Foundation and MDCH).

Turn this sheet over for information about Nursing Recruitment and Retention Actions and Nursing Regulatory and Licensure Actions.

The complete *Nursing Agenda for Michigan* is available at www.micomon.org. Contact the Office of the Chief Nurse Executive at (517) 241-9841. May 2007.

Nursing Recruitment and Retention Actions in 2006/2007

- Michigan Legislators have become more informed on nursing workforce issues, and have demonstrated through legislation their commitment to addressing the nursing shortage. A group of bills have been introduced in the Legislature to address workforce issues (see section on Nursing Licensure and Regulation).
- The Michigan Center for Nursing has implemented a campaign -- *It's a Guy Thing Too* -- to increase the recruitment and retention of male nurses.
- The *RN Career Transition: Nursing for Life* program³ assists nurses with planning and preparation for life-long nursing careers. The initiative also may attract regional and community resources to address nursing workforce issues at the local level.



For more information, contact COMON at tthomps@mph.org, or call the Office of the Michigan Chief Nurse Executive at (517) 241-9841, or contact the organization listed below.

Nursing Regulatory and Licensure Actions in 2006/2007

- The Michigan Legislature has introduced and is considering legislation in the following areas: improve **nurse staffing** (reduce nursing “burn-out” and increase patient safety) in hospitals by using measures of patient need (acuity) to determine appropriate staffing levels [HB 4340, SB 0063]; regulation of **nursing hours and overtime** [HB 4339]; and use of **patient lift equipment** to increase patient safety and reduce nursing injuries [HB 4013, SB 0377].
- Governor Granholm signed PA 398, HB 6253, and PA 643, HB 5750, which streamlined procedures for temporary licensure for nurses coming into Michigan with a license in another state. This improved the workforce availability of nurses moving to Michigan.
- The Michigan Legislature is moving toward passage of SB 0197, a bill that removes the requirement for a redundant examination for foreign nursing graduates. The companion bill [HB 4207] was passed unanimously by the House. These bills will improve the flow of qualified foreign nursing graduates into the Michigan healthcare system, and make Michigan more attractive to these nurses.
- A barrier to clinical experience for nursing students was removed through a policy revision for criminal background checks until a fully operational system is in place.

¹ Michigan Department of Community Health, Michigan Department of Labor and Economic Growth, Michigan Department of Education, and Michigan Economic Development Corporation.

² The AHCTII is one component of the MIOPPS program of the Michigan Department of Labor and Economic Growth.

³ *The RN Career Transition: Nursing for Life* program of the Michigan State University College of Nursing is funded by the Blue Cross & Blue Shield of Michigan Foundation in partnership with the Robert Wood Johnson Foundation.

Quarterly updates of this document are posted on the COMON website, www.micomon.org.

What is the Michigan Nursing Corps?

In her 2007 State of the State address, Governor Jennifer Granholm announced the **Michigan Nursing Corps (MNC)**.

"One area that demands our special attention is nursing. Today we have a nursing shortage in communities across our state. Yet we have waiting lists of people who are anxious to become nurses. Something's wrong with this picture, and we are going to fix it. Tonight we are launching the Michigan Nursing Corps, an initiative to train new nurses. We will prepare 500 nursing educators to train 3,000 new nurses in just three years."¹

Full funding for the MNC would total \$45 million, \$15 million per year for three years. In the Fiscal Year 2008 State budget, the Legislature approved \$1.5 million, funding that will seed MNC programs.

In her 2008 State of the State address, the Governor reinforced the importance of nursing and submitted an FY 2009 budget that includes \$10 million for a strong start on MNC programs. The MNC is a collaborative effort by two State agencies, Community Health (MDCH) and Labor & Economic Growth (MDLEG).

The Problem

There is a growing nursing shortage in Michigan and the United States. Michigan's nursing education programs are bottlenecked in their ability to admit, educate and graduate all qualified applicants. Nursing education programs do not have enough classroom faculty, clinical faculty, or clinical experience infrastructure and sites to educate all the qualified people who want to become nurses. At the same time, our population is aging and will need much more health care in the

future. The retirement of the "Baby Boom" generation has just begun.

- Michigan is expected to have a shortage of about 7000 Registered Nurses by 2010 and a shortage of 18,000 RN's by 2015²
- In 2007, Michigan nursing education programs turned away over 4,000 qualified applicants due to the programs' lack of capacity
- More than 50% of faculty at most Michigan nursing schools/colleges are eligible to retire today
- Nursing students often wait many months to get the clinical experience they need to graduate and enter the workforce.

The Solution

The Michigan Nursing Corps will provide new classroom faculty, clinical faculty, and clinical experience infrastructure and sites. These new resources will help to educate additional RN's each year to take care of Michigan citizens. At full funding, the MNC would add from 1,000 to 3,000 RN's per year to the Michigan nursing workforce.

The Process

The first components of the MNC will be implemented through a Request for Proposals process. This competitive process will select individuals and institutions to participate in one of three MNC model programs.

Eligibility

- Nurses in the last two years of a doctoral degree in Nursing will be eligible to receive financial support to complete their degree full-time.
- Nurses with a Bachelor of Science degree in Nursing (BSN) will be eligible to receive financial

¹ <http://www.michigan.gov/gov/0,1607,7-168--161761--00.html>

² *The Michigan Agenda for Nursing 2005-2010*, 2006.

support to complete an accelerated one-year Master's degree in Nursing Education (MNE).

- Other practicing BSN nurses will be eligible to complete a clinical instructor certification course with Master's degree credits.
- Funded partnerships between selected nursing schools/colleges and hospitals will increase clinical experience infrastructure and sites available for nursing students' use.

Increase in Capacity

- In exchange for the financial support, the doctoral and MNE degree graduates will sign contracts to teach in Michigan nursing education programs for at least five years.
- Each new clinical instructor will supervise clinical experiences for about fifteen nursing students per year.
- The new clinical experience infrastructure and sites will permit nursing students to complete their education in a timely way and enter the nursing workforce.

The Outcome

With full funding, the three-year Michigan Nursing Corps initiative would result in 30 new doctoral and 300 new MNE-prepared nursing classroom faculty, each of whom contracts to teach in Michigan for five years.

- Each new MNE graduate would enable a nursing education program to increase admissions by 10 students per year.
- Assuming that most of the 300 new MNE faculty remain in nursing education beyond the contracted 5 years, an estimated 19,800 new seats would open up in Michigan nursing education programs over 8-10 years.³
- These additional nursing students would receive clinical experience supervision from 300 new clinical instructors, using expanded clinical sites and infrastructure

(learning laboratories – some mobile -- with simulations and virtual experience).

At lower funding levels for the MNC, the capacity expansion for each new MNE is 10 nursing education seats per year for the five contracted years and each additional year the MNE continues to teach. The new doctoral and MNE faculty will meet the immediate need for additional nursing classroom faculty and, in years to come, will replace the large numbers of nursing faculty who will be retiring. The MNC is both a short-term and long-term investment in assuring a constant supply of high quality nurses for Michigan.

The Cost and Return on Investment

At full funding, the MNC will cost a total of \$45 million over three years.

- Each of the resulting 19,800 new nurses will bring **\$120,000 per year** into their community (salary, fringes, and other economic benefits)⁴.
- Over a 20-year career, each nurse is estimated to bring over **\$3.9 million** in benefit to the Michigan economy.
- The 19,800 new nurses educated through the fully-funded MNC would bring **\$78.6 billion** in economic benefit to Michigan over the next twenty years, for a return (on the \$45 million investment) of \$1,746 per dollar invested, or \$87 per year per dollar invested.

Michigan needs to make this investment to improve the physical and economic health of its citizens and communities. For more information, please contact:

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Michigan Department of Community Health
(517) 241-9841, klemczakj@michigan.gov**

³ *The Bottleneck in Nursing Education*, 2007.

⁴ *The Economic Impact of Health Care in Michigan*, 2006.



Actions to Avert a Crisis

Ten Things You Need to Know About the Nursing Shortage

1. Michigan and the nation are facing a 30-year shortage of nurses (Registered Nurses, Licensed Practical Nurses, and Advanced Practice Nurses).
2. Nurses are Michigan's largest licensed healthcare professional group – 145,996 licensed in 2005 [119,152 RNs; 26,844 LPNs].
3. Michigan's shortage of RNs (demand exceeds supply) will be 7,000 nurses in 2010, 18,000 nurses by 2015, and an estimated 30,000 nurses in 2020. Our healthcare system cannot function without adequate numbers of well-prepared nurses.
4. **Demand** for nurses will continue to increase as our population ages. Over the next thirty years, the Baby-Boom generation (76 million people now age 41-60) will require extraordinary amounts of healthcare.
5. **Demand:** The U.S. Census estimates that in 2030 Michigan's population will include 2,420,447 people age 65 and older, with 287,089 of those people age 85 and older.
6. **Demand:** The majority of healthcare is provided by professional nurses or those supervised by professional nurses in hospitals, psychiatric mental health & substance abuse centers, public health clinics, physician offices, industrial health clinics, nursing homes, home health, and other healthcare settings.
7. **Demand:** The availability of professional nurses is a major factor in all the strategic plans for national, state, and local responses to bio-terrorism, epidemics and pandemics, and natural disasters.
8. **Supply:** Over 92% of Registered Nurses are women. In the past 35 years, the range of occupations open to women has greatly expanded and fewer young women have entered nursing.
9. **Supply:** Nursing education's production of additional nurses is already declining, due largely to shortages of a) qualified nursing faculty (average age 51.1) and b) clinical education sites.
10. **Supply:** The nursing workforce is aging, with an average age of 46.1 years for Registered Nurses in Michigan. Many nurses have left the profession for other opportunities.

Nurses have taken the lead in addressing the nursing workforce crisis. The Coalition of Michigan Organizations of Nursing (COMON) has identified issues and recommended actions. **The Nursing Agenda for Michigan** has been shaped by the ideas and experience of hundreds of nursing leaders and practicing nurses from a wide range of nursing specialties; it was developed in collaboration with the Office of Michigan's Chief Nurse Executive (Michigan Department of Community Health) and other concerned organizations. For ten things we can do about the nursing shortage, turn this page over.





The **Nursing Agenda** for **Michigan** — *Summary*

Ten Things We Can Do About the **Nursing Shortage**

Recommended Short-Range Actions

Healthcare System and Work Changes

1. Promote safe working hours to improve both patient & nurse safety and retention of the existing nursing workforce.
2. Improve the organization and design of nursing tasks to make them more efficient and effective, and to improve nurse retention.
3. Improve the ergonomics of nursing tasks to improve the health & safety of patients and nurses.
4. Set up collaborative multidisciplinary teams to manage & deliver patient care and increase shared decision-making.
5. Create a more respectful and supportive nursing workplace to improve retention of the existing nursing workforce.

Nursing Education Changes

6. Increase availability of nursing faculty by
a) adding slots in fast-track master's programs,
b) recruiting additional faculty from clinical nursing and from both clinical and faculty retirees, and c) tapping into underutilized faculty capacity.
7. Add new nurses to the workforce by increasing the number of student slots available in second-degree accelerated nursing programs.
8. Maximize the use and availability of web-based instruction and other technologies in nursing education.

Regulatory & Licensure Changes:

9. Use an increased nursing license fee to provide assistance to the nursing workforce. For example, increase the outreach and responsiveness of the regulatory apparatus, so that licensure is not delayed.
10. Increase mentoring, support, and oversight for all stages of nursing careers, from student to retirement, by engaging and supporting qualified retired nurses in a multitude of roles.

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See the complete **Nursing Agenda** online at:
www.michigan.gov/mdch/ocne

Contact the **Office of the**
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The Bottleneck in Nursing Education And What We Can Do to Fix It

What Is the Problem? Michigan and the nation have a rapidly worsening nursing shortage. The Michigan Department of Labor and Economic Growth estimates that by 2015, Michigan will need 18,000 additional RNs beyond those we would normally train. However, there is a bottleneck in nursing education that limits the number of students that can be admitted to nursing programs. In 2007, Michigan nursing education programs admitted 4600 qualified new students and turned away over 4,000 qualified applicants. Nationally, nursing schools across the country turned away over 150,000 qualified applicants.

What Can We Do To Fix It? Fixing the bottleneck in nursing education requires a simultaneous three-pronged approach. All three of these strategies must be implemented, or the “fix” will not work. To break through the bottleneck, we need to 1) rapidly increase the number of nursing faculty so that nursing education programs can increase the number of qualified applicants they can admit each year; 2) educate experienced practicing nurses to become clinical instructors for nursing students in their healthcare setting, and 3) expand learning laboratories that provide simulations and virtual clinical experiences. Simultaneous investment in nursing classroom faculty, clinical instructors, and learning laboratories is required to increase the graduation of new nurses.

1. Nursing Education Faculty: Production of new nurses is limited by shortages of credentialed faculty. The average age of nursing faculty is over 51 years, and more than half the faculty teaching in many Michigan nursing education programs could retire right now. Investment is recommended in a) the last two years of doctoral programs to educate 30 additional doctorally prepared nursing faculty needed to educate new Master in Nursing Education students; and b) one-year Accelerated Master’s programs to add 300 new MNE graduates in three years. Michigan schools of nursing are prepared to educate this number if resources are made available. Both of these investments would include tuition, stipend, and other costs for 330 new faculty.

30 doctoral students (10 students per year for three years) in the dissertation stage of their degrees receive awards of \$100,000 per student per year for two full-time years.

- Awards are made through Michigan accredited universities.
- Each doctoral student commits to finishing their doctorate in two full-time years.
- Each doctoral student agrees to teach in Michigan for five (5) years.
- Program cost is \$3 million for 30 new doctoral faculty members (\$1,000,000 per 10 faculty members).
- Each PhD, EdD, or DNP-prepared faculty will teach 10-20 new MNE students per year for five years in accredited Michigan nursing education programs.

300 accelerated program MNE students (100 students per year for three years) receive awards of \$80,000 per student for an accelerated MNE program requiring one year.

- Awards are made through Michigan accredited universities, which receive support for accelerated program costs.
- Each MNE student commits to finish their degree in one full-time year.
- Each MNE student agrees to teach in Michigan for five (5) years.
- Program cost is \$30 million for 300 new faculty members (\$10 million per 100 faculty members, including university start up costs and tracking system costs).
- Each MNE-prepared faculty member can open up 10 additional nursing program seats/year so that 1,000 additional RN nursing students can be admitted in the first

year of teaching, 2,000 in the second year of teaching, and 3,000 in the third year, continuing through the eighth year. Over eight years, this would provide nearly 20,000 new seats in Michigan nursing programs (allowing for some MNE faculty attrition in years six through eight¹).

Adding MNE faculty into nursing programs at the rate of 100 per year for three years (1,980 total over eight years) takes into consideration the ability of nursing educational systems to both produce and absorb new faculty – and the ability of healthcare systems to absorb the additional nursing graduates as the demand for healthcare increases.

2. Clinical Instructors: Production of new nurses is limited not only by the shortage of college/school faculty but also by a shortage of clinical instructors -- these are experienced practicing nurses with Bachelor's degrees who, with additional training can provide the hands-on clinical experience required for the education of nurses. About 160 clinical instructors have been educated in the past year through the Michigan Accelerated Health Care Training Initiative (AHCTI). The cost of educating each clinical instructor is estimated to be \$15,000, which includes classroom instruction plus a semester of practice with students and patients. Each clinical instructor provides supervised clinical experience to nursing students, and frees regular nursing faculty to spend more time in the classroom. Educating 100 new Clinical Instructors per year for three years would provide 300 additional Clinical Instructors at a cost of \$4,500,000.

3. Learning Laboratories: Clinical experience sites are scarce, and nursing students often have to wait many months to get a clinical experience "slot". To prepare students for real-world clinical experience and speed up the process of orientation to the clinical environment, nursing technology laboratories provide clinical simulations and "virtual reality" experiences. Such laboratories may be shared by several nursing education programs, and either installed at a central location or installed in a mobile vehicle. Two institutions of higher learning installed such laboratories through the AHCTI program, and are piloting this approach to enhanced clinical experience for nursing students. Establishing additional regional nursing technology laboratories to serve the rest of the state is estimated to require six additional laboratories (half of them mobile) at a cost of \$7,500,000, including start-up costs and staffing.

What Legislative or Regulatory Changes Are Needed to Implement these Strategies?

No regulatory changes are required to implement these strategies.

What Will This Cost Over Three Years?

- 30 PhD nursing faculty at a cost of \$3,000,000 (from FY07/08 to FY09/10) would result in education of 1,800 new MNE graduates over the five-year PhD teaching commitment.
- 300 MNE nursing faculty at a cost of \$30 million (from FY07/08 to FY09/10) would result in 1,000 additional seats in Michigan nursing programs in FY08/09, 2,000 in FY09/10, 3,000 in FY10/11 through FY12/13, and an average of 2,600 in FY13/14 through FY15/16, for an estimated total of 19,800 additional seats over an eight year period, assuming some faculty attrition in the last three years.
- 300 clinical instructors (10 healthcare facilities each prepare 10 clinical instructors per year for three years) at a total cost of \$4,500,000, would give Michigan the

¹ A 20% attrition rate is applied to each MNE cohort in the year after they complete the required 5 years of teaching. There is a substantial market for MNE-prepared nurses as nurse-administrators; such positions carry much higher salaries than are available to nursing faculty. Therefore, the attrition rate may be higher. However, even those who take non-academic positions frequently continue to teach part-time.

capacity to provide clinical experience to an additional 3,000 nursing students per year on a continuing basis.

- Six nursing technology laboratories (three of them mobile to serve more rural areas) at a total cost of \$7,500,000 will bring virtual clinical experience to nursing students at an earlier stage in their education, prepare students for the clinical environment, and decrease stress on a scarce resource, clinical experience sites. This will permit more students to graduate in a timely manner and enter the nursing workforce.

What Is the Return on the Investment – the Business Case?

Each newly graduated nurse entering the Michigan nursing workforce brings approximately \$120,000 per year (salary & fringes and other economic benefits) into the Michigan economy². The 300 new MNE nursing classroom faculty, 300 new clinical instructors, and six new nursing technology laboratories would generate a total of 19,800 new nurses in the healthcare workforce over an eight year period. At \$120,000 per year per nurse (with a 5% annual increase factor for raises, promotions, and inflation), these 19,800 new nurses in the workforce would generate \$12,481,982,955 in benefit to the Michigan economy over the eight-year period (FY10/11 – FY17/18) during which MNC-supported new RNs would be added to the healthcare workforce. (See spreadsheet attached.)

Another approach to calculating economic benefit to the state is to estimate – conservatively -- that each new RN has a 20-year career. At \$120,000 per year in salary, fringes, and other economic benefits (with a 5% annual increase factor for raises, promotions, and inflation), each RN provides over \$3,900,000 in benefit to the community over 20 years. The 19,800 new RNs produced by the MNC initiative would bring \$78.6 billion to the economy of the state.

The total investment in these nursing graduates would include the \$33,000,000 for doctoral and masters faculty, \$4,500,000 for clinical instructors, and \$7,500,000 for nursing clinical laboratories, for a total of \$45,000,000. Therefore, an investment of \$45 million will yield a conservative economic benefit over 20 years of nearly \$78.6 billion for Michigan's economy. The return on investment is \$1,746 (over 20 years) per dollar invested.

If we use 2007 dollars in calculating this benefit, the conservative 20 year total is \$2.4 million per nurse, and \$47.5 million for all 19,800 nurses. This gives a return on investment of \$1,056 per dollar invested, or \$53 per year per dollar invested (in 2007 dollars). See the spreadsheet referenced below for more details.

Considering the structural difficulties of educational and healthcare systems in absorbing the MNE graduates into faculty positions and the nursing graduates into clinical positions, spreading this process over three or even five years is desirable. An example in another state is the nursing faculty program funded by Maryland: The State of Maryland Legislature has committed \$9.5 M each year for ten years to prepare nursing faculty. This gives colleges, universities, and healthcare systems time to adjust. All indications are, however, that the graduates of these programs will be “snapped up” just as soon as they are available.

² A multiplier of 1.5 is applied to salary and fringes to reflect the indirect economic benefits of each nursing graduate. The multiplier is derived from *The Economic Impact of Health Care in Michigan, 2006*.

Sources

The Economic Impact of Health Care in Michigan- Michigan Health & Hospital Association, Michigan State Medical Society and Michigan Osteopathic Association, Third Edition June 2006

The Nursing Agenda for Michigan-Actions to Avert a Crisis 2006- The Coalition of Michigan Organizations of Nursing (COMON), Michigan Department of Community Health-Office of the Chief Nurse Executive.

Calculation of Return on Investment for the Michigan Nursing Corps, FY07/08 – FY17/18. A spreadsheet showing MNC production of nursing faculty and RN graduates over 10 years, plus the economic impact of added RNs in the healthcare workforce (return) compared to cost (investment). Michigan Department of Community Health-Office of the Chief Nurse Executive.