



February 15, 2021

Dr. Michael Baumgartner  
Executive Director  
Coordinating Commission for  
Postsecondary Education  
140 N. 8<sup>th</sup> Street, Suite 300  
Lincoln, NE 68509

Dear Michael:

Enclosed is a copy of the proposal to create a Master of Healthcare Delivery Science in the College of Allied Health Professions at UNMC. The proposal was approved by the Board of Regents at the February 12, 2021 meeting. Also enclosed is the Proposal for New Instructional Program Form 92-40.

Please do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Susan M. Fritz".

Susan M. Fritz, PhD  
Executive Vice President and Provost

Enclosures

c: Chancellor Jeffrey Gold  
Senior Vice Chancellor Dele Davies  
Dean Kyle Meyer, College of Allied Health Professions  
Vice Provost David Jackson

**COORDINATING COMMISSION  
FOR POSTSECONDARY EDUCATION**

140 N. 8<sup>th</sup> Street, Suite 300  
Lincoln, NE 68508

Telephone: (402) 471-2847  
FAX: (402) 471-2886

**PROPOSAL FOR NEW INSTRUCTIONAL PROGRAM**  
Form 92-40

**SECTION I**

Institution Submitting Proposal: University of Nebraska Medical Center

Title of Program: Healthcare Delivery Science

CIP Code: 51.0701

Organizational Unit in which program will be located:

College of Allied Health Professions

Name of contact person in the event additional information is needed: Dr. Susan M. Fritz

Telephone: 402-472-5242

Degree, Diploma, or Certificate to be offered (use separate submittal for each level):

Master of Healthcare Delivery Science

Proposed date to initiate program: When approved by the Coordinating Commission

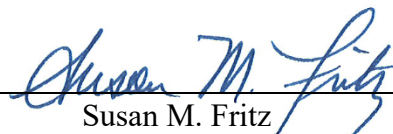
List the location(s) where this program will be offered: UNMC

If the program has a projected ending date, please so indicate:

Date approved by Governing Board: February 12, 2021

(Attach all documents related to this proposal upon which the Governing Board made its decision to approve the proposal.)

Chief Executive Officer's or other Authorized Officer's signature: \_\_\_\_\_

  
Susan M. Fritz

TO: The Board of Regents Addendum XI-A-3  
Academic Affairs

MEETING DATE: February 12, 2021

SUBJECT: Creation of a Master of Healthcare Delivery Science in the College of Allied Health Professions at the University of Nebraska Medical Center

RECOMMENDED ACTION: Approval to create a Master of Healthcare Delivery Science in the College of Allied Health Professions at the University of Nebraska Medical Center (UNMC)

PREVIOUS ACTION: October 5, 2017 – The Board approved the creation of the Master of Health Administration in the Department of Health Services Research and Administration in the College of Public Health at UNMC.

EXPLANATION: The Master of Healthcare Delivery Science is a 30-credit hour online, applied non-thesis degree designed to provide practicing healthcare professionals with advanced knowledge pertaining to core administrative and leadership competencies related to five essential areas of healthcare practice (providing patient-centered care, working in interdisciplinary teams, employing evidence-based practice, applying quality improvement, and utilizing informatics). While the degree will be applicable to any healthcare provider, its primary purpose is to provide an advanced degree opportunity for those clinical, diagnostic and therapeutic sciences professionals wishing to strengthen their credentials and explore an expanded role within the healthcare system.

This proposal has been approved by the Council of Academic Officers and the Executive Graduate Council. This proposal also has been reviewed by the Academic Affairs Committee.

PROGRAM COST: \$113,000 for Year 1; \$791,403 over five years

SOURCE OF FUNDS: College of Allied Health Professions auxiliary funds; tuition and fees

SPONSORS: H. Dele Davies  
Senior Vice Chancellor for Academic Affairs

Jeffrey P. Gold, Chancellor  
University of Nebraska Medical Center

RECOMMENDED: /s/ Susan M. Fritz  
Executive Vice President and Provost

DATE: January 15, 2021



June 25, 2020

Susan Fritz, Executive Vice President and Provost  
University of Nebraska  
3835 Holdrege Street  
Lincoln, NE 68583

Dear Provost Fritz:

We are forwarding you the materials relating to the creation of a Masters in Healthcare Delivery Science through the College of Allied Health Professions. This program is an online, applied degree designed to provide practicing healthcare professionals with advanced knowledge pertaining to core administrative and leadership competencies related to five essential areas of healthcare practice. The purpose of this program is to offer practicing healthcare professionals the opportunity to obtain an advanced degree that provides broad content in a number of key areas pertinent to the ongoing improvement of the healthcare system, and to deliver the degree through an easily accessible distance education format. The Masters in Healthcare Delivery Science will provide an important advanced training opportunity for healthcare providers.

This proposal has been reviewed by us, and it has our approval. We are requesting your review and approval, that of the Chief Academic Officers, and that it be reported to the Board of Regents at an upcoming meeting.

Sincerely,

A handwritten signature in black ink, appearing to read 'H. Dele Davies'.

H. Dele Davies, MD, MS, MHCM  
Senior Vice Chancellor

A handwritten signature in purple ink, appearing to read 'Jeffrey P. Gold'.

Jeffrey P. Gold, MD  
Chancellor, University of Nebraska Medical Center

cc:

**Proposal to Create the Master of Healthcare Delivery Science**  
**College of Allied Health Professions at the University of Nebraska Medical Center**

**I. Descriptive Information**

*Name of the institution proposing the program:* The University of Nebraska Medical Center (UNMC)

*The name of the program (major) proposed:* Healthcare Delivery Science (HDS)

*Degree/credential to be awarded graduates of the program:* Master of Healthcare Delivery Science (MHDS)

*Other approved programs offered in this field by the institution:* Master of Health Administration, College of Public Administration, UNMC

*CIP Code:* 51.0701

*Administrative unit for the program:* College of Allied Health Professions (CAHP)

*Proposed delivery site(s) and type(s) of delivery:* The curriculum will be housed and administered by the CAHP, and it will be delivered entirely online. Courses will be administered using the Canvas Learning Management System already utilized by University of Nebraska Campuses.

*Proposed date (term/year) the program will be initiated:* upon approval

*Description, including credit hours and other requirements (program of study) and purpose of the proposed program:* The Master of Healthcare Delivery Science (MHDS) is an online, applied degree designed to provide practicing healthcare professionals with advanced knowledge pertaining to core administrative and leadership competencies related to five essential areas of healthcare practice. The five areas of core knowledge and competencies were first identified in 2003 by the then Institute for Medicine (now the National Academy of Medicine) in the report, "Health Professions Education: A Bridge to Quality," and cited as key to improving health care quality and patient safety.<sup>1</sup> They include, providing patient-centered care, working in interdisciplinary teams, employing evidence-based practice, applying quality improvement, and utilizing informatics. Courses in management, bioinformatics, clinical education, finance, patient safety and quality improvement will support the focus on the five competencies of the curriculum.

The purpose for creating the non-thesis Master of Healthcare Delivery Science degree is to offer practicing healthcare professionals the opportunity to obtain an advanced professional graduate degree that provides broad content related to a number of key areas pertinent to the ongoing improvement of the healthcare system, and to deliver the degree through an easily accessible distance education format.

<sup>1</sup> Greiner Ann & Knebel E. Health Professions Education: A Bridge to Quality. Washington, D.C: National Academies Press, 2003. Print.

While the degree will be applicable to any healthcare provider, its primary purpose is to provide an advanced degree opportunity for allied health professionals for whom the associate degree, bachelor degree or post-baccalaureate certificate is the entry-level degree. Such professions include cardiovascular interventional technology, clinical perfusion, diagnostic medical sonography, magnetic resonance imaging, medical laboratory science, radiation therapy, radiography, respiratory therapy and many others. The online program is structured around five core student learning outcomes with objectives identified for each:

1. Healthcare Management
  - Demonstrate leadership, communication, and interpersonal skills as they relate to management within a healthcare organization.
  - Develop basic human resources skills including the creation of a corporate culture, the understanding of performance and productivity management and the engagement of employees.
2. Finance
  - Apply finance, accounting, marketing, information technology, and planning skills for successful administration within a healthcare organization.
3. Healthcare Delivery Strategies
  - Relate knowledge of the healthcare delivery system, including trends, innovations and health informatics.
  - Implement strategies and tools related to quality improvement issues in the healthcare setting.
4. Patient Centered Care
  - Illustrate the importance of patient centered care through the development of interprofessional teams, improvement of clinical education and the employment of evidence-based practice to continually improve operations and the quality of care delivered.
5. Leadership
  - Apply knowledge related to the complex aspects of leadership in a healthcare organization, including working in interdisciplinary teams.
  - Employ leadership through innovation, mentorship and reflective practice.

The online curriculum is composed of five core courses (15 credit hours), four to six elective courses (12 credit hours) with a two-part capstone project (3 credit hours). Throughout the curriculum, the student will complete applied projects where the student will transfer foundational constructs learned to real-world practice. These applied projects will culminate in a final, non-thesis capstone. Using applied projects to build a capstone project has been successfully implemented a similar program within CAHP, the Master of Health Professions Teaching and Technology program. Graduates of this program comment on the value-added of a capstone project that showcases their learning outcomes. A learner earning a Master of Healthcare Delivery Science degree will complete a total of 30 semester credit hours. The program curriculum is detailed below. Full course descriptions, learning objectives, and mapping of applied projects for the non-thesis capstone are included in Appendix A.

The proposed curricular model will provide learners with broad content related to the five core competencies through the required survey courses, but will also allow learners the latitude to dive deeper into two to three of the competencies depending on their interests and professional opportunities.

**Core Courses (15 credit hours total):**

HDS 631 Healthcare Management	3 credit hours
CPH 565 Healthcare Finance	3 credit hours
HDS 652 Design of Quality Improvement Initiatives	3 credit hours
HDS 660 Introduction to Health Informatics	3 credit hours
HPTT 623 Leadership in Health Professions Education	3 credit hours

**Capstone I & II (3 credit hours total):**

Students will complete the first capstone course in their first or second semester in the program and complete the second course their final semester.

HDS 671 Introduction to Digital Portfolio	1 credit hour
HDS 672 Digital Portfolio Capstone	2 credit hours

**Electives (12 credit hours total):**

Students will complete twelve credits of elective courses.

HDS 615 Communication & Culture in Healthcare	3 credit hours
HDS 723 Principles of Critical Inquiry	2 credit hours
HDS 626 Health Care Ethics/Critical Thinking	3 credit hours
HDS 630 Scanning the Health Care Environment	3 credit hours
HDS 650 Foundations of Quality Improvement	3 credit hours
HDS 651 System and Social Influences of Quality and Safety	3 credit hours
HDS 653 Implementation & Evaluation of Improvement Initiatives	3 credit hours
HDS 661 Health Data Analytics	3 credit hours
HDS 662 Health Information Systems	3 credit hours
HDS 663 Health Information Management	3 credit hours
HDS 673 Special Topics in Healthcare	3 credit hours
HPTT 630/830 Research Analysis & Design for Health Professions Education	3 credit hours
HPTT 640 Foundations of Clinical Teaching in the Health Professions	3 credit hours

All listed elective courses, except for HDS 673, are cross-listed with College of Allied Health Professions (CAHP), Health Professions Teaching and Technology (HPTT), or with Health Professions Medical Education (HPME) or Biomedical Informatics (BMI) in Graduate Studies. HDS students are not the only cohort of students enrolling in the elective courses. The cross-listing of elective courses will allow students to individualize their learning experience, while optimizing operational efficiencies for the program and college.

The HDS program advisory board will be responsible to conduct and monitor periodic program review, evaluating student, graduate, and employer survey data, as well as feedback from the program faculty. Ongoing curricular adjustments will be made as necessary based on the results of these reviews.

**Justification for required credit hours:** The number of credit hours for attainment of the degree is based on the goal of allowing a full-time student (with summer courses) to complete the degree within two academic years. In addition, a survey of similar programs offered at other institutions was performed during the initial stages of the program's development. The majority of equivalent outside degree programs have nearly identical credit hour requirements (Appendix B).

## **II. Centrality to Role and Mission**

One of the core missions of UNMC is to improve the health of Nebraskans through premier educational programs with the vision of preparing the best-educated health professionals and scientists. The MHDS degree represents the first completely online, health professions centered program of study within the University of Nebraska system that provides practicing healthcare professionals in several allied health professions with the requisite knowledge and skills to keep pace with ever-expanding career responsibilities related to clinical teaching, management and administration, patient education, and quality improvement activities. Since the curriculum will be offered solely online, it will also strongly support the UNMC mission of “providing outreach to underserved areas”.

One of the major goals of the degree is to provide graduates of many allied health programs an effective path toward obtaining a master’s degree. Particularly for graduates of entry-level bachelor and post- baccalaureate certificate programs at the University of Nebraska Medical Center, the degree can serve as a formal, articulated pathway, offering the opportunity for these graduates to obtain a master’s degree.

Other universities have chosen to develop “unique” master’s degree programs for specific groups of professionals. For instance, several universities offer a Master’s in Radiologic Science to graduates of radiography programs, or a Master’s in Medical Laboratory Science to only graduates of medical laboratory science programs. These degrees seldom provide advanced-practice competencies. Rather, they include content on the health system, leadership, administration, etc. The proposed MHDS degree will not only provide a completely online program of study, but it was developed and will be delivered by an interprofessional team of healthcare professionals representing multiple healthcare disciplines, educators, and areas of expertise. The proposed MHDS degree will provide opportunity for advancement to a larger audience, avoid unnecessary duplication, and most importantly, add value to the education of allied health practitioners through its interprofessional focus.

## **III. Evidence of Need and Demand**

*Need for the MHDS degree in the institution, the community, the region, the state, or the nation.*

As their clinical careers progress, individuals with professional degrees in a given allied health profession may become interested in pursuing opportunities in the health system beyond the entry-level knowledge and competencies of their chosen profession. These areas of additional responsibility and growth may include such related functions as management and administration, bioinformatics, finance, clinical education, patient safety, and quality improvement. While their entry-level health professions degree may not provide sufficient knowledge nor meet the qualification for formal entry into these additional roles and responsibilities within the health system, most of these professionals desire to retain some portion of their role in the delivery of clinical care while expanding their involvement in these related areas.

The online MHDS degree provides a unique plan of study that stems from the National Academy of Medicine’s (formerly Institute of Medicine) core competencies. These core competencies, identified through a strategic and collaborative effort by healthcare leaders, enable credentialed healthcare professionals to advance their knowledge and skillset beyond the discipline-specific clinical competency level. The MHDS was designed specifically to provide health care



professionals with the added knowledge and competencies required for advancement opportunities in management and administration. These prospective students would benefit from formal training to prepare them for the demands of these health system roles in the interdisciplinary environment (see market demand report, Appendix B and updated market demand report, Appendix C).

*Demand for the program – the extent of student interest in the proposed program.*

Data from graduate surveys indicate that over 50 percent of the graduates of the existing online CAHP degree completion programs request information about advanced degrees pertaining to clinical education or clinical management. The CAHP routinely receives such requests from current practitioners within the allied health fields. Many practicing healthcare professionals are interested in pursuing advanced leadership roles, but may not be qualified based solely on their professional degree or having been placed in a management/leadership position desire to further their formal education to effectively succeed in these roles.

To participate in formal education to achieve these outcomes, these practicing professionals desire online learning opportunities with flexible offerings. This pool of potential students would include managers in ancillary services including laboratory, imaging and rehabilitation services in healthcare facilities in the State of Nebraska and across the nation. The College of Allied Health Professions graduates approximately 80 undergraduate or post-baccalaureate certificate students per academic year. This group of prospective students serve as a natural pipeline to the MHDS. The MHDS provides the pathway for continuing education in advanced healthcare service competencies beyond clinical service aptitude. Approximately 50 percent of students in CAHP post-baccalaureate certificate programs express interest in pursuing a master's degree at completion of their certificate program (see Appendix D for graduate support of a master's degree). The CAHP graduates not only serve the workforce needs of Nebraska but other states as well. Data from 2019 suggested the projected employment rate for Health Services Managers to be 17% for the region. Data also indicated Omaha, NE as a top city seeking Master's-Level Health Care Delivery Graduates (see Appendix C).

#### **IV. Adequacy of Resources**

*Faculty and Staff Resources*

The MHDS Advisory Board that has guided the development of the curriculum, is composed of faculty within the CAHP, clinical management, clinical preceptors, and other patient care partners. The Master of Healthcare Delivery Science degree will be supported by a Program Director and administrative support to oversee the delivery of the program curriculum. A program committee will be used to provide administrative support and guidance. The CAHP's Office of Enrollment Management and Student Affairs staff will assist in recruitment and admissions processes.

MHDS Program Committee:

Janice Tompkins, MPH, MT(ASCP), Assistant Professor, Assistant Dean for Diversity and Inclusion, CAHP

Lisa Bartenhagen, MS, R.T.(R)(T) ARRT, Associate Professor and Charles R. O'Malley Endowed Chair, Department Chair of Clinical, Diagnostic, & Therapeutic Sciences; Director of the Radiation Therapy Education Program, CAHP

Tanya Custer, MS, R.T.(R)(T) ARRT, Associate Professor, Director of Distance Education, CAHP

Karen Honeycutt, PhD, MEd, MASCP, MLS(ASCP)<sup>CM</sup><sup>SM</sup><sup>CM</sup>, Associate Professor and Gilg Professor for Teaching Excellence and Innovation in Allied Health, Department Chair of Allied Health Professions Education, Research & Practice, Director of the Medical Laboratory Science Program; UNMC Varner Professor Laureate, CAHP

Kimberly Michael, MA, RT(R), RDMS, RVT, FSDMS; Associate Professor and Anderson Distinguished Professor; Director of the Diagnostic Medical Sonography Education Program; Associate Director, Interprofessional Academy of Educators, CAHP

Stephanie Vas, MA, RT(R)(CT)(MR) ARRT, MRSO, Instructor, Director of the Magnetic Resonance Imaging Program, CAHP

Tammy Webster, PhD, MPA, RT(R)(M), FAEIRS; Associate Professor, Assistant Dean for Academic Affairs, Director of the Radiography and CVIT Programs and CT Practicum, CAHP

The program of study will be provided by faculty members who possess a graduate or doctoral degree and hold appointments within the CAHP. The faculty for the program is made up of 15 members from three colleges at UNMC, each with primary or courtesy faculty appointments within the CAHP. These include four individuals from the College of Medicine (1 MD, 3 PhD), 1 from the College of Public Health (Masters), and 10 CAHP (5 PhD, 5 Masters). The courses proposed in the MHDS program of study have been developed and were approved by the CAHP Curriculum Committee. Courses have an instructor on record and scheduling of each course will support student progression through the program of study. Those courses with a HPTT prefix are existing courses within the college's Master of Health Professions Teaching and Technology program and will be cross-listed in the Master of Healthcare Delivery Science program. Similarly, the CPH course is an existing course housed within the College of Public Health. The College of Allied Health Professions has a Director of Distance Education and many faculty members who are well-versed in instructional design best practices for online course delivery. There is instructional technology support housed within the college as well as from the UNMC IT department. In addition, the Director of E-Learning & Instructional Designer at UNMC has holds a courtesy faculty appointment within the CAHP. Teaching load will be supported through stipends provided to campus units who faculty teach in the program.

### *Physical Resources*

The program of study will be supported by the Office of Enrollment Management and Student Affairs in the CAHP, located in the UNMC Student Life Center, utilizing existing office space for the Program Director and administrative staff. Faculty have offices and computers that will be used to administer the online instruction. All program activities will be administered online or virtually with no need for physical space. If the need arises for on-campus student or faculty consultation, various conference rooms and/or individual faculty/committee members' offices will be utilized.,

### *Instructional Equipment and Information/ Technological Resources*

As an Academic Health Science Center, UNMC offers many educational opportunities and advantages for students. Students have access to the McGoogan Library of Medicine, one of the nation's major health science libraries. The McGoogan Library of Medicine serves the information needs of all UNMC students, faculty, and staff, as well as licensed Nebraska health professionals and residents of the state. In addition to resources physically located on campus, the library has over 5,500 full-text, online journals and over 150 on-line textbooks. All UNMC students have complete access to the library and other online resources whether on or off of the UNMC campus.

In addition, the library provides services to students including how to search for literature, locate articles and books, search the internet, note copyright restrictions, cite sources, and avoid plagiarism. The library provides timely access to high quality collections of print and electronic materials, develops applications of information technology, promotes the development of information management skills that support lifelong learning, and promotes networking and the integration of information. The library's Writing Center also provides resources and services to online learners.

### *Budget Projections for the first five years of the program*

Tuition revenue generated by the Master of Healthcare Delivery Science degree will be sufficient to cover projected expenses after the first year. The CAHP has resources generated by auxiliary activities to cover the first-year deficit of \$64,728. After the first year, the program will generate a modest positive cashflow. The CAHP will charge the same tuition as other University of Nebraska online graduate level courses (\$580/credit hour in AY 2019-2020), which is competitive with comparable programs outside of the University of Nebraska system. It is estimated that over a two-year ramp-up period, at least 14 students will enroll in 3 credit hours per semester in the program based on the experience of similar programs and data accrued in the feasibility study. At this minimum level of enrollment, projected revenue for the first five years of the program is presented in Table 1 (attached).

Implementation of the program will require the addition of administrative support in the form of a Program Director (0.35 FTE) and administrative staff (0.25 FTE expanding to 0.35 in year 3). No new hires are anticipated to fulfill the administrative support needs. These needs will be accomplished through reassignment of existing responsibilities and combining responsibilities with other new roles being developed in the college associated with growth in other programs. Campus units whose faculty teach in the program will receive a stipend for teaching courses on an ad hoc basis, distributed only when their course is offered (with at least five students enrolled). Projected expenses are presented in Table 2 (attached).

## **V. Avoidance of Unnecessary Duplication**

The Master of Healthcare Delivery Science degree will be the only online, professional graduate degree of its kind offered in the University of Nebraska system. The MHDS will provide credentialed healthcare professionals in service fields such as the clinical, diagnostic and therapeutic sciences, who primarily practice in the clinical setting, an academic foundation to meet expanded roles in the healthcare system related to core competencies of administration and

management, bioinformatics, clinical education, patient safety, and quality improvement. This program is unique from other online master's level programs, in that it targets clinical health care providers seeking to acquire knowledge related to advanced competencies in areas related to management and administration within the healthcare system.

## **VI. Consistency with the Comprehensive Statewide Plan for Postsecondary Education**

Providing a Master of Healthcare Delivery Science degree is consistent with the vision and major statewide goals outlined in the *Comprehensive Statewide Plan for Postsecondary Education*. In particular, this proposal supports a number of the statewide goals and outcomes outlined in the *Plan*, including:

- ***Deployment of instructional technology to broaden access for learners.*** The MHDS is a completely online program affording students, regardless of location, the opportunity to enroll and successfully complete the program of study requirements.
- ***Helping students graduate within a reasonable and predictable time frame.*** The MHDS program of study was strategically designed to meet the core competencies associated with leadership expectations in healthcare services. The credit hours align with the knowledge base needed for the targeted program outcomes, and at 30 hours total, is consistent with other professional master degree programs.
- ***Opportunity for individuals to move easily into another sector of postsecondary education as their career needs, interests, and educational goals shift.*** The MHDS program of study affords graduates the knowledge base and academic degree for career advancement. Graduates may be eligible to move from clinical care delivery to healthcare systems management.
- ***Ensure that graduates are competent to succeed in the workforce as their primary clinical roles expand into leadership, management and clinical education.*** The MHDS program of study was guided by the National Academy of Medicine's (formerly Institute of Medicine) Core Competencies for healthcare professionals. The competencies embedded within the curriculum aim to address key requisites needed for effective healthcare service management.
- ***Responding to the changing health care needs of Nebraska's citizens, incorporating the use of new educational technology and distance learning to teach both current/future health care providers and patients in underserved rural areas.*** The MHDS program of study integrates competencies in informatics, quality improvement, communication, and management. As an online degree, these competencies are mastered through the utilization of educational technologies and distance learning platforms. The online delivery approach provides students, regardless of location, the opportunity to learn and ultimately serve their communities.

The University of Nebraska Medical Center stands to benefit from this proposal as healthcare professionals that participate in the program will develop and hone skills to allow them to meet the needs of their expanding roles as they become leaders in their professions, contributing to UNMC's reputation of being at the forefront of innovative education. In addition, UNMC students in the clinical environment who interact and learn from these leaders will benefit from evidence-based teaching strategies to improve learning and retention. These strategies in turn prepare them for practice in their respective health professions. In addition, this online, degree program will increase the number of potential faculty candidates who meet the educational requirements of programmatic accreditation standards.

## APPENDIX A

<b>Core Courses (15 Credit Hours Total)</b>		
<b>Course #</b>	<b>Course Title</b>	<b>Course Description</b>
HDS 631	Healthcare Management	<p>This course introduces health professions students and practitioners to the concepts of organizational theory and behavior as they apply to health care. The topics to be covered include self-identification, the principles of motivation, team building, leadership, management and organizational culture and change. The course also includes the principles of financial management, risk management, and the processes of hiring, coaching, evaluating and dismissing employees. The concepts of quality improvement will be applied in a quality improvement project along with literature reviews to support the project.</p> <ul style="list-style-type: none"> <li>• Describe the functions of management and leadership. Identify the contributions of each individual to the functioning of an organization.</li> <li>• Apply strategies for working with different personality types.</li> <li>• Understand what it means to work as a team.</li> <li>• Create recommendations for improving teamwork among members of the healthcare team.</li> <li>• Evaluate organizational culture and plan for change.</li> <li>• Apply the theories of management in the health care setting.</li> <li>• Understand the human resource functions of an organization. Prepare human resource documents.</li> <li>• Assess staffing options in their department.</li> <li>• Create a new staffing proposal for their department.</li> <li>• Explain quality improvement tools.</li> <li>• Apply the quality improvement process.</li> <li>• Propose a Process Improvement project for their department.*</li> <li>• Complete a literature review to support the Process Improvement project.*</li> <li>• Analyze appropriate data collection, implementation, and evaluation tools necessary to complete the Process Improvement project.*</li> <li>• Implement the Process Improvement project.*</li> <li>• Evaluate the outcomes of the Process Improvement project.*</li> <li>• Make an oral presentation of the Process Improvement project.</li> <li>• Identify risk management areas of concern.</li> <li>• Identify laws, regulations, and accreditation standards which affect health care management.</li> </ul>
CPH 565	Healthcare Finance	<p>This course will focus on the application of financial management principles and concepts to health care organizations, consists of (1) instructor lectures, (2) case analyses, (3) presentations, and (4) two examinations. Much of the learning in this course will come from your own individual work and from interacting with other students, so the benefits that you receive will be directly related to your individual efforts. Students are not expected to have prior coursework in financial management, managerial and financial accounting. The course does, however, assume the students have some experience with spreadsheet models.</p> <ul style="list-style-type: none"> <li>• Undertake and interpret analysis of profit and break-even for a healthcare organization.</li> <li>• Utilize the major methods of cost allocation to allocate costs across departments.</li> <li>• Define the major types of pricing strategies used by healthcare organizations.</li> <li>• Conduct analyses to set prices and determine service offerings for a healthcare organization.*</li> <li>• Define opportunity cost and undertake time value analysis of cash flow streams for a project.</li> <li>• Determine the required rate of return for a program or project.*</li> <li>• Use corporate cost of capital to inform capital investment decision-making for a healthcare organization.*</li> <li>• Evaluate the financial performance of a healthcare organization.*</li> </ul>

HDS 652	Design of Quality Improvement Initiatives	<p>Learners will explore and apply strategies and tools from the science of improvement to define, measure, and analyze quality problems in healthcare settings. Topics covered include methods to identify improvement needs and set improvement aims, strategies to evaluate the strength of evidence, selection of data collection and analysis tools and strategies, selection of appropriate measures and metrics for evaluation and comparison, prioritization of improvement activities, assembly of improvement teams, and justification of improvement goals and efforts.</p> <ul style="list-style-type: none"> <li>• Examine the scope of the current evidence related to potential improvement areas.</li> <li>• Examine sources of and judge the strength of current scientific evidence and context-specific evidence in relation to potential improvement areas.</li> <li>• Compare retrospective and prospective methods to identify potential improvement areas.</li> <li>• Create aim/goal statements for improvement areas.</li> <li>• Create a data collection and analysis plan and coordinate data collection and analysis efforts.*</li> <li>• Compare and choose data collection and analysis tools.</li> <li>• Choose appropriate measures/metrics for evaluation and comparison.</li> <li>• Perform analysis/evaluation of improvement issues.*</li> <li>• Summarize and present analysis and evaluation findings.</li> <li>• Compare strategies and tools to support the prioritization of improvement activities and efforts.</li> <li>• Apply appropriate study and improvement design(s).*</li> <li>• Justify the selection of improvement areas.</li> <li>• Assemble an improvement team.*</li> </ul>
HDS 660	Introduction to Health Informatics	<p>This course presents an introduction on informatics in the healthcare setting. Overarching topics include: the fundamental informatics framework, the role of informatics across the healthcare continuum, and a survey of health informatics applications.</p> <ul style="list-style-type: none"> <li>• Describe how health information technology (HIT) is part of healthcare reform in the United States.</li> <li>• Explain the fundamental informatics framework.</li> <li>• Compare and contrast the field of health informatics to health information technology.</li> <li>• Describe how informatics is used across the healthcare continuum.</li> <li>• Apply principles of informatics to assess health care related outcomes.*</li> <li>• Compare health informatics, bioinformatics, and public informatics.</li> <li>• Summarize a current health informatics application of interest.*</li> </ul>
HPTT 623	Leadership in Health Professions Education	<p>This course provides an in-depth exploration of the knowledge, skills, attitudes, and competencies required for leadership in the context of complex health care and health professions education organizations. Leadership theory will be used as a framework for enhancing organizational behavior focusing on both individual and team performance.</p> <ul style="list-style-type: none"> <li>• Evaluate the characteristics that facilitate or pose barriers to effective leadership.</li> <li>• Design leadership strategies relevant to health care delivery and/or health science education settings.*</li> <li>• Apply best practices in leadership in health science education.*</li> <li>• Utilize reflective practice to analyze personal leadership strengths and areas for ongoing improvement or growth.</li> </ul>
<b>Capstone Courses (3 Credit Hours Total)</b>		
HDS 671	Introduction to Digital Portfolio	<p>This course provides participants with an introduction to developing a professional digital portfolio. Graduate candidates in the Master of Healthcare Delivery Science degree will design a non-thesis, digital portfolio capstone that summarizes their educational experiences in the MHDS program using the applied projects completed throughout the curriculum.</p>

HDS 672	Digital Portfolio Capstone	This course provides students with the time and focus to complete their portfolio capstone, which was introduced in HDS 671 Introduction to Digital Portfolio. The portfolio will include applied projects that are exemplary examples of the graduate candidates work.
<b>Elective Courses (12 Credit Hours Total)</b>		
HDS 615 (CAHP 615)	Communication & Culture in Healthcare	Communication and Culture in Healthcare is an upper-level course for allied health professions students and other interested students that facilitates an understanding of the role of culture and diversity in the healthcare arena and explores the ethical and legal implications of these situations. The course enables students to explore the value of diversity in our society through self-examination of their own beliefs, values and biases. Students will evaluate the dynamics involved when cultures interact and apply this to the healthcare setting. The course will include an in-depth assessment of the Culturally and Linguistically Appropriate Services [CLAS] standards and the cultural competency responsibilities of healthcare organizations.
HDS 623 (CAHP 723)	Principles of Critical Inquiry	This course is designed to develop the student's abilities to search, critically evaluate and interpret medical literature and its application to patient care. The primary focus will be on evidence-based practice, research ethics, studies of research design and statistical methods.
HDS 626 (CAHP 626)	Healthcare Ethics/Critical Thinking	This course covers ethical issues that allied health professionals can expect to encounter during their education and career. It covers such areas of concern as professionalism, cultural differences, confidentiality, informed consent, responsible practice, handling mistakes, difficult cases, and key legal aspects of these issues. To assist students in resolving issues, the course identifies and applies key principles of critical thinking. The course trains students in the use of these principles in ethics and professionalism. The course is designed to improve the ability of students to reason soundly in professional ethics, to be familiar with the health professional ethics literature, and to communicate clearly about ethical values, integrity, and judgment. At the same time, the course is intended to provide a broad context to the daily issues of professional life and to present the historical richness of the debates over ethical issues.
HDS 630 (CAHP 630)	Scanning the Healthcare Environment	This upper level course is designed to provide allied health professions students with an overview of health care delivery in the United States. The course will explore many factors that influence the delivery of health care, including the determinants of health, the financing of health care, and various health care settings. The course will examine the evolution of health care in the United States and will project issues that will affect health care in the future. Allied health professionals are affected by such changes in both their personal and professional lives. It will be the challenge of health care professionals of the future to consider the value of Medicare and Medicaid, the handling of insurance issues, the creation of policy governing health care delivery and the reduction of health care disparities. This course is designed to assist students in gaining an understanding of why change is occurring, recognizing trends in their particular professional environment and identifying strategies to affect the changes to assure the patient's access to quality care in an economical environment.
HDS 650 (HPME 850)	Foundations of Quality Improvement	Learners will explore foundational principles of the field and science of quality improvement. Topics covered will lay the groundwork for students to understand the complexity of quality improvement in practice including policies and regulations that affect quality, quality metrics and reporting, frameworks to conceptualize quality issues, quality improvement models, data management and analysis methods, considerations for adopting change to improve and sustain performance, and organizational and social influences on improvement
HDS 651 (HPME 851)	System and Social Influences of Quality and Safety	Learners will explore system and social influences that influence quality improvement and safety initiatives in healthcare settings. Topics covered include strategic alignment of improvement initiatives with organizational strategy, safety culture, high-reliability and learning organizations, leadership for improvement, inter-professional teams and teamwork, individual behavior change and performance management, system design and human factors, and health information technology and informatics in quality improvement.
HDS 653 (HPME 853)	Implementation and Evaluation of Improvement Initiatives	Learners will explore and apply strategies and tools from the science of improvement to implement and evaluate the effectiveness of quality improvement initiatives and to manage and spread improvements in healthcare settings. Topics covered include development of improvement implementation strategies and action plans, strategies and tools to analyze and evaluate implementation efforts and impacts on metrics of interest, approaches to change management with an emphasis on the spread and sustainment of change, financial analysis and return on investment of improvement activities, and the integration of a portfolio of improvement projects under a larger quality improvement program

HDS 661 (BMI 861)	Health Data Analysis	This course presents the basic concepts of data analytics and systems thinking in the healthcare setting.
HDS 662 (BMI 862)	Health Information Systems	This course introduces health information systems as tools to gather, analyze, and document patient and health system information to detect, understand, and prevent or treat diseases. Students will learn how interoperable health information and decision support systems work together to provide safe, effective, patient-centered, timely, efficient, and equitable care.
HDS 663 (BMI 863)	Health Information Management	This course explores topics related to the management and security of health information. Specifically, students will learn the administrative and regulatory uses of health information; the fundamentals of medical coding and reimbursement; and methods used to ensure the confidentiality, privacy and security of patient health information.
HDS 673	Special Topics in Healthcare	This independent study course allows students to explore a specific topic not offered in the existing curriculum.
HDS 640 (HPTT 640)	Foundations of Clinical Teaching	This course provides the opportunity to investigate and apply theory and evidence-based practice strategies in clinical teaching. Topics include optimizing orientation and onboarding, developing learning objectives, promoting clinical reasoning, providing effective feedback and conducting a formal evaluation.

### Courses to Consider in the Future

HSRA 860	Health Economics	This course is designed to help students understand how the theories and models of economics can be applied to the study of health and health care. The examination of the markets (demand and supply) for health, health care and health insurance is stressed. In addition, the economic analytic tools such as microeconomic theories and economic evaluation methods will also be reviewed and introduced. The objective of this course is to equip students with the knowledge/tools to examine and analyze the problems/issues of health care from the perspective of economics.
ECON 8600 (UNO)	Health Economics	This course is designed to help students understand how the theories and models of economics can be applied to the study of health and health care. The examination of the markets (demand and supply) for health, health care and health insurance is stressed. In addition, the economic analytic tools such as microeconomic theories and economic evaluation methods also will be reviewed and introduced. The objective of this course is to equip students with the knowledge tools to examine and analyze the problems issues of health care from the perspective of economics.
HDS 673	Special Topics in Healthcare	National Library of Medicine Self-Study Course on Healthcare Economics available at: <a href="https://www.nlm.nih.gov/nichsr/edu/healthecon/01_he_02.html">https://www.nlm.nih.gov/nichsr/edu/healthecon/01_he_02.html</a>

### Mapping of Additional HDS-Related Topics to Core or Elective Courses

HDS Topic	HDS Core or Elective Course
Evaluation of Scholarly Literature	HDS 631, HDS 723
Reimbursement Models & Policy	CPH 565, HDS 630
Supply Chain	HDS 650, HDS 653
IT, Data Management, & Communication	HDS 662, HDS 663, HDS 660
Marketing	HDS 631, HDS 630
Compliance	HDS 653, HDS 673
U.S. Healthcare System & Healthcare Reform for the Health Professions Student	E-Learning Module available via the E-Learning Gallery





EAB

MARKET RESEARCH BRIEF

# Market Demand for a Master's in Health Care Delivery Science

# COE Forum

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# 1) Research Methodology

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**Project Challenge** Leadership at the University of Nebraska Medical Center approached the Forum as they considered launching a master’s degree in health care delivery science. Through a combination of qualitative interviews with administrators of master’s-level health care delivery and administration programs, and quantitative data analytics, the Forum sought to assess the market viability of a master’s degree program in health care delivery science at the University of Nebraska Medical Center.

EAB’s market research function provides insights which guide strategic programmatic decisions at member institutions. The Forum combines qualitative and quantitative data to help administrators identify opportunities for new program development, assess job market trends, and align curriculum with employer and student demand.

EAB reports rely primarily on labor market data from the Burning Glass Labor/Insight™ tool (description below). Reports occasionally use data from the United States Census Bureau and United States Bureau of Labor Statistics data to explore occupation and job trends. Market research reports may also incorporate Integrated Postsecondary Education Data System (IPEDS) data to assess student enrollment, demographics, and completion rates across competitor programs.

**Methodology** **Methodology:** Unless stated otherwise, this report includes data from online job postings from June 2014 to May 2015. The Forum identified the top titles, skills, employers, and locations nationwide.

Annual growth in job postings is measured in the change between January 2010 and December 2014 by six-month halves (i.e., 2012 H2 is July 2012 to December 2012).

**Burning Glass Labor/Insight™** **EAB’s Partner for Real-Time Labor Market Data**  
This report includes data made available through EAB’s partnership with Burning Glass Technologies, a Boston-based leader in human capital data analytics. Burning Glass Technologies specializes in the use of web spidering technology to mine more than 80 million online job postings and analyze real-time employer demand. Under this partnership, EAB may use Burning Glass’s proprietary Labor/Insight™ tool to answer member questions about employer demand for educational requirements, job titles, and competencies over time, as well as by geography. The tool considers job postings “unspecified” for a skill, industry, employer, geography, certification, or educational requirement when the job posting did not advertise for one of these particular job characteristics. Unspecified postings represent null values and should be excluded from the total number (n value) of job postings analyzed in the query. A more complete description of the tool is available at <http://www.burning-glass.com/products/laborinsight-market-analysis/>.

For more information about the Labor/Insight™ tool, please contact Kelly Bailey, Business Development Manager, at [kbailey@burning-glass.com](mailto:kbailey@burning-glass.com) or 732-800-2484.

## Project Sources

The Forum consulted the following sources for this report:

- EAB’s internal and online research libraries  
[www.eab.com](http://www.eab.com)
- National Center for Education Statistics (NCES)  
<http://nces.ed.gov>
- Program Websites:
  - “Science of Health Care Delivery, MS” Arizona State University. Accessed June 23, 2015.  
<https://chs.asu.edu/shcd/programs/master-science-science-health-care-delivery>
  - “Master of Health Care Delivery Science at Dartmouth” Dartmouth College. Accessed June 23, 2015.  
<http://mhcds.dartmouth.edu/the-program>
  - “MS Program in Health Care Delivery Leadership” Mount Sinai School of Medicine. Accessed June 23, 2015.  
<http://icahn.mssm.edu/education/graduate/masters-programs/health-care-delivery>
  - “Executive Master of Healthcare Administration” University of Minnesota. Accessed June 23, 2015.  
<http://sph.umn.edu/programs/mhaexec/>

## Profiled Institutions

The Forum interviewed administrators of health care delivery science and administration programs at the following institutions:

### A Guide to Institutions Profiled in this Brief<sup>1</sup>

Institution	Location	Approximate Institutional Enrollment (Undergraduate/Total)	Classification
<b>Arizona State University</b>	Southwest (City; Midsize)	38,700 / 48,700	Research Universities (very high research activity)
<b>Dartmouth College</b>	Northeast (Town; Remote)	4,300 / 6,300	Research Universities (very high research activity)
<b>Mount Sinai School of Medicine</b>	Mid-Atlantic (City; Large)	0 / 1,100	Special Focus Institutions (medical schools and medical centers)
<b>University of Minnesota</b>	Midwest (City; Large)	34,400 / 51,500	Research Universities (very high research activity)

1) National Center for Education Statistics.

## 2) Executive Overview

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### Key Observations

**Recruit health care organization leaders to increase enrollments in the health care delivery science program and improve health care delivery.**

Health care delivery science programs exist to improve the efficiency of the health care system. Since individuals in leadership positions have greater influence and can therefore affect greater change, many master's-level health care delivery science programs recruit health care professionals in leadership roles. Administrators at the **University of Nebraska Medical Center** should market the master's-level health care delivery science program to health care industry professionals to increase enrollments.

**Require an implementation project to ensure students can apply strategies learned in the program to students' workplaces.** Most master's-level health care delivery science students work full-time in the health care industry and may implement what they learn in classes at their places of employment. Even so, all profiled programs require health care delivery science students to complete an implementation project in which students design a program (e.g., an employee wellness program) and implement it at a health care organization. Institutions require projects to ensure students learn to put lessons into practice. Implementation projects occur at either a student's place of work or an institution local to the school.

**Include economics, policy, strategy, and leadership courses in the curriculum to prepare students for workplace effectiveness.** Program graduates must understand all facets of the health care system to implement changes in health care delivery. A successful health care delivery science program includes elements of health care economics and finance, health policy, strategy and operations, and organizational and personal leadership to produce well-rounded graduates. Leverage resources from across the **University of Nebraska Medical Center** to ensure students understand all aspects of health care delivery.

**National employer demand for health care delivery science professionals increased 15.4 percent across 2014.** Employers nationwide posted 34,362 jobs for health care delivery science professionals in the second half of 2014, a 15.4 percent increase over the 29,766 jobs posted in the first half of the year. This increase confirms reports of increased interest in master's-level health care delivery science programs from administrators at profiled institutions.

**Deliver the program in a cohort model to foster students' collaboration skills.** Employers nationwide seek health care delivery science professions with collaboration skills more than any other skill except patient care. The multifaceted nature of health care makes collaboration crucial to efficient care delivery. Deliver the program in a cohort model to give students as many opportunities as possible to learn from one another and work together.

### 3) Program Characteristics

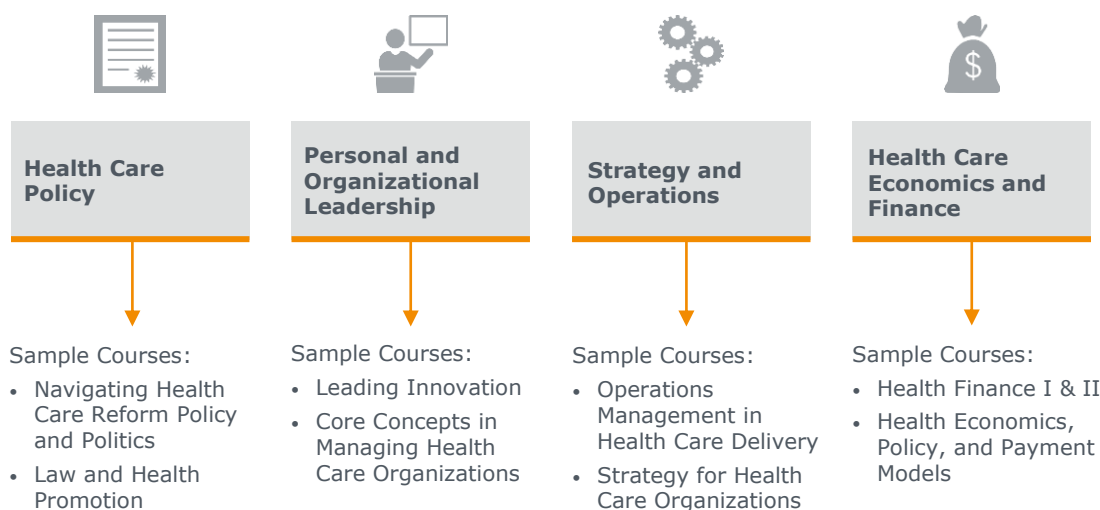
#### Curriculum and Requirements

#### Include Economics, Health Care Strategy, and Leadership Courses in Curriculum to Prepare Graduates for Health Care Delivery Work

Health care delivery science program curricula cover all aspects of health care, from patient care to payment. Program curricula typically include courses on policy, leadership, strategy, and economics. Include courses in all these areas to create well-rounded graduates who understand all facets of health care. A student with a broad understanding of the industry may implement comprehensive solutions to improve the efficiency of health care delivery.

#### Common Curricular Elements in Master’s-Level Health Care Delivery Science Programs

*Profiled Institutions*



#### Required Courses in Master’s-Level Health Care Delivery Programs

Arizona State University	
Master of Science in the Science of Health Care Delivery	<ul style="list-style-type: none"> <li>• Health Behavior and Statistical Tools in Health Environments</li> <li>• Health Care Systems and Design</li> <li>• Interdisciplinary Approaches to Promotion of Healthy Lifestyles</li> <li>• Health Economics, Policy, and Payment Models</li> <li>• Interdisciplinary Perspective on Health Disparities and Access</li> <li>• Law and Health Promotion</li> <li>• Leadership and Professionalism</li> <li>• Leading Change in Health Organizational Systems</li> <li>• Creativity and Innovation Leadership in Health</li> <li>• Health Care Finance and Process Engineering</li> <li>• Seminar in Science of Health Care Delivery</li> <li>• Capstone: Applied Project</li> </ul>

## Dartmouth College

Master of Health Care Delivery Science

- Science of Health Care Delivery
- Health Economics and Policy
- Finance Essentials for Leaders in Health Care Delivery
- Clinical Microsystems: Designing, Leading, and Improving Patient-Focused Care
- Shared Decision Making
- Leveraging Data to Inform Decision-Making
- Health Care Operations Management
- Management and Leadership of Health Care Organizations
- Strategic Marketing for Health Care Organizations
- Population Health and Preventive Care
- Management and Organization Change
- Effective Information Technology for Health Care Organizations
- Leading Innovation
- Strategy for Health Care Organizations
- Personal Leadership

## Mount Sinai School of Medicine

Master of Science in Health Care Delivery Leadership

- Gateway Seminar—Critical Themes for Health Care Delivery in the 21st Century (one week on-site residency session)
- The Affordable Care Act
- Navigating Health Care Reform Policy and Politics
- Health Care Delivery Economics
- Strategy Creation for Health Care Organizations
- Strategic Communications for Health Care Delivery Organizations
- Leading and Managing Health Care Delivery Organizations
- Leveraging Data for Evidence-Based Decision-Making in Health Care
- Seminar 2 - Improved Health Care Delivery Effectiveness and Quality: Systems, Approaches, Tools (one week on-site residency session)
- Health Information Systems and Technology
- Finance Essentials for Health Care Delivery Leadership
- Operations Management in Health Care Delivery
- Improving Population and Public Health Delivery
- Clinical Microsystems Innovations
- Capstone



Executive  
Master of  
Health Care  
Administration

- Marketing for Health Care Professionals
- Managerial Accounting for Health Services
- Health Finance I & II
- Statistics for Health Care Decision-Making
- Health Care Human Resource Management
- Principles of Management in Health Services Organizations
- Healthcare Management Ethics
- Health Care Marketing
- Topics in Health Economics
- Health and Health Systems
- Operations Research and Quality in Health Care
- Information Technology in Health Care
- Private Purchasers of Health Care
- Core Concepts in Managing Health Care Organizations
- Interdisciplinary Teamwork in Health Care
- Health Policy
- Organizational Integration in Health Care Delivery
- Health Care Strategies in Competitive Markets
- Health Care Delivery, Design, and Innovation
- Legal Considerations in Health Services

## Include a Personalized Leadership Assessment to Provide Students with Personalized Instruction

Master’s-level health care delivery science programs focus on training leaders in the health care industry, so program curricula often include personalized leadership assessments. Programs also incorporate leadership-focused courses. The health care delivery programs at **Dartmouth College** and **Mount Sinai School of Medicine** incorporate an assessment of each student’s leadership skills and style in the master’s-level health care delivery science program curriculum.

Administrators at Dartmouth College complete the assessment before a student enters the program. Students must submit the names of colleagues, managers, and direct reports before beginning the program. Program administrators give those names to an external consulting firm that completes interviews with the people listed to gain an understanding of the student’s leadership abilities. Administrators then deliver the assessment results to students so they learn their leadership strengths and opportunities for improvement, and can work to improve throughout the program.

## National Employers Seek Health Care Delivery Science Professionals with Clinical and Leadership Skills

Employers exhibit demand for professionals with both clinical and leadership skills. Over 21 percent of the jobs posted last year for health care delivery science professionals list 'patient care' as a desired skill. Other commonly sought clinical skills include 'acute care' and 'mental health.'

Employers also seek health care delivery science professionals with leadership skills such as 'collaboration,' 'process improvement,' and 'decision making.' Over 14 percent of all relevant jobs posted last year list 'collaboration' as a desired skill.

### Top Skills for Health Care Delivery Science Professionals

June 2014-May 2015, National Data<sup>2</sup>

n=74,882 job postings, 7,335 unspecified postings



## Require Students to Complete an Implementation Project to Ensure Workplace Effectiveness

Require an implementation project to ensure students know how to put knowledge gained during the program into practice. In an implementation project, students design a program to implement at a specific institution, and then implement the program. A student may design an employee wellness program at a health care organization, for example, according to the logic that healthier employees perform better.

All profiled programs require students to complete an implementation project, though most health care delivery science students already work in the health care industry and therefore have chances to implement lessons from master's programs. Some institutions allow students to complete the project in teams. Implementation projects take place in actual health care delivery institutions to hold students responsible for tangible results.

## Certificates

### Offer Certificates in Leadership to Differentiate the Health Care Delivery Science Program at the University of Nebraska Medical Center

Few master's-level health care delivery science programs offer certificates, presenting an opportunity for the **University of Nebraska Medical Center** to differentiate its program by offering students additional leadership-specific credentials.

The health care delivery science program at **Mount Sinai School of Medicine** started recently, but administrators already plan to offer certificates in year three or four of the program. Administrators conducted a gap analysis to determine what topics students have the greatest need for and least exposure to, and decided to offer operations management certificates in management processes including LEAN, Six Sigma, and RAPID. Administrators also plan to offer certificates in public health. Contacts caution that certificate programs require faculty time commitment and state regulatory approval. Contacts at **Arizona State University** also seek to introduce certificates as the program grows.

## Program Resources and Delivery

### Hire Faculty from Multiple Disciplines to Expose Students to Different Facets of the Health Care System

Health care delivery science program administrators at **Arizona State University** employ faculty from multiple disciplines, including law and finance. **Dartmouth College** similarly employs faculty from the Tuck School of Business and the Dartmouth Institute for Health Policy and Clinical Practice. Professors from multiple disciplines contribute different perspectives on health care issues, which encourage students to make connections between the many aspects of health care delivery.

The **University of Minnesota** employs 18 to 20 faculty members to teach in the Executive Master of Health Care Administration program, all of whom work in the Division of Health Policy and Management within the School of Public Health. Arizona State University employs only tenure-track faculty to teach in the health care delivery science program, but the University of Minnesota employs some adjuncts.



#### Practicing Administrators Teach Health Care Delivery Courses

Since the Mount Sinai health system hosts the health care delivery science program, administrators at **Mount Sinai School of Medicine** employ teams of experts (i.e., clinicians, administrators) from the health system to teach courses. For example, the Chief Technology Officer of the Mount Sinai Health system teaches the "Health Information Systems and Technology" course along with technology division directors. The CTO serves as the lead instructor and the directors act as co-instructors.

## Deliver the Master of Health Care Delivery Science Program in a Cohort Model to Foster Collaboration Skills

As noted on page eight of this report, employers nationwide seek health care delivery science professionals with collaboration skills more frequently than any other skill except patient care. The multifaceted nature of health care requires a collaborative approach to health care delivery, and a cohort model fosters collaboration among students.



### Students Learn from One Another

Program administrators at **Dartmouth College** offer an independent study option for students who already know course material (e.g., a hospital's Chief Financial Officer may not benefit from a health care finance course) but report no students have selected this option yet. Contacts explain that students who already know the material in a given class learn from observing others engage with the material. For example, watching clinicians learn about health care finance exposes a hospital CFO to the clinical perspective on hospital finance.

## Create an Online Program with Three to Five Residency Periods to Attract Working Professionals

Administrators at **Dartmouth College** and **Mount Sinai School of Medicine** offer a distance program with required residency periods. Students move through a sequence of required courses simultaneously, and all students must attend all residency sessions. All students in these programs work full-time, so both programs' administrators offer the master's-level health care delivery program in a hybrid format to accommodate students' work schedules.

The online Executive Master of Health Care Administration program at the **University of Minnesota** similarly enrolls only working professionals. Administrators offer online courses asynchronously to allow students to move complete courses at their own pace. Administrators offer the master's program in health care delivery science at **Arizona State University** both face-to-face and online, and online courses also occur asynchronously.

### Program Delivery Characteristics

Institution	Residency Requirement	Online Course Delivery
<b>University of Minnesota</b>	5 periods (totaling 22 days on campus) across the 25-month program	<ul style="list-style-type: none"> <li>Asynchronous (though individual professors may call for synchronous sessions at their discretion)</li> <li>Students work between 12 and 18 hours online each week</li> </ul>
<b>Dartmouth College</b>	4 periods across the 18-month program	<ul style="list-style-type: none"> <li>Students commit to 15 hours of work a week</li> <li>Students meet synchronously online once a week</li> </ul>
<b>Mount Sinai School of Medicine</b>	3 periods (each period lasts from a few days to a week)	Unknown
<b>Arizona State University</b>	None: program occurs face-to-face and online	<ul style="list-style-type: none"> <li>Asynchronous</li> </ul>

## Allow Health Care Organizations to Enroll Multiple Employees in Health Care Delivery Science Program Cohorts

Administrators at **Dartmouth College** and **Mount Sinai School of Medicine** allow health care organizations to enroll sponsored teams of two to six people. These teams complete the program together and, in the case of Dartmouth College, work on the same final project. Leadership at the sponsor organization pre-approves the project topic.

The sponsored team model fosters students' collaboration skills and also increases the likelihood of more efficient health care delivery at the sponsor organization, since graduates learn together and will implement changes together.



### Sponsored Teams Represent a Small Portion of Master's-Level Health Care Delivery Science Program Cohorts

Administrators at **Dartmouth College** report sponsored teams account for one third of each class, while administrators at **Mount Sinai School of Medicine** estimate sponsored teams will make up 15 percent of the program's next cohort.

### 3) Student Enrollment and Recruitment

#### Enrollment Trends over Time

#### Administrators Report Increased Interest in Master’s-Level Health Care Delivery Science Programs

Administrators at **Dartmouth College** cap program enrollment at 50 students to ensure faculty maintain the quality educational experience the College delivers in face-to-face programs. Contacts report that the College receives many more applications than the 50 available spots, and estimate the number of applicants grows by around 10 percent each year. Administrators at **Mount Sinai School of Medicine** also cap enrollment and report the program receives 2.5 times as many applications as available seats. Contacts at the **University of Minnesota** also report increased interest in the Executive Master of Health Administration program.

#### Program Enrollment Relative to Institution Size

Institution	Program Enrollment	Approximate Institutional Enrollment
Arizona State University	Unknown	48,700
Dartmouth College	50 students (capped)	6,300
Mount Sinai School of Medicine	25 students (capped)	1,100
University of Minnesota	30-34	51,500

#### National Employer Demand for Health Care Delivery Science Professionals Increased by 15.4 Percent from January to December 2014

Employer demand for health care delivery science professionals grew nationwide from 29,766 jobs posted in H1 2014 to 34,362 jobs posted in H2 2014, a 15.4 percent increase. This increase represents an upward trend following a 14.6 percent decrease in nationwide employer demand from H2 2013 to H1 2014.

The increase in employer demand echoes contacts’ reports of increased interest in health care delivery science programs. Increased employer demand and student interest support the creation of a master’s-level health care delivery science program at the **University of Nebraska Medical Center** to satisfy student and employer demand.

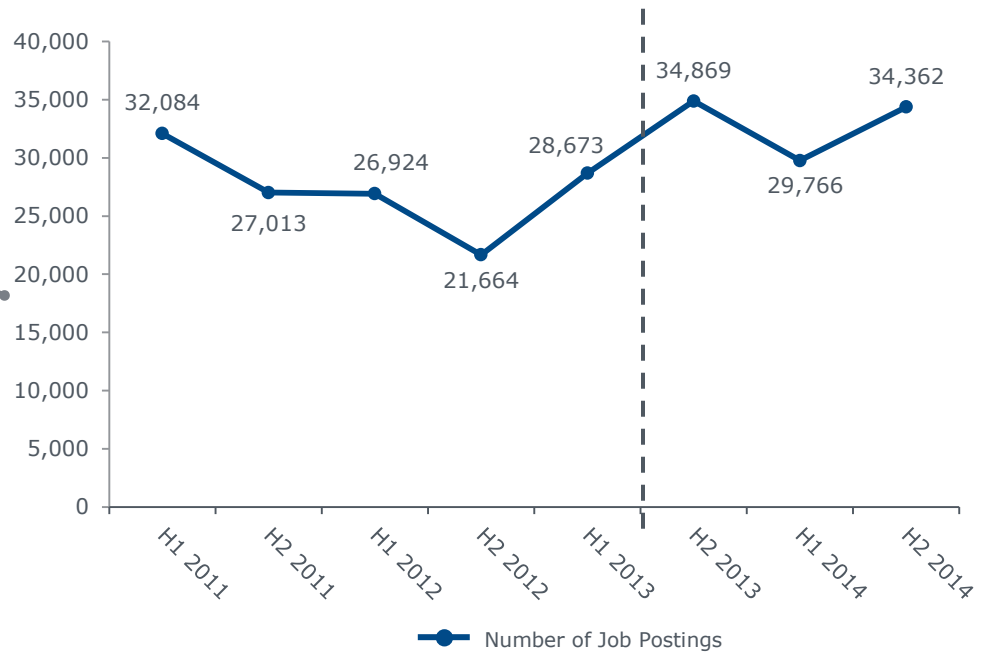
**15.4%**

National employer demand for health care delivery science professionals increased by 14.5 percent between H1 and H2 of 2014.

## Historic Demand for Health Care Delivery Professionals

H1 2011-H2 2014, National Data<sup>3</sup>

Due to improved data-mining software, Burning Glass Labor/Insight™ recognizes more positions starting in 2013 H2. Data on either side of the dotted line is thus not directly comparable.



## Program Marketing

### Market Directly to Health Care Delivery Professionals to Enroll More Students

People interested in health care delivery science programs likely believe in being proactive in improving the health care system. Accordingly, administrators at **Mount Sinai School of Medicine** craft marketing messages that appeal to such professionals (e.g., “harnessing disruption,” “getting ahead of the curve”). Administrators perform individual email outreach to attract these students. Administrators also employ digital marketing strategies, including a recent website redesign.

Program administrators at **Dartmouth College** and **Arizona State University** primarily market the health care delivery science programs via word of mouth. Arizona State University particularly relies on the good reputation of the University’s online programs to recruit new students.

3) Burning Glass Labor/Insight™.

### Seek Professionals in Leadership Positions to Ensure Students Can Implement Lessons Learned in the Master of Health Care Delivery Science Program at Work

Master's-level health care delivery programs train professionals to improve the efficiency of health care delivery while maintaining a high quality of care. Employees in leadership positions hold more influence in their organizations, meaning they may affect greater change in health care delivery. To that end, administrators at both **Dartmouth College** and **Mount Sinai School of Medicine** require all applicants to hold a leadership position in the health care industry. Both programs enroll students who oversee health care delivery (e.g., directors, unit heads).

Contacts at Dartmouth College and Mount Sinai School of Medicine emphasize that students in their programs may learn a substantial amount from one another, given students' high-level positions at their individual organizations. Administrators at the **University of Minnesota** intentionally recruit students from all aspects of the health care industry (e.g., physicians, lawyers, social workers) and report that students cite the cohort's professional diversity as a program strength. Recruit students with significant and varied experience in the health care industry to increase the program's impact on health care systems.

### Characteristics of Health Care Delivery Science Students

#### *Profiled Institutions*

#### Experience



- Over 90% of students in **Dartmouth College's** program possess advanced degrees (e.g., MD, MBA, JD).
- Students in **Mount Sinai School of Medicine's** program have 10 or more years of industry experience. Health care administration students at the **University of Minnesota** possess between three and 10 years of industry experience.

#### Current Work



- Students in **Mount Sinai School of Medicine's** program currently run departments or units and aspire to vice president roles.
- Students at the **University of Minnesota** represent various health care-related fields including medicine, law, and social work.
- 66% of health care delivery science students at **Dartmouth College** work as front-line health care providers, including physicians and nurses.

#### Geography



- **Dartmouth College** program students come from all over the United States and foreign countries (e.g., Sweden, China, Peru).
- **Mount Sinai School of Medicine** students mostly come from the New York City Metropolitan area.
- Around 50% of **University of Minnesota** students come from the upper Midwest.



## Recruit Health Care Professionals Who Seek Career Advancement to Increase Enrollment

Administrators at **Dartmouth College, Mount Sinai School of Medicine,** and the **University of Minnesota** require applicants to their health care delivery science and health care administration programs to work in the health care industry. The University of Minnesota prefers professionals with a minimum of three years of current experience, though contacts note most enrolled students possess closer to 10 years of industry experience.

Administrators of **Arizona State University's** program do not require students to hold a position in the health care industry to participate in the health care delivery science program, though contacts report most online students work in the health care industry. The program enrolls some students directly out of undergraduate programs, and some students at Arizona State University also complete the health care delivery program before completing other professional degrees, such as a medical degree or physician's assistant degree.

Program administrators at both **Dartmouth College** and **Mount Sinai School of Medicine** note that clinicians (e.g., physicians, nurse managers) compose around 60 percent of each cohort. Other students come from hospital administration, health care consulting, and health insurance. Administrators at the University of Minnesota recruit students from disciplines including law and social work along with clinical practitioners.

Recruit professionals already working in the health care industry to increase enrollment in the health care delivery science program. These students understand the need for improvements to health care delivery and can implement lessons learned from the program at their places of employment.



### Graduates Contribute to Strategic Decisions at their Institutions

Contacts at **Dartmouth College** note that even students in the program who do not seek professional advancement upon graduation achieve some degree of advancement because they can contribute more meaningfully to strategic conversations at their institutions.

## Potential Jobs for Graduates

### National Employers Seek Health Care Delivery Science Professionals to Fill Director-Level Roles Most Often

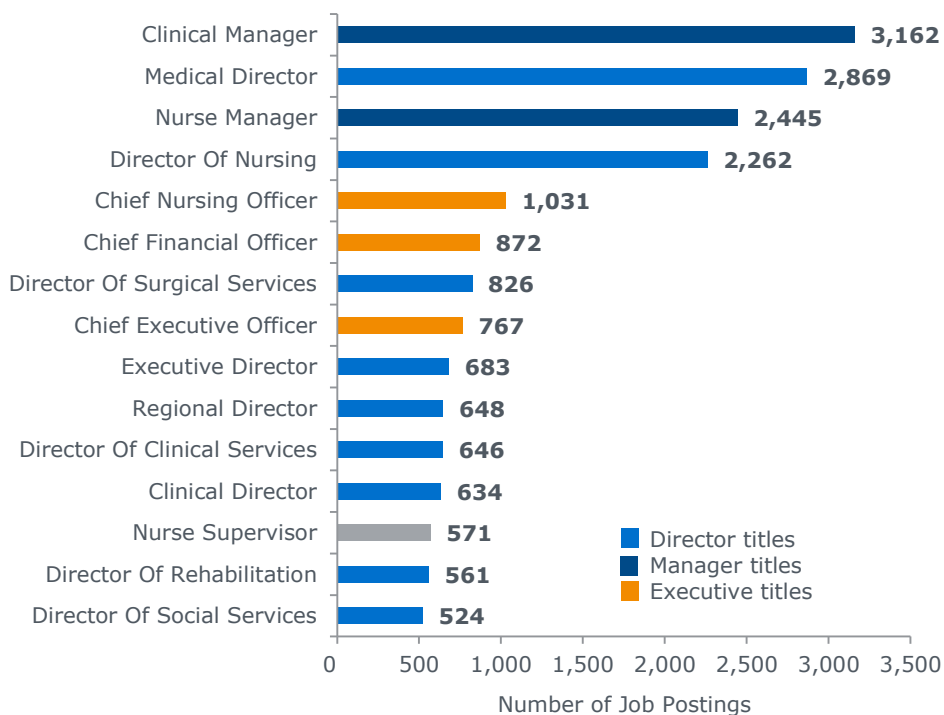
Nine of the top 15 titles for health care delivery science jobs posted last year contain the word 'director.' These include 'Medical Director,' 'Director of Nursing,' and 'Director of Surgical Services.' The presence of so many leadership titles on the list of top titles supports the strategy to market the program to health care industry professionals in leadership positions.

Programs like those at **Dartmouth College** and **Mount Sinai School of Medicine** already serve high-level leaders, but the presence of so many 'manager' and 'director' titles on the list below suggests the existence of a large potential audience among mid-level health care managers for the health care delivery science program at the **University of Nebraska Medical Center**.

#### Top Titles for Health Care Delivery Science Professionals

June 2014-May 2015, National Data<sup>4</sup>

n=74,882 job postings, 7,335 unspecified postings



\*California Environmental Quality Act  
 \*\*Principal or Senior Associate-Level Engineer or Scientist  
 \*\*\*Environmental Scientist/Groundwater Sampling Technician

## Top Employers

### The Hospital Corporation of America Seeks the Most Health Care Delivery Professionals Nationwide

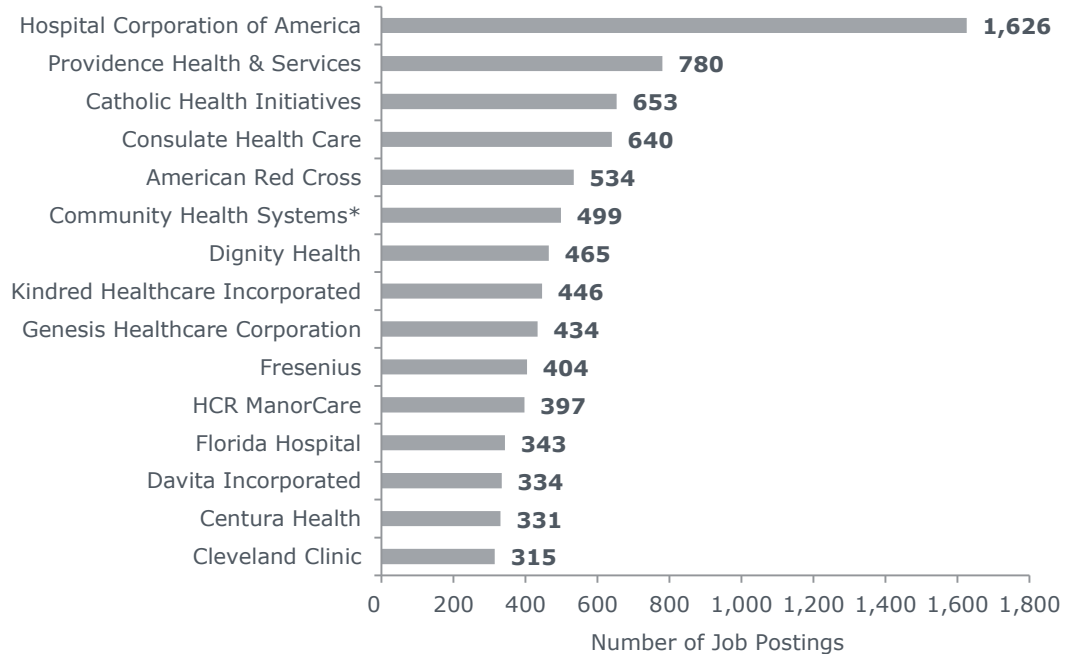
The 'Hospital Corporation of America' posted 1,626 relevant jobs for health care delivery science professionals last year, more than double the number of jobs posted by any other employer. Job postings from the 'Hospital Corporation of America' account for just over two percent of all relevant jobs posted last year. Other employers that sought health care delivery science professionals last year include 'Providence Health & Services,' 'Catholic Health Initiatives,' 'Consulate Health Care,' and the 'American Red Cross.'

The list of top employers includes health care providers (e.g., 'Florida Hospital,' 'Cleveland Clinic'), which suggests administrators of the **University of Nebraska Medical Center's** program should recruit practicing clinicians who seek to assume more responsibility in their organizations.

### Top Employers of Health Care Delivery Science Professionals

June 2014-May 2015, National Data<sup>5</sup>

n=74,882 job postings, 14,972 unspecified postings



\*Community Health Systems Professional Services Corporation

## Top Locations

### Employers in California, Texas, and New York Seek Health Care Delivery Science Professionals Most Often

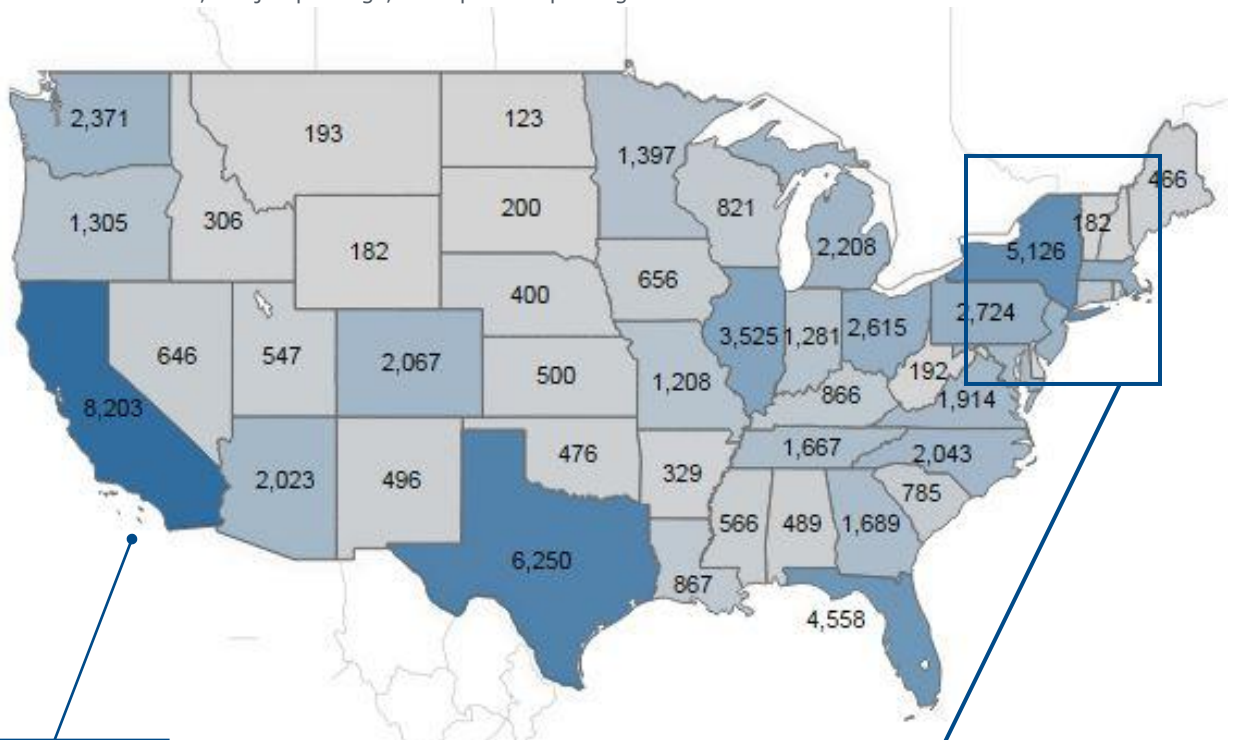
Employers in California posted 8,203 jobs for health care delivery science professionals last year, the most of any state. Other states with high employer demand include Texas (6,250 job openings), New York (5,126 job openings), Florida (4,558 job openings), and Illinois (3,525 job openings). These areas represent good recruitment opportunities for the master of health care delivery science program at the **University of Nebraska Medical Center.**

5) Burning Glass Labor/Insight™

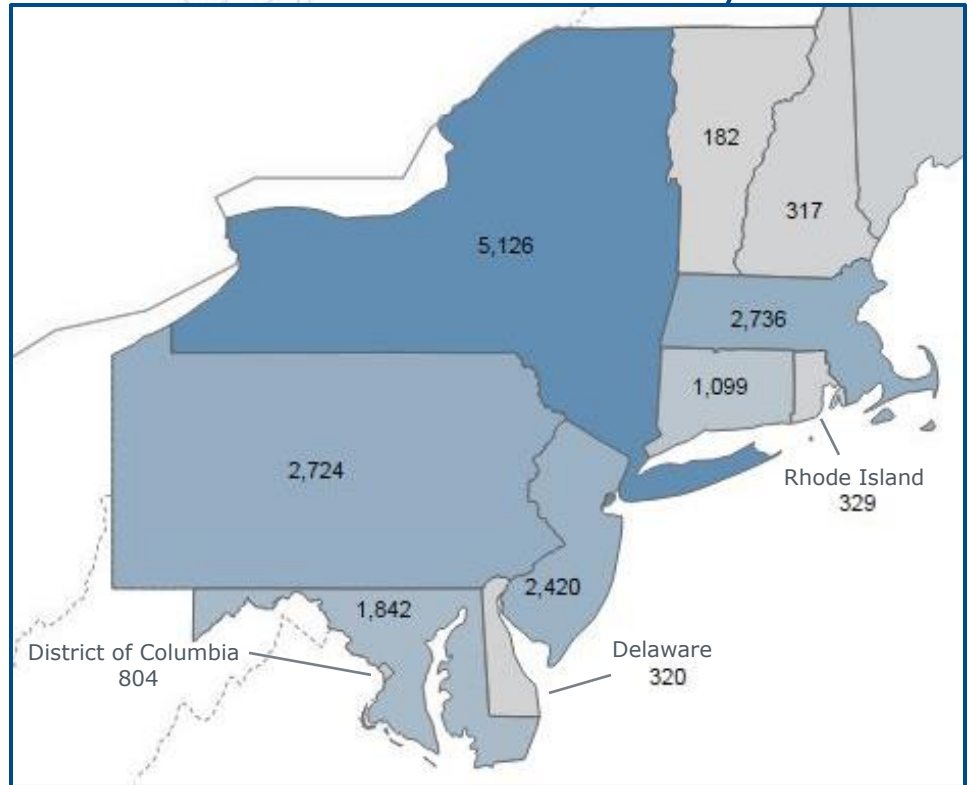
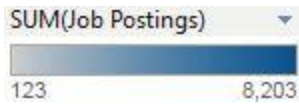
## States with the Highest Employer Demand for Health Care Delivery Science Professionals

June 2014-May 2015, National Data<sup>6</sup>

n=74,882 job postings, 0 unspecified postings



The color filling each state represents the number of jobs posted there, so that the darkest blue fills the state with the highest employer demand. The numerals in each state represent the number of jobs posted there.



6) Burning Glass Labor/Insight™

## Employers in Rochester, Minnesota Seek the Most Health Care Delivery Science Professionals Per Capita

Employers in metropolitan statistical areas (MSAs) with high populations such as New York and Los Angeles seek the most health care delivery science professionals. Employers in those cities posted 5,829 and 3,043 job openings, respectively. Other MSAs in which employers sought high numbers of health care delivery science professionals last year include:

- Chicago-Joliet-Naperville, IL-IN-WI: 2,995 job openings,
- Dallas-Fort Worth-Arlington, TX: 2,560 job openings, and
- Washington-Arlington-Alexandria, DC-VA-MD-WV: 2,153 job openings.

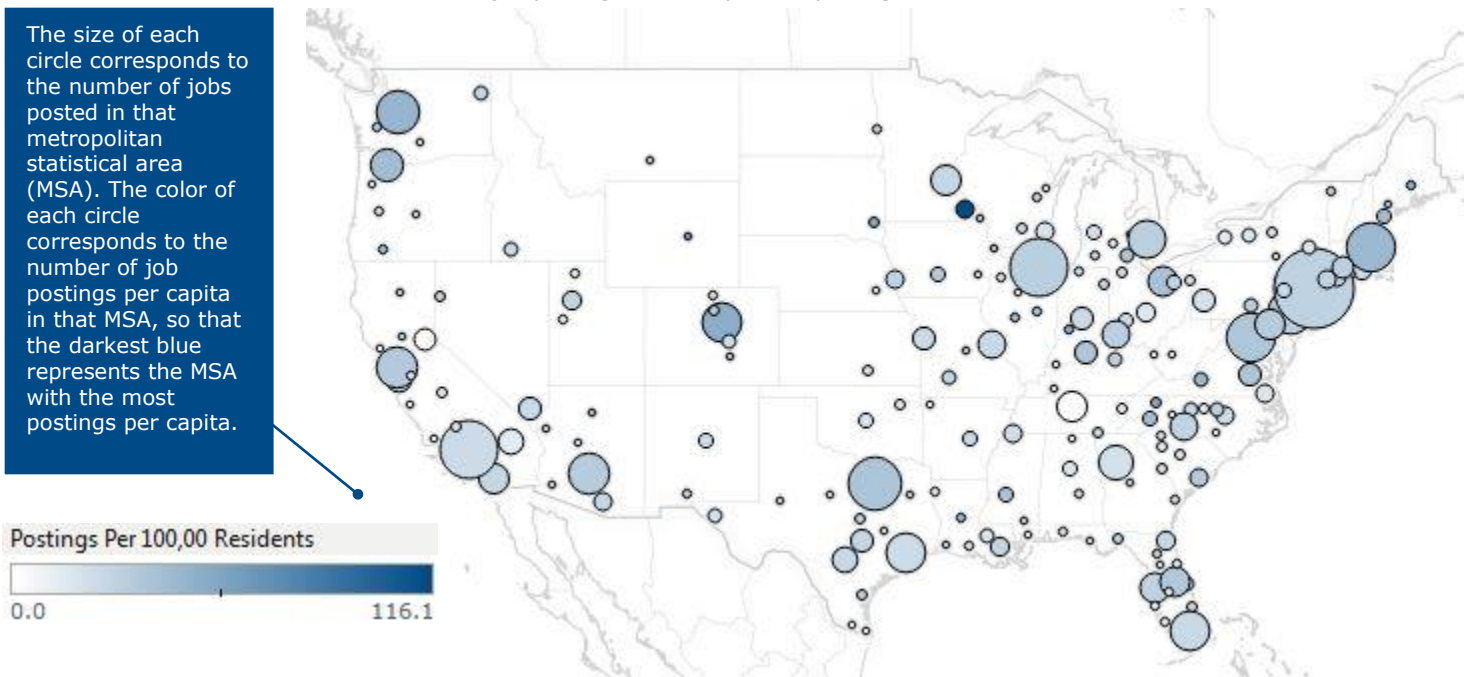
Though employers in large cities exhibit the greatest overall demand for health care delivery science professionals, areas with the highest demand per capita differ from the areas with highest overall demand. Metropolitan statistical areas with high employer demand for health care delivery science professionals per capita include:

- Rochester, MN: 116.1 job postings per 100,000 residents,
- Denver-Aurora-Bloomfield, CO: 52.1 job postings per 100,000 residents,
- Bloomington, IN: 50.3 job postings per 100,000 residents,
- Bangor, ME: 50.2 job postings per 100,000 residents, and
- Boston, MA: 45.3 job postings per 100,000 residents.

### Metropolitan Statistical Areas with the Highest Employer Demand for Health Care Delivery Science Professionals Per Capita

June 2014-May 2015, National Data<sup>7</sup>

n=74,882 job postings, 108 unspecified postings



7) Burning Glass Labor/Insight™

# Appendix A: Networking Contacts

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## **Arizona State University**

Dr. Natalia Wilson

*Associate Director, School for the Science of Health Care Delivery*

602-496-0330

[natalia.wilson@asu.edu](mailto:natalia.wilson@asu.edu)

## **Dartmouth College**

Mr. George Newcomb

*Director of Admissions, Master of Health Care Delivery Science Program*

603-646-1222

[george.l.newcomb@dartmouth.edu](mailto:george.l.newcomb@dartmouth.edu)

## **Mount Sinai School of Medicine**

Dr. Brian Nickerson

*Administrative Director, MS Program in Health Care Delivery Leadership*

212-659-8393

[brian.nickerson@mssm.edu](mailto:brian.nickerson@mssm.edu)

## **University of Minnesota**

Mr. Tom Gilliam

*Administrative Director, Master of Health Administration and Executive Studies Programs, School of Public Health*

612-625-4437

[gilli032@umn.edu](mailto:gilli032@umn.edu)

# Updated Labor Market Data, for University of Nebraska

Analysis of Job Postings and Employment for Master's-Level Health Care Delivery Professionals in the Region

**0.69%**

## Average Monthly Demand Growth

January 2017-December 2019, Region

- Average net monthly growth of two job postings during this time period.
- During the same period, demand across all occupations grew 1.13 percent.

**716**

## Average Monthly Demand

January 2017-December 2019, Region

- Employers posted 3,872 job postings between January 2019 and December 2019.

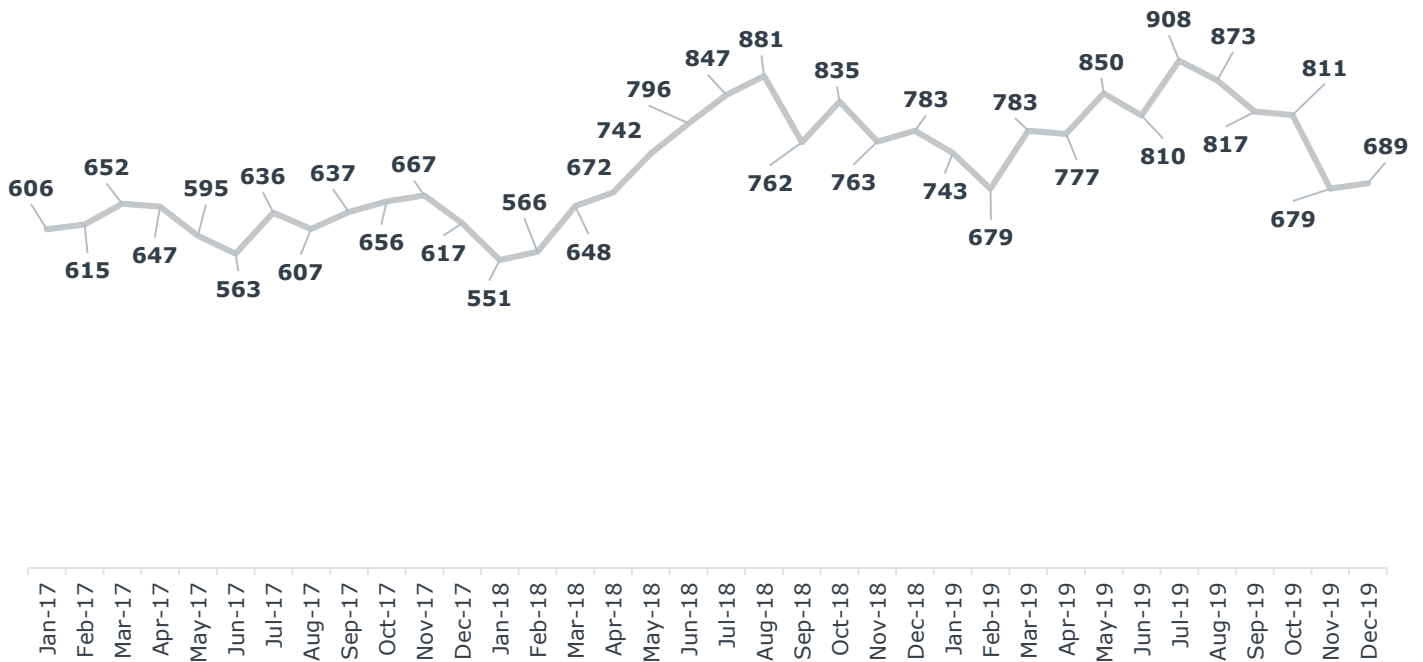
**3,872**

## Relevant Jobs Posted in the Past Year

January 2019-December 2019, Region

## Job Postings over Time

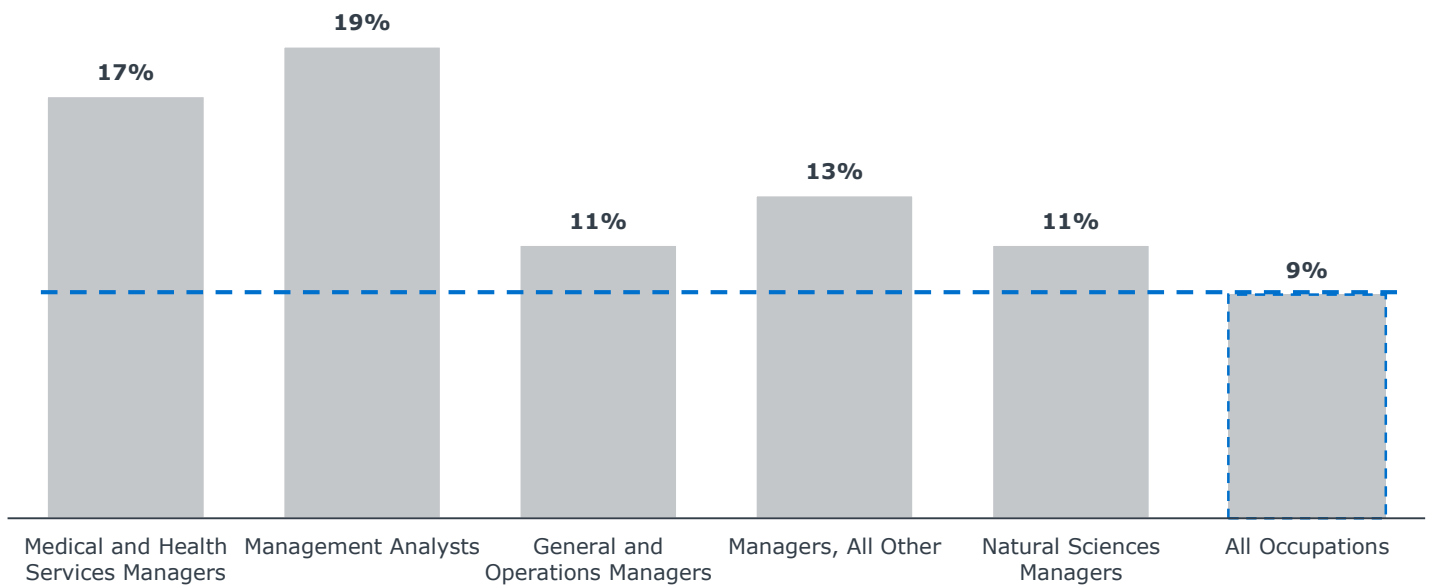
January 2017-December 2019, Region



## Analysis of Job Postings and Employment for Master's-Level Health Care Delivery Professionals in the Region

### Projected Employment in Top Occupations<sup>1</sup>

2018-2028, Region



1) Top occupations refer to the occupations in which employers most often seek relevant professionals.



## Analysis of Job Postings and Employment for Master’s-Level Health Care Delivery Professionals in the Nation

**0.54%**

### Average Monthly Demand Growth

January 2017-December 2019, Nation

- Average net monthly growth of 23 job postings in this time period.
- During the same period, demand across all occupations grew 0.81 percent.

**8,298**

### Average Monthly Demand

January 2017-December 2019, Nation

- Employers posted 44,097 job postings between January 2019 and December 2019.

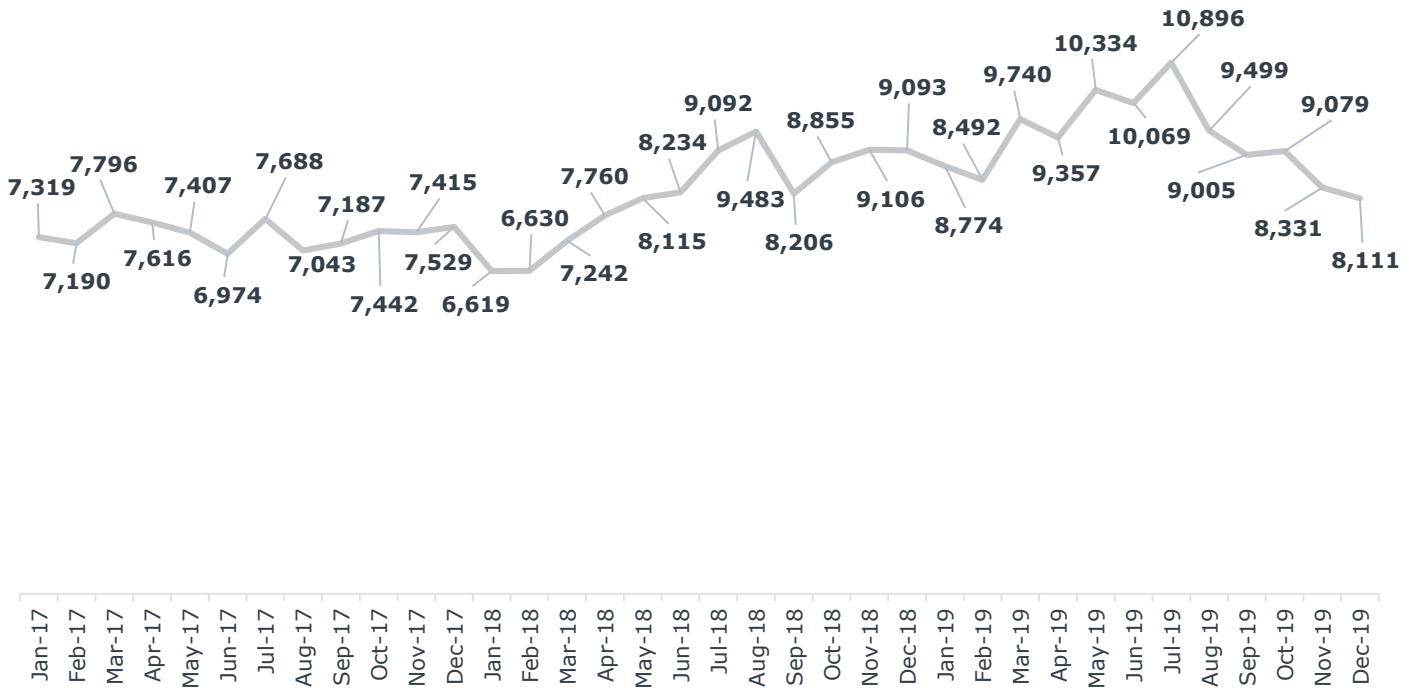
**44,097**

### Relevant Jobs Posted in the Past Year

January 2019-December 2019, Nation

### Job Postings over Time

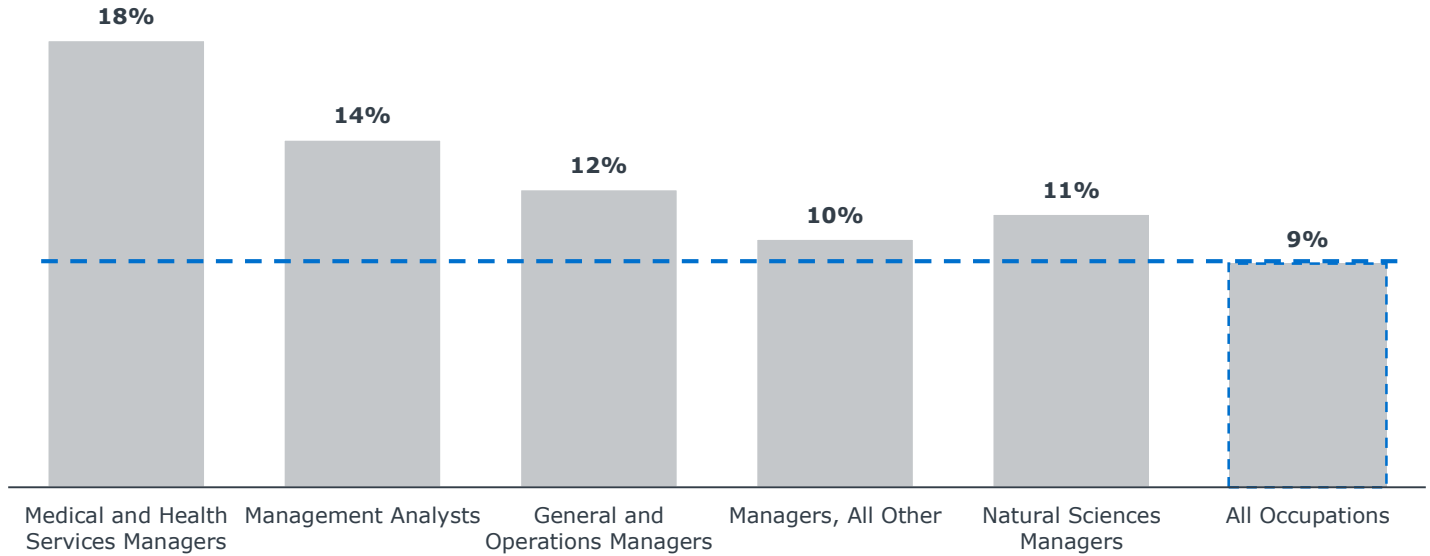
January 2017-December 2019, Nation



## Analysis of Job Postings and Employment for Master's-Level Health Care Delivery Professionals in the Nation

### Projected Employment in Top Occupations<sup>1</sup>

2018-2028, Nation

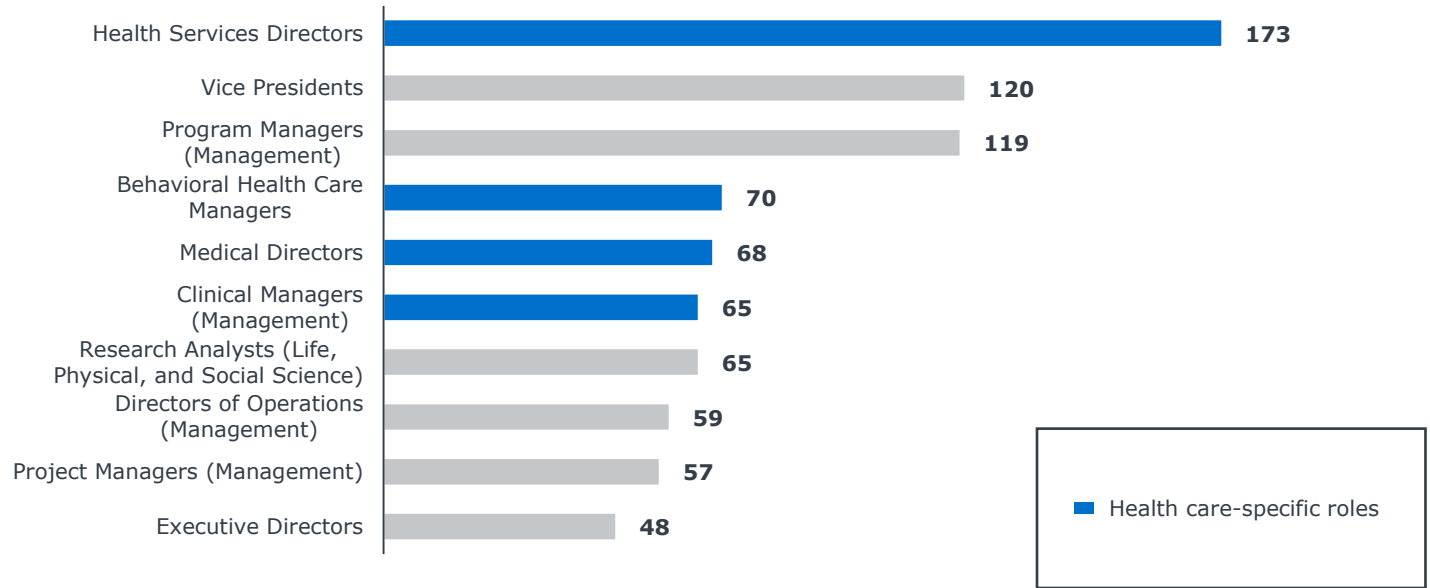


1) Top occupations refer to the occupations in which employers most often seek relevant professionals.

### Top Titles for Postings Seeking Master's-Level Health Care Delivery Applicants

January 2019-December 2019, Region

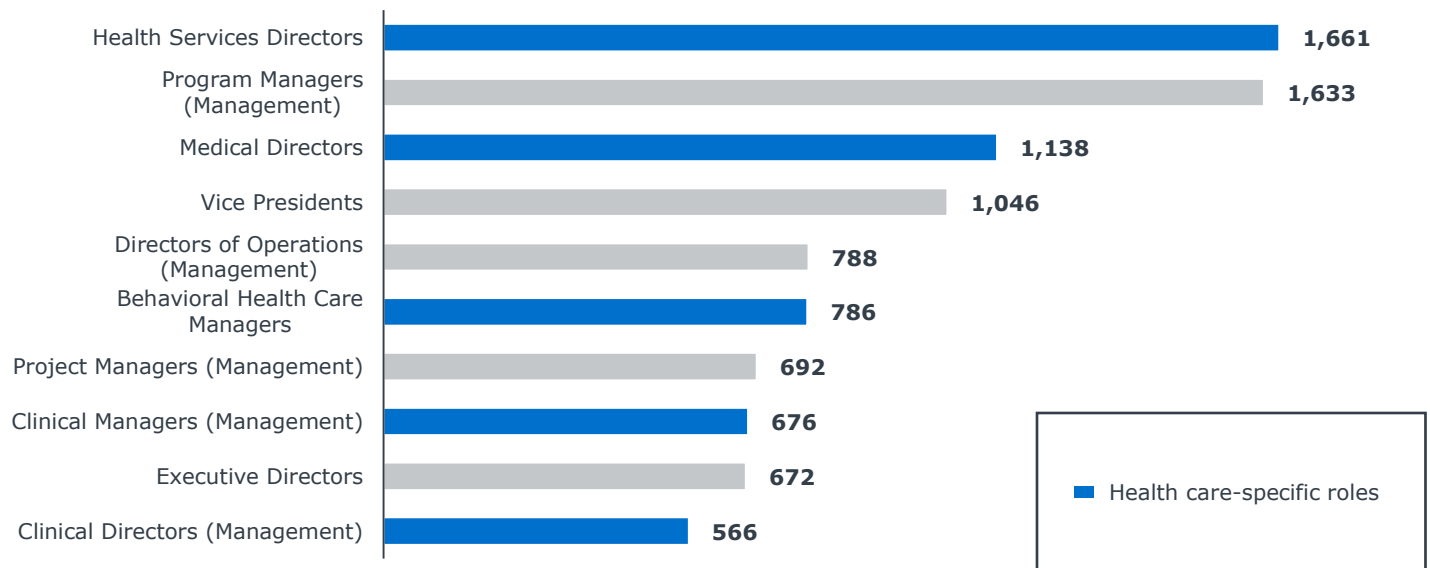
N=3,872



### Top Titles for Postings Seeking Master's-Level Health Care Delivery Applicants

January 2019-December 2019, Nation

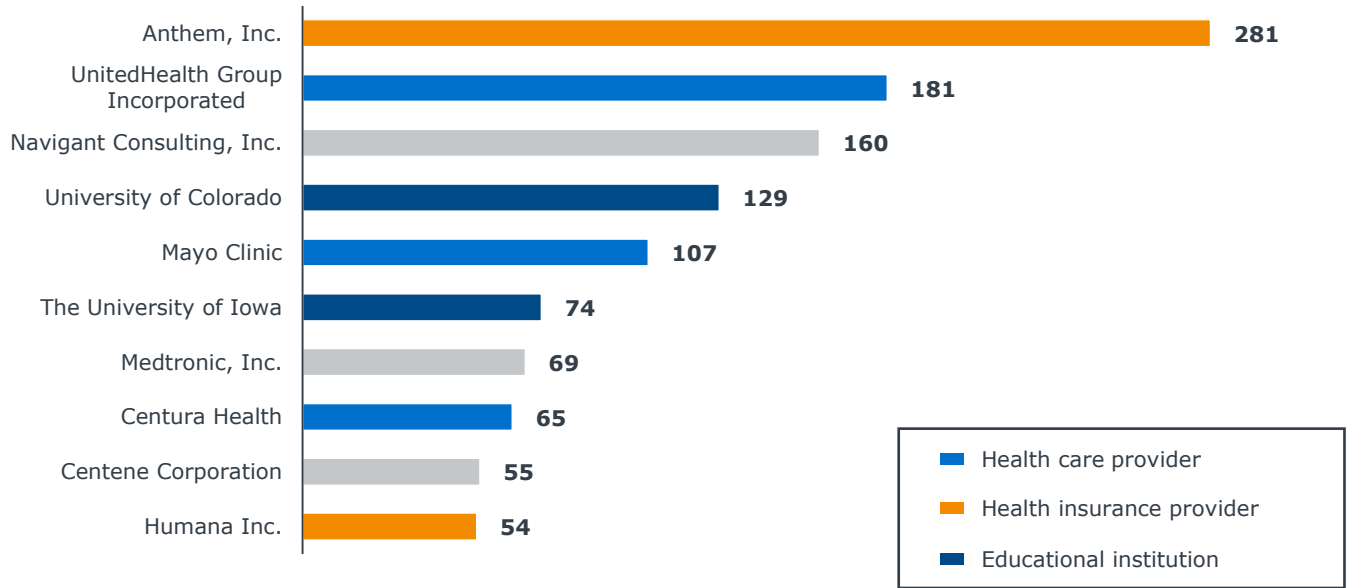
N=44,097



### Top Employers Seeking Master's-Level Health Care Delivery Applicants

January 2019-December 2019, Region

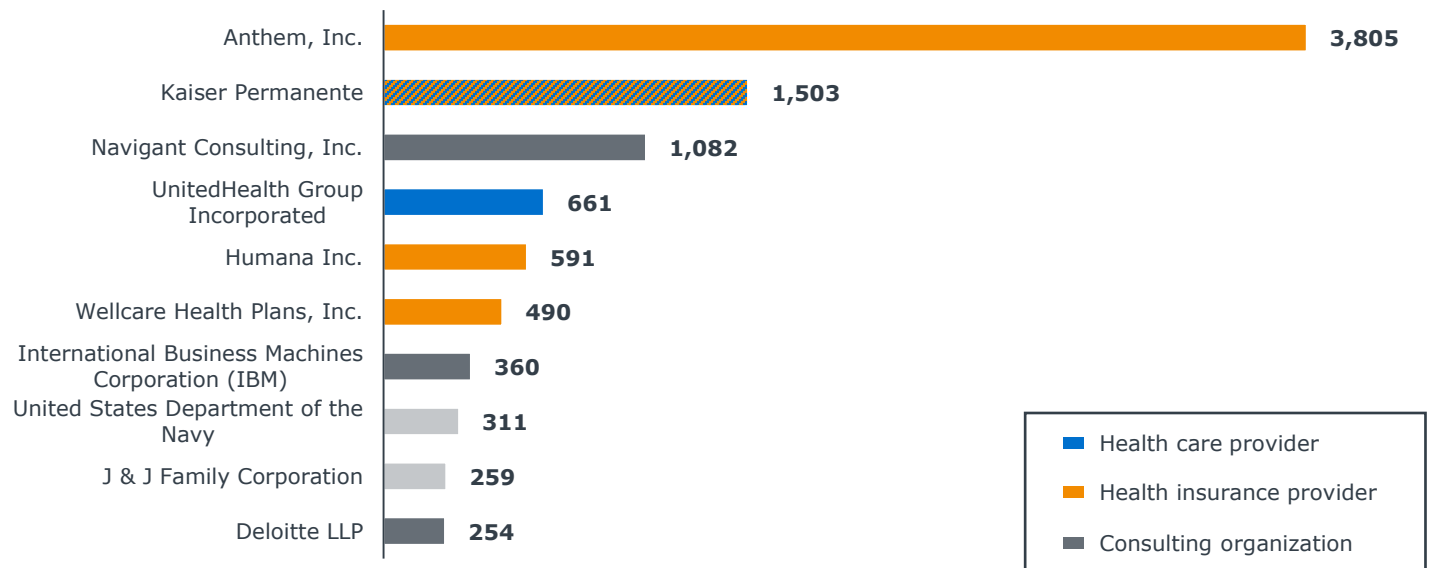
N=3,872



### Top Employers Seeking Master's-Level Health Care Delivery Applicants

January 2019-December 2019, Nation

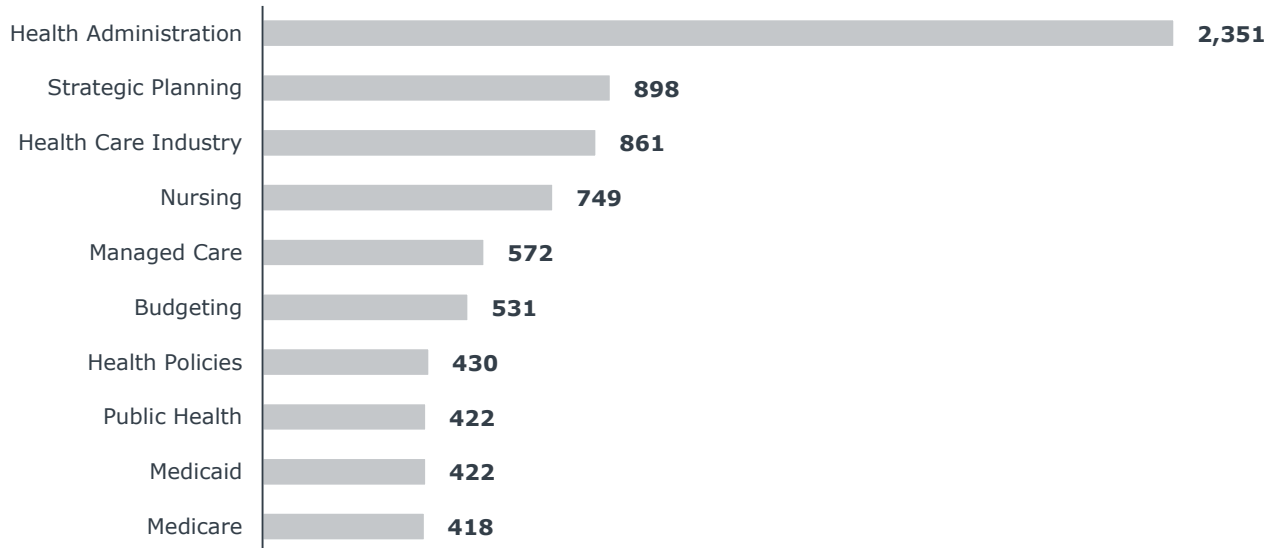
N=44,097



## Top Skills in Advertised Master's-Level Health Care Delivery Job Postings

January 2019-December 2019, Region

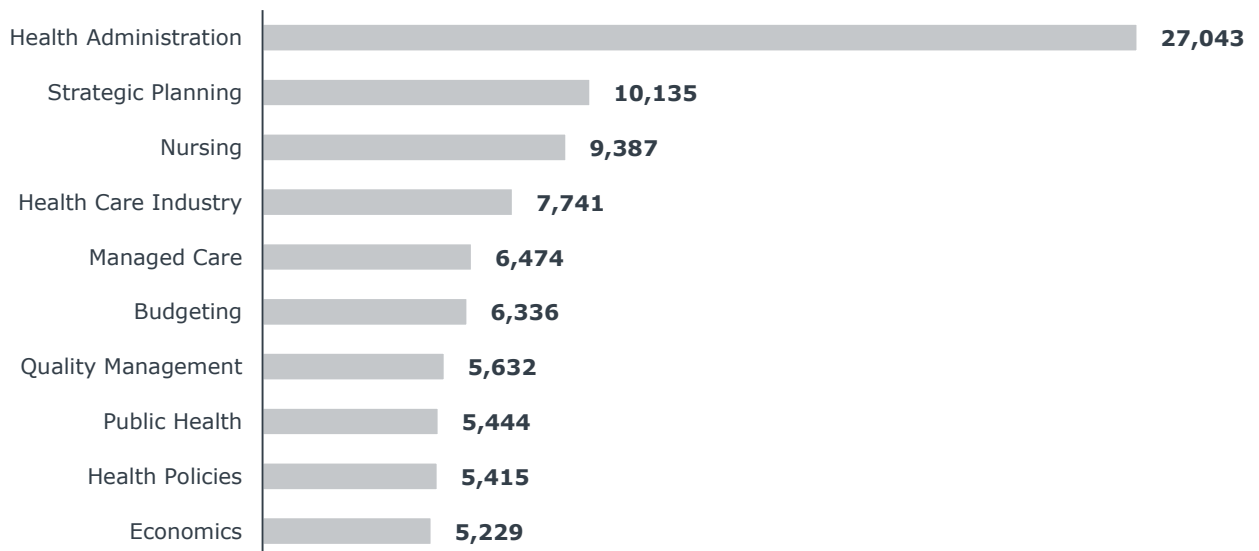
N=3,872



## Top Skills in Advertised Master's-Level Health Care Delivery Job Postings

January 2019-December 2019, Nation

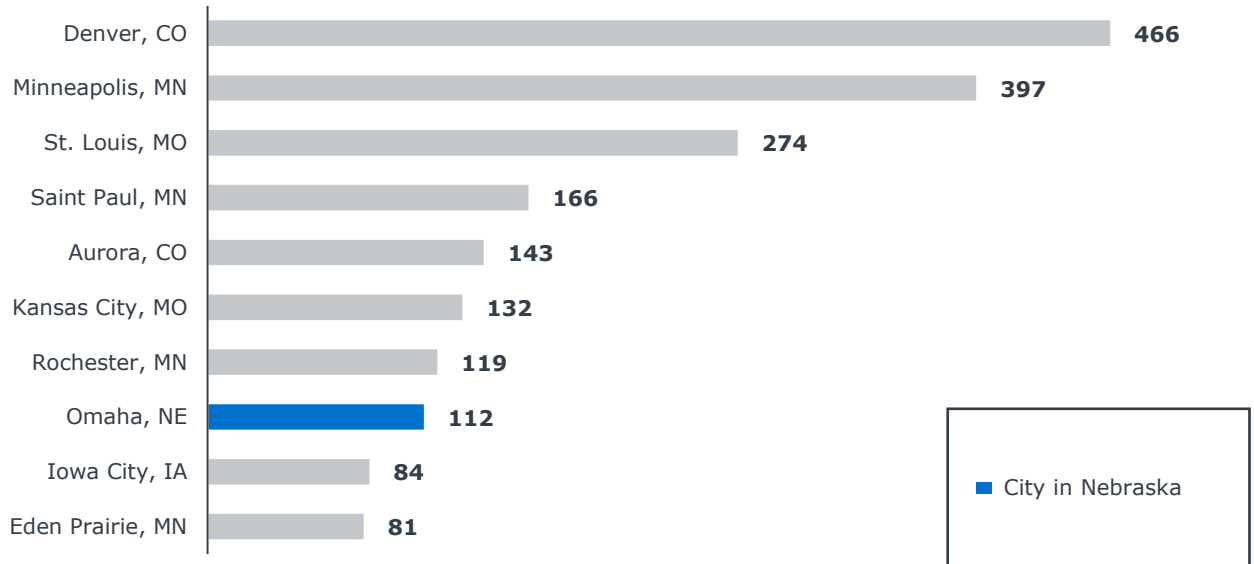
N=44,097



### Top Cities Seeking Master’s-Level Health Care Delivery Applicants

January 2019-December 2019, Region

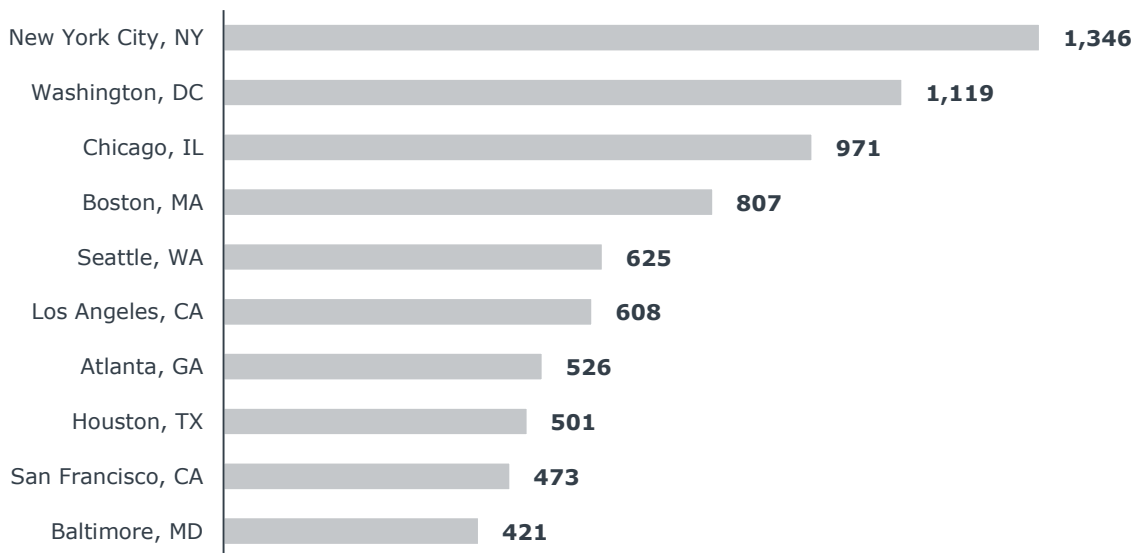
N=3,872



### Top Cities Seeking Master’s-Level Health Care Delivery Applicants

January 2019-December 2019, Nation

N=44,097



# Appendix B: Research Parameters and Sources

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## Research Methodology

EAB's market insights research guides strategic programmatic decisions at partner institutions. The Market Insights Service combines qualitative and quantitative data to help administrators identify opportunities for new program development, assess job market trends, and align curriculum with employer and student demand.

Unless stated otherwise, this report includes data from online job postings from January 1, 2019 to December 31, 2019. To best estimate employer demand for master's-level health care delivery professionals, the Forum analyzed job postings for master's-level professionals with relevant skills (i.e., "health administration," "informatics").

### *Definitions*

"Region" and "regional" refer to the following states: Colorado, Iowa, Kansas, Minnesota, Missouri, and Nebraska.

## Research Questions

The requesting partner asked:

- How has demand for graduates of my proposed program evolved over time?
- Which employers demonstrate the greatest demand for potential graduates?
- What skills should the proposed program teach to prepare students to meet employer demand?
- In what positions do employers demonstrate the greatest need for potential graduates?
- In which cities do employers most frequently advertise for potential graduates?

## Project Sources

The Forum consulted the following sources for this report:

- EAB's internal and online research libraries
- Emsi Analyst, described below
- U.S. Bureau of Labor Statistics
- U.S. National Center for Education Statistics (NCES)

## Labor Market Intelligence Partner: Emsi

This report includes data made available through EAB's partnership with Emsi (formerly Economic Modeling Specialists International), a labor market analytics firm serving higher education, economic development, and industry leaders in the U.S., Canada and the United Kingdom.

Emsi curates and maintains the most comprehensive labor market data sets available for academic program planning, providing real-time job posting data, workforce and alumni outcomes data, and traditional government sources of data. Under this partnership, EAB may use Emsi's proprietary Analyst™ and Alumni Insight™ tools to answer partner questions about employer demand, the competitive landscape, in-demand skills, postings versus actual hires, and skills gaps between job postings and professionals in the workforce. The Emsi tools also provide EAB with in-depth access to unsuppressed, zip-code-level government data for occupations, industries, programs, and demographics. For more complete descriptions of the Emsi tools, visit:

- <http://www.economicmodeling.com/analyst/>
- <https://www.economicmodeling.com/alumni-insight/>

To learn more about Emsi and its software and services, please contact Bob Hieronymus, Vice President of Business Development at [bob.hieronymus@economicmodeling.com](mailto:bob.hieronymus@economicmodeling.com) or (208) 883-3500.





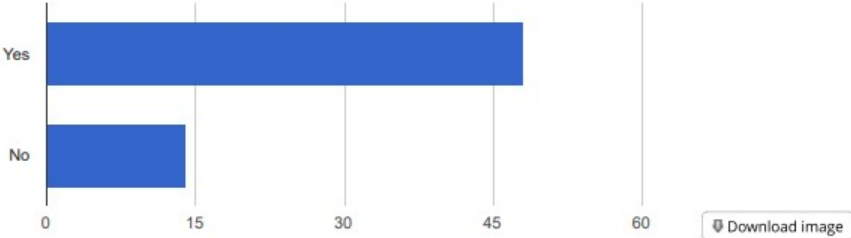
Washington DC | Richmond | Birmingham | Minneapolis

202-747-1000 | [eab.com](http://eab.com)

**4. If the College of Allied Health Professions/MITS offered a discipline-specific professional Master's degree, would you be interested in enrolling?** *(if\_college\_of\_allied\_health)*

Total Count (N)	Missing	Unique
62	0 (0.0%)	2

Counts/frequency: Yes (48, 77.4%), No (14, 22.6%)



**TABLE 1: PROJECTED EXPENSES - NEW INSTRUCTIONAL PROGRAM  
UNMC Master of Healthcare Delivery Science**

	(FY2021) Year 1		(FY2022) Year 2		(FY2023) Year 3		(FY2024) Year 4		(FY2025) Year 5		Total
<b>Personnel</b>	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	<b>Cost</b>
Faculty <sup>1</sup>	0.35	\$47,003	0.35	\$48,413	0.35	\$49,866	0.35	\$51,362	0.35	\$52,903	\$249,547
Professional											
Graduate Assistants											
Support Staff <sup>2</sup>	0.25	\$17,149	0.25	\$17,663	0.4	\$25,470	0.35	\$26,234	0.35	\$27,021	\$113,537
Benefits											
Subtotal	0.60	\$64,152	0.60	\$66,076	0.70	\$75,336	0.70	\$77,596	0.70	\$79,924	\$363,084
<b>Operating</b>											
General Operating <sup>3</sup>		\$21,038		\$21,519		\$23,834		\$24,549		\$25,286	\$116,226
Equipment											
Library/Information Resources											
Teaching Stipends		\$27,810		\$57,240		\$73,575		\$75,600		\$77,868	\$312,093
Subtotal		\$48,848		\$78,759		\$97,409		\$100,149		\$103,154	\$428,319
<b>Total Expenses</b>		<b>\$113,000</b>		<b>\$144,835</b>		<b>\$172,745</b>		<b>\$177,745</b>		<b>\$183,078</b>	<b>\$791,403</b>

<sup>1</sup> Faculty includes a .35 FTE Program Director.

<sup>2</sup> Staff includes a new .25 FTE support role in the first two years, increasing to .35 thereafter, to assist with admissions, marketing and recruiting, program administration and general student, faculty and office support.

<sup>3</sup> General operating expenses are 25% of salary and includes such costs as software licensing fees, faculty development and travel, guest lecturers, general equipment and supplies.

All costs are inflated at 3% per year.

**TABLE 2: PROJECTED REVENUES - NEW INSTRUCTIONAL PROGRAM  
UNMC Master of Healthcare Delivery Science**

	(FY2021) Year 1	(FY2022) Year 2	(FY2023) Year 3	(FY2024) Year 4	(FY2025) Year 5	Total
Existing Funds <sup>1</sup>	\$64,728	\$0	\$0	\$0	\$0	\$64,728
Required New Public Funds						
1. State Funds						
2. Local Tax Funds (community colleges)						
Tuition <sup>2</sup>	\$48,272	\$152,472	\$211,404	\$217,217	\$223,191	\$852,556
<b>Total Revenue</b>	<b>\$113,000</b>	<b>\$152,472</b>	<b>\$211,404</b>	<b>\$217,217</b>	<b>\$223,191</b>	<b>\$917,284</b>

<sup>1</sup> The projected first year deficit will be covered by College auxiliary funds.

<sup>2</sup> Tuition revenue is based on a 50/50 mix of 7 CAHP Bachelors or certificate program graduates transferring 12 credit hours towards completion of the 30-credit hour degree, and 7 non-CAHP students taking the full 30 hours, over an expected two-year, six-semester time frame. Tuition rate is based on the 2019-2020 NU Online rate of \$580 per credit hour, inflated at 2.75% per year.