



Thomas P. Miller and Associates

Building Assets through Knowledge & Innovation

Indiana Health Industries Workforce Study Executive Summary

A Report Prepared by
Thomas P. Miller and Associates
and
Hudson Institute

For
The Indiana Health Industry Forum

07/15/03



The Indiana Health Industries Workforce Study

Foreword

Background

In 2002, the Indiana Health Industry Forum (IHIF) commissioned Thomas P. Miller and Associates (TPMA) and the Hudson Institute to perform a study of the workforce in Indiana's health industries.

The study results are described in three reports: *Demand for Workers in Indiana's Health Industries*, *Supply of Workers for Indiana's Health Industries* and *Workforce Gaps in Indiana's Health Industries*. The third report, *Workforce Gaps in Indiana's Health Industries*, also includes recommendations for addressing the workforce issues facing Indiana's health-related employers.

In addition, the study team has prepared a report for each of the 12 Workforce Investment Act (WIA) regions in Indiana. These reports provide regional breakdowns of as much of the data from the study as possible.

IHIF will make as many of these products as possible available online, at www.ihif.org.

Acknowledgements

IHIF would like to thank several organizations and individuals for their valuable contributions to this study.

The following organizations provided funding in support of this work. The leaders of these organizations demonstrated their commitment to the prosperity of the people of Indiana, and their understanding of the importance of the health industries and workforce development.

- Central Indiana Corporate Partnership
- Indiana Hospital and Health Association
- Indiana Department of Workforce Development
- Eli Lilly and Company Foundation
- The Guidant Foundation
- Indianapolis Private Industry Council



An IHIF “workforce committee” guided this study. The following individuals donated their valuable time and knowledge to our efforts.

- John R. Hayes, MD (Eli Lilly and Company)
- Alison Spoonmore (Eli Lilly and Company)
- Bob Morr (Indiana Hospital and Health Association)
- Lee Lewellen (Central Indiana Corporate Partnership)
- Alisa Wright (Baxter Pharmaceutical Solutions)
- Scott Silver (Hill-Rom Company)
- Christine Young (Roche Diagnostics)
- Gary Bormet (Dow AgroSciences)
- Patrick Vercauteren (Indiana Department of Workforce Development)
- Melina Kennedy (City of Indianapolis)
- Wade Lange (Indiana Health Industry Forum)

IHIF would also like to thank the human resources professionals and other officials at health-related companies and organizations throughout the state of Indiana who contributed their expertise to our study through surveys, interviews and focus groups. Their cooperation allowed our study team to understand workforce issues from a pragmatic, “in-the-trenches” perspective.



The Indiana Health Industries Workforce Study

Executive Summary

Background

The Indiana Health Industry Forum (IHIF) commissioned this study to:

- document the impact of the health industries on Indiana's economy,
- analyze the workforce development needs of the state's health industries, and
- share the resulting insights and information with policymakers, lawmakers, economic developers, educators and business leaders.

For purposes of this study, the health industries include two major sectors: healthcare delivery and medical manufacturing. Healthcare delivery includes hospitals, long-term care facilities, clinics, medical labs, and home healthcare agencies. Medical manufacturing includes both the producers of pharmaceuticals and medical devices, as well as related research facilities.

Data for this study came from two major types of sources. The first was information collected by the United States Department of Labor, the Indiana Department of Workforce Development and other government agencies. The second was information from the health industries' employers, collected through interviews and surveys. The study team relied on both sources to develop a list of critical occupations in the health industries. At several points in the research process, the study team checked its findings with a committee of industry employers assembled by IHIF. The same committee helped the authors shape the recommendations.

Findings

The health industries are major Indiana employers. In 2000, they accounted for one in ten Indiana jobs and generated \$11 billion in wages. They employed over 277,000 people. These numbers should grow substantially, since the health industries in Indiana are projected to provide 40,000-45,000 job openings (new jobs and replacements) between 2003 and 2008. An estimated 28,000 of those job openings will be in the critical occupations identified in this report. This concentration of workers in the health industries gives Indiana a competitive advantage.



The health industries serve as an engine of economic growth for Indiana by creating high-paying jobs. Average pay in the health services was \$33,197 in 2000; in medical manufacturing it was \$78,909. Both exceeded the “family wage” standard of \$30,000 per year for an average family, and the average state wage of \$31,015. One reason for high average pay in these industries is that the critical occupations are those that require workers with high levels of technical or clinical skills, but not necessarily advanced (i.e. post-baccalaureate) degrees. Medical manufacturing is one of the state’s leading advanced manufacturing sectors because of its technologically sophisticated and highly competitive nature.

Several workforce issues, however, are obstacles to the optimal development of Indiana’s health industries. Critical workforce issues must be addressed if the state’s health-industry employers are to thrive. Currently, those employers’ needs are not being met.

For critical occupations requiring at least a two-year degree, there often is a mismatch between the number of workers who graduate from Indiana’s colleges and universities and the workforce demands of employers. The shortages are especially acute in healthcare delivery professions. All of the registered nurses receiving an associate’s or bachelor’s degree in 2002 would not fill all of the open positions in Indiana hospitals alone—leaving aside demand from clinics, long-term care facilities and other medical organizations. Further, the number of new licenses issued to registered nurses has declined 20% since 1998. In other critical occupations, notably radiologic technology, nuclear medicine technology, respiratory therapy and medical sonography, Indiana’s higher education pipeline produces too few healthcare technicians to meet demand (though some workers are trained for these occupations by other organizations).

In medical manufacturing, the number of workers available is less an issue. Medical manufacturers, however, face other challenges. For example, they need engineers in a variety of specializations. Although Indiana’s colleges and universities produced over 1,000 engineers in industry-critical fields in 2002, many left Indiana and the remaining labor pool did not meet the demand from medical manufacturers.

Another challenge is that medical manufacturers value workers’ experience at least as highly as their educational credentials (although hiring practices are moving toward requirements for more post-secondary education). Major employers are reluctant to turn very expensive capital equipment over to inexperienced hands. Employers report, however, that workers leave Indiana’s colleges, universities, and other training organizations without enough experiential learning.

Employers in both health industries often cited effective education and training programs at Indiana institutions. The programs cited, however, are not distributed evenly around the state, nor are they always located where employers are concentrated. Given that workforces tend to be regional, having a program located near the sources of demand is essential. To provide the workforce that the health industries need, institutional priorities



and resource allocation decisions among Indiana's education providers must be aligned with the specialized and customized training demanded by employers.

Finally, Indiana's data collecting and reporting systems do not produce the information necessary to address these workforce issues successfully. At the state, regional or local levels, much of the data currently available on health-industry workers is either not the data needed, not easily accessible, or not collected and reported in a timely manner. For example, the number of active licenses for certain healthcare professions is available. What is not known is the number of license holders who are currently practicing. Another example can be found in the state's data on advanced research degrees. One can find the number of doctoral degrees awarded in biology or chemistry by Indiana's colleges and universities. The Student Information System that collects degree data, however, is not currently designed to report the specializations (e.g. analytic chemistry or microbiology) of all of Indiana's degree recipients.

Recommendations

Indiana needs a highly collaborative, well coordinated initiative to answer workforce challenges facing health-industry employers. Although many organizations will be involved at the state, regional and local levels, four sectors are essential to the collaboration: employers, education, government and workforce development agencies and organizations.

This report recommends that IHIF drive and coordinate the initiative because:

- IHIF is the only statewide organization representing both medical manufacturing and healthcare delivery, and
- IHIF represents members from all four sectors in the collaboration.

The collaboration's objective should be to implement solutions to health-industry employers' human capital needs. The key to meeting employers' needs is getting ***the right program in the right place at the right time***. This will not be a simple task, but it is the only way to ensure that employers get the right workers.

IHIF must find partners willing to help Indiana secure more than 40,000 jobs over the next five years, and lead its partners through the process. Employers, educators, workforce development agencies and government officials must work closely together to:

- Identify the right (most critically needed) programs,
- Assign high priority to those programs, and
- Provide resources to support those programs.



More specifically, **employers** should:

- Form Employer Learning Networks
- Collaborate with IHIF in an industry-wide effort to respond to evolving human capital needs
- Work with IHIF and state government agencies to improve the data collection and reporting systems
- Develop a human resource managers' network
- Support the development of next-generation regulations for healthcare delivery
- Identify the specific needs for certifications in emerging occupations
- Set industry standards for high school graduates (for example: Work Keys) and beyond
- Inventory existing industry outreach to K-12 schools
- Encourage involvement by their employees in K-12 schools, especially in math and science

Government and workforce development agencies should:

- Expand and improve data collection and availability
 - The health industry should be the prototype for better use of ES202 data
 - Ensure that the data collection system yields the data needed on critical occupations
 - Understand how reported data creates perceptions of Indiana and influences decisions
- Collaborate with IHIF in industry-wide efforts to respond to evolving human capital needs
- Support the creation of academic programs for emerging and evolving occupations
- Focus on strengthening math and science in K-12 schools
- Workforce Investment Boards should align federal and state workforce funds with industry needs, and serve as the local coordinators and implementers



Colleges and universities should:

- Collaborate with IHIF in industry-wide efforts to respond to evolving human capital needs
- Assist in getting the right programs in the right place at the right time
- Design programs around current workers and experiential learning
- Assist K-12 in strengthening math and science curricula

K-12 schools should:

- Collaborate with IHIF in industry-wide efforts to increase the math and science achievements of students, and with industry employers to address readiness issues for graduates entering the workforce
- Promote inclusive view of health industry careers
- Adopt recommendations of the P-16 Plan of the Governor's Education Roundtable



Workforce Gap Analysis Funding Organizations



Lilly

Eli Lilly and Company
Foundation

GUIDANT

The Guidant Foundation

