

Industry Futures Series

In the Wake of Health Care Reform: Fast-Growth Jobs and Skills in the Decade Ahead

Wanted: Richer Employer-Side Market Intelligence

Conventional Market Research III-Suited to Discover Breakthrough Opportunities

Traditional Methods Limited



Student Surveys

- Schedule and delivery preference
- True labor market demand

Wishing for Better Answers



Will Employers Hire Our Students?

"Surveys show what students will take, but not what companies will hire"

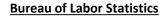
Community Workforce Boards



- Local employer perspectives
- Thought leadership and national perspectives

Where Will an Industry Be in Five Years?

"Program advisors know what's going on in their world, but not across the world"





- It's free?
- Data too old



"Government statistics show where the puck is, not where it's going"

Vision of the Future?

For-Profits Raising Ante on "Workforce Solutions"

Addressing Influential Employers' Practice-Preparation Gaps

Built for Deep Industry and Market Insight



Boots on the Ground in Major MSAs

- Hundreds of FTEs across IT, business, education, criminal justice, and health care
- Track national trends; MSA-specific employer outreach

From Theory to Practice

- Customize generic programs to local market priorities
- RN→BSN; Health Administration

Corporate Outreach 50% of Enrollments?

- Corporate partnerships over time at least as important as direct-to-student marketing
- Students will still pay, but employers will "steer" to preferred educators

Customized RN → BSN with Major Health System





Goal-Centric Curriculum

Special modules on employer's clinical quality and patient satisfaction priorities



Simulations Designed and Taught by Health System Staff

Health system RNs build real-world simulations for course inclusion



Career Path Mapping

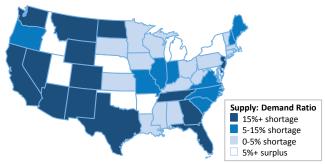
Maps certificates and degrees to alternative RN career paths for "lifelong learning" re-approach

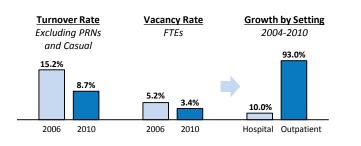
Health Care Still Massive, but No "Field of Dreams"

Demand Shifting, Competition Increasing across High-Profile Disciplines

Nursing Shortage Real, but Morphing

Projected RN Deficit, 2015





Health Administration Programs

Plentiful, Hard to Distinguish



Accountable Care in One Page

Medicare Driving Massive Changes in Care Delivery and Health IT

Why Employers Care Legislation **Key Provisions** Significant incentive to Medicare changes from Patient Protection and fee-for-service to bundled prevent hospital Affordable Care Act payments for 90-day readmission (Obamacare) episode covering hospital Imperative to integrate and physician services care delivery system Reimbursement **HITECH Act** Providers must use approved electronic penalties if patient (Meaningful Use) health records data systems aren't interoperable Health Insurance Secure storage and · Financial penalties for Portability and transmission of patient data breach Accountability Act (HIPAA) Significantly more granular · Penalties for billing ICD-10 coding for medical conditions inaccuracies

Consequential Deadlines for Rest of Decade

Medicare's Timeline for Accountable Care Payment Rollout

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EMR Meaningful Use Stage1 EMR Meaningful Use Stage2			Use	EMR Meaningful Use Stage3					
HIPAA 5010 – Patient Information Security									
Medicare Shared SavingsMedicare Shared SavingsEarly AdoptersCompetitive Pressure Expansion									
Hospital Value-Based Purchasing Quality Hospital Value-Based Purchasir Efficiency					ng				
Readmission Penalties for Poor Performers									
ICD-10 – Complex New Diagnostic Coding Scheme Takes Effect									
National Episodic Bundlin			Bundling Pa	yment Pilot			Evaluation and Rollo		
	Payment Adjustments for Hospital-Acquired Conditions								
	alty for ← ggards							→ Bonu Adop	ıs for Early oters

Voice of the Employer

Information You Can't Find in Student Surveys

Who We Talked To

- Health Care CEOs
- HR Managers
- Clinical Leaders
- Professional Associations
- Consultants
- Government Agencies



What We Listened For

- Future of the Industry
- Financial and Regulatory Imperatives
- New Job Roles
- New Skills Required in Traditional Titles
- Opportunities to Apply Non-Clinical Courses for a Health Care Audience



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- · Health Coaches
- · Telehealth Nursing

II

Business Skills for Health Workers

- Accountable Care Project Managers
- Interprofessional Care Team Leaders
- Electronic Medical Record Implementation Leaders
- Clinical Mobile Apps Specialist

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Health Informatics

- · Hot Markets
- Critical Technical and General Skills
- · Emerging Career Ladders

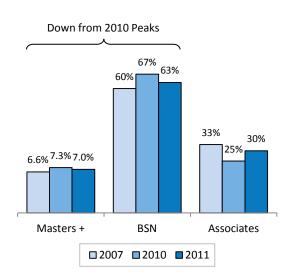
Push for Advanced Nursing Degrees Not Seen in the Numbers

Employers Want Different Skills, Not Necessarily Masters Degrees

Pulling Back Nationally

RN Education Degree Requirements

(From Online Job Postings)

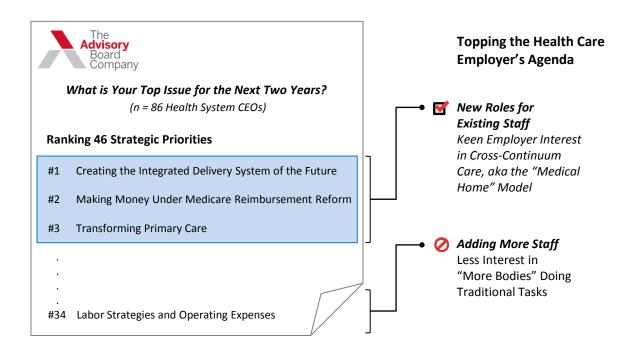


Markets Finding Their Own Equilibrium

	Masters +	BSN	Associates
Charlotte	13.5%	52.9%	33.6%
Boston	11.3%	74.6%	14.1%
Chicago	10.6%	48.7%	40.8%
Seattle	9.9%	72.2%	17.9%
Los Angeles	5.7%	71.2%	23.1%
Atlanta	3.7%	59.4%	36.9%
Amarillo	3.3%	27.9%	68.9%

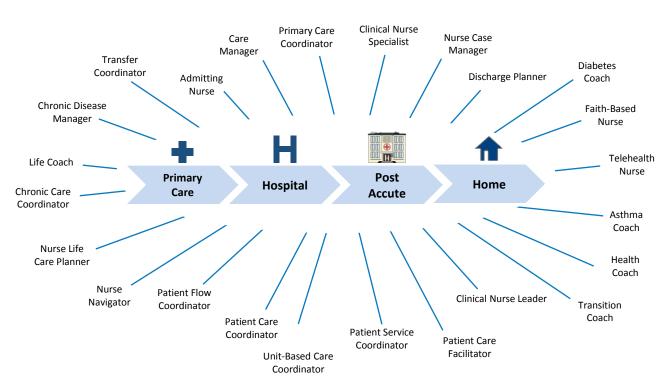
Integrating Inpatient and Outpatient Care a Top Priority

Re-Skilling Existing Staff Even More Important than Growing Workforce



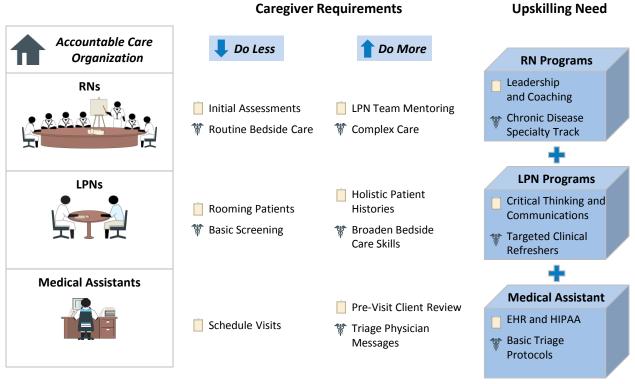
Proliferation of Care Coordination Roles

New Job Titles Encountered in Health Care Research



Top-of-License Practice

Accountable Care Depends on Performing Higher-Value Tasks Independently



Prime Targets for Clinical Refresher Courses

LPN Clinical Skills Requirements in Kaiser Permanente Top of License Training



- Administer medications—IM, SubQ, PO, intradermal, inhalations, topical, rectal, vaginal, ophthalmic, nasal
- Administer narcotics including wastage
- ✓ Adult immunizations
- ✓ Anti-embolic stockings
- Application of "soft" splints, immobilizers and give pt. instructions
- Application of U-bags
- Audiogram/Hearing Test/Screening—adult and/or pediatrics
- **▼** Bladder scanner
- Cast removal
- Central line dressing changes and management
- Changing O2 tank

- Crutch management/cane walking reinforcement and give pt. instructions
- Developmental screening tests e.g., ASQ
- ▼ Head circumference
- Intravenous infusions—initiates, monitors including pumps, manages and administers medications
- ✓ Irrigations—bladder, wound
- LOPS testing
- MG tube insertion and care
- Obtaining culture specimens throat, nasal, wound, nasopharyngeal

- ✓ Oxygen administration per nasal cannula, face mask
- **▼** Peak flow measurement
- ☑ Point of care testing
- ☑ Pulse oximetry
- Suctioning—oral, nasal route
- Tracheotomy tube care
- TST
- ☑ Urinary catheterizations
- ✓ Vital signs/orthostatic BP
- ✓ Visual acuity
- ✓ Weight/height measurements
- Wound care—measurement of wounds, simple and complex (e.g. unnaboot, compression dressings, etc.), ostomy, focused assessment of wound healing

Caveat: Consult State Regulations

Health Coaches

Patient Education to Prevent Unnecessary Readmissions

Key Elements of Health Coach Role



- RN/LPN
- Community Member

Medication Adherence



Reviews discharge medication list with patient and answers any questions

Disease Education



Ensures patient knows disease progression early warning signs and how to respond appropriately

Personal Health Record



Helps patient create a folder of important health information to share with providers

Physician Follow-Up



Scheduling and complying with timely PCP appointment

Chronic Care

- Diabetes
- Pharmacy

IT Systems

- Disease Registry
- EMR/PHR



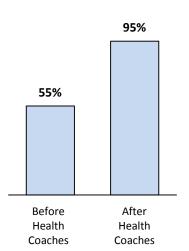
Communications

- Coaching
- Gerontology

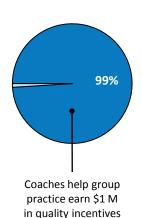
Health Coaches Post Immediate Clinical and Financial Benefits

Immediate Benefits to Medical Practices

Patients Receiving Preventive Care



Primary Care Physicians Receiving Medicare Bonus



Surprisingly Strong Results with Non-Clinical Coaches



Community Asthma Coaching

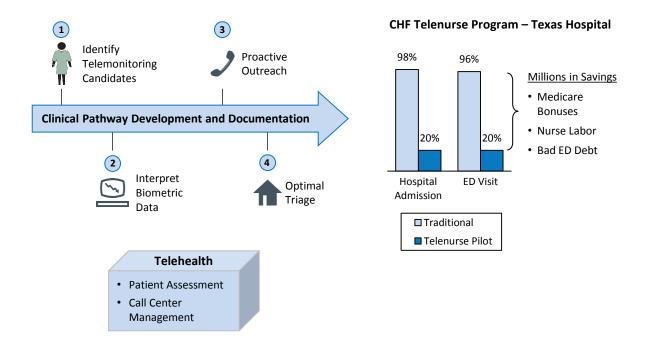
- Missouri hospital wins grant for short program for laypersons to coach asthma patients
- Emphasis on educating parents and navigating health care system



52% Reduction in Hospitalizations

Telehealth Nursing

Remote Monitoring and Preventive Interventions of High-Risk Patients



Recapping 23

A Taxonomy of New Accountable Care Roles

	EDVEATION ASSAURT	Capsule Description	Other Common Names	Individuals Commonly Deployed
Inpatient	Inpatient Care Coordinator	Serves as a primary contact for physicians and other care providers; responsible for managing patient care needs and progress, care plan development, and discharge planning	Primary Care Coordinator, Patient Care Coordinator, Unit-Based Care Manager, Hospital-Based Case Manager	RN, CNL, LCSW, Case Manager
Outpatient	Co-Morbidity Chronic Care Coordinator	Follows patients deemed heavy users of expensive inpatient care due to multiple chronic illnesses, high ED utilization, or recent discharge from a SNF; promotes more active and informed patient role in self-care	RN Chronic Care Coordination (CCC) Coordinator, Chronic Disease Manager, Team Member, Health Coach, Faith-Based Community Liaison	RN, LCSW, MA, Case Manager, Community Member
	Telehealth Nurse Utilizes technological resources to prevent complications associated with chronic health conditions to avoid hospital admissions		IT-Based Care Coordinator	RN

Recapping 24

A Taxonomy of New Accountable Care Roles

	Capsule Description	Other Common Names	Individuals Commonly Deployed
Non-Urgent Care Navigator	Directs patients to the appropriate site of care, often diverting inappropriate ED and acute care utilization	Life Coach, Transfer Coordinator	RN, LPN
Clinical Patient Concierge	Provides guidance to patients, families, and physicians during acute inflection points in health care (such as cancer diagnosis) or catastrophic illness; coordinates care and expedites scheduling	Nurse Navigator, Nurse Life Care Planner	RN, NP, Social Worker, Survivor
Disease-Specific Chronic Care Coordinator	Counsels patients regularly regarding disease-related symptom management and advises patients on lifestyle choices to improve prognosis	Diabetes Coach, Chronic Disease Manager (Cardiac Specific), Asthma Coach	RN, NP, Pharmacist, Community Member
Health Coach	Follows patients from the hospital to their homes or PAC facilities after discharge, supporting patient self- management during the transition	Transition Partner	RN, NP, Nursing Student, Community Member

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Health Informatics

- Hot Markets
- Critical Technical and General Skills
- · Emerging Career Ladders

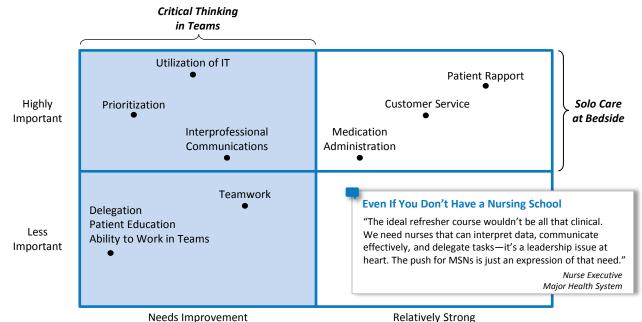
Leadership for Nurses 26

Florence Nightingale, Meet Stephen Covey

Growing Premium on Critical Thinking Skills among Caregivers

What Are the Most Important Competencies in New Nursing School Graduates?

(n = 3,600 Nurse Managers)



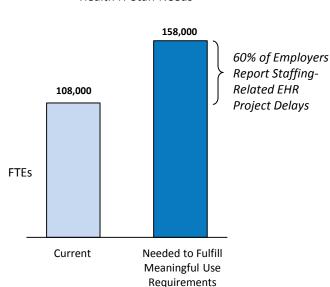
IT Skills for Everyone 27

Cross-Training Care Providers in IT

More Employers Looking Inward to Staff Critical Projects

Health Employers Face IT Skills Shortage

Health IT Staff Needs



Hard to Get IT Pros Interested in Health Care

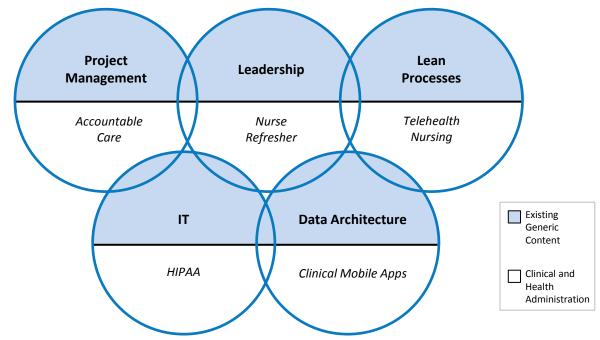
"Health care doesn't pay as well as other industries, and there's tons to learn about clinical processes and regulations that doesn't mean anything outside the sector. A lot of people are concluding it's cheaper and better to retrain their own clinical staff to manage IT projects than to recruit IT pros and teach them health care."

Director HIMMS

A Health Care Spin on Generic Curriculum

Mixing and Matching Existing Courses into Employer-Friendly Programs

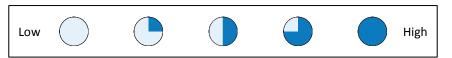
Certificate and Contract Education Opportunities for Community College Leaders



Building Programs Around "Must-Do" Projects

Cross-Training Opportunities at the Intersection of Industry-Specific and General Skills

Health Care Role	Project Management	Leadership and Critical Thinking	Lean Processes	Information Technology	Data and Web Design	Health Care Content
Accountable Care Project Director RN, MD, Finance						Principles of Accountable Care and Population Health
Interprofessional Team Leader RN, Case Manager						Health Care MBA track
EHR Project Director HIT, RN, Finance						HIPAA
Clinical Mobile Applications CMIO, MD, RN, HIT						Clinical Pathways and HIPAA



Health Care-Related Topics for Another Session

Demographic and Scientific Tailwinds, but Unproven Employer Demand

R_x §



The Era of

Mass Longevity

Services for "Super

Seniors" Age 80+



Professions and Certifications as Cutting-Edge Science Goes "Retail"

- · Personalized Medicine
- Proton Therapy Tools



Interdisciplinary Public Policy

Health Care Concerns in Global Trade and Security

- Global Food Safety
- Bioterrorism

Professionalizing Facility Administration

- · Rehab Facility Management
- Assisted Living Management
- Hospice and Palliative Care

High-End Home Health

- · Geriatric Social Work
- · Alzheimer's Disease Management
- Aging-in-Place Home Remodeling (



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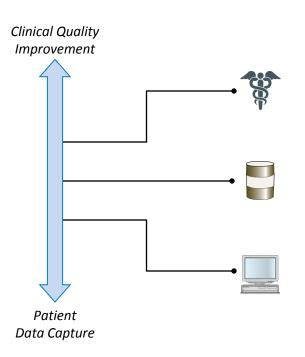
Health Informatics

- Hot Markets
- Critical Technical and General Skills
- Emerging Career Ladders

Health Informatics 34

Defining Our Terms

"Informatics" and "IT" Too Often Used Interchangeably



For Today's Purposes

Clinical Informatics = Evidence-Based Medicine

Statistically defining clinical best practices and supporting provider decisions

Health Informatics = Cross-Continuum Connectivity

Storing, transmitting, and analyzing clinical and administrative data

Health IT = Electronic Record-Keeping

Secure capture and sharing of patient data and accurate medical coding

A Name You Should Know 35

Burning Glass in Brief

Real-Time Analysis of Employer Demand



- Boston-based, 140+ staff in four continents
- Leading developer of technology for career planning, labor market analytics, and workforce development
- Clients include government agencies, private companies, institutions of higher education
- "Spidering" technology aggregates online job postings in the U.S.,
 Canada, and U.K. to build industry's most complete jobs database
 - —Major Job Boards
 - National and Local Employer Websites
 - —Craigslist

Patented Technology Parses "Natural Language" Postings

Tool Understands, Codes, and Categorizes Dozens of Facts about Each Job

Company Profile

Clark Research International (CRI) offe breadth of multidisciplinary skill research science, policy analysis analysis, and data collection and analy

Conventional Extracts:

- Job title: IT Project Manager
- Occupation Code: 15-1099.11 (Information Technology Project Managers)
- NAICS 541690 (Other Scientific and Technical Consulting Services)
- Location: Boston

ption

a full-time IT project mode. He/she must be artnerships; communicate managers; and be able to erational and technical soluting background with software in C++, with experience in Responsibilities include a documentation, process sting, and training.

on & Benefits

dental, and child care available. F BA/BS with 2 - 4 years of experie equivalent combination of education and PMP Certification required.

Burning Glass Added Extracts:

- Full location: MSA (14460); LMA (MT257165); Geocode: 42.3597, 71.0560
- Min experience: 2-4 years, Level=2
- Education Attainment: Bachelor's
- Major: Computer Science,
- Salary: \$70,000 base salary
- Benefits: Medical, Dental, Wellness, Childcare
- Type of Job: Full-time
- General Skills: Collaboration; Communications
- Specific Skills: IT Design; Process Improvement; Testing; C++, Sybase
- Certifications: PMP
- Number of Positions: One posting

PLUS DOZENS OF OTHERS

Testing the Right Path for Growth

Employer Data Informs How Best To Leverage Institutional Strengths

Same Region, New Programs

- · Highest-demand fields
- · Emerging job titles

Existing Programs, New Regions

- Hottest MSAs
- Largest employers in state and across country



- National/regional brand recognition
- · Distinctive programs
- Understanding target students

Diagnosing Enrollment Shortfalls

- Slackening employer demand?
- Need for program refreshment?

Similar Students, New Programs

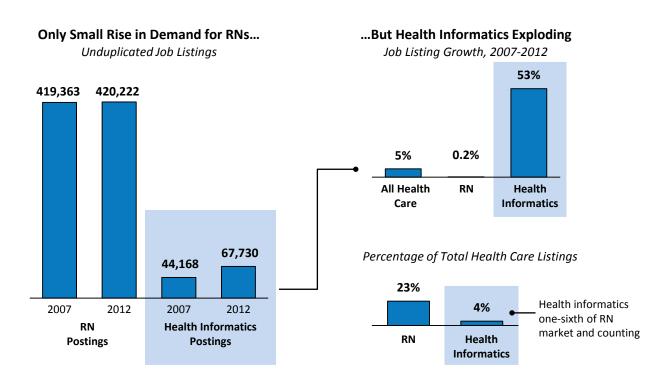
- Specialized skills and certifications
- Emerging career advancement ladders

Existing Programs, New Target Students

- Cross-training in highdemand occupations
- Skills/ degrees presenting in new industries

Health Informatics: Growth Niche in a Flat Market

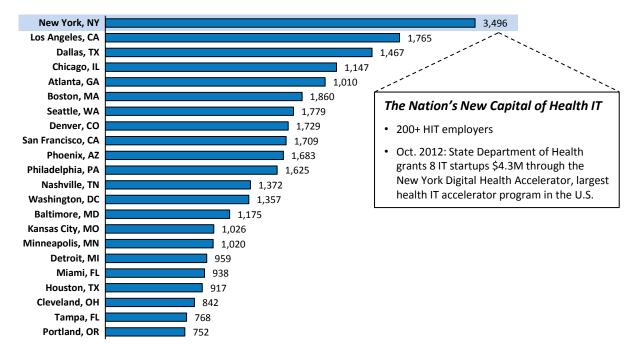
Nursing Still Bigger, but Informatics Rapidly Increasing Share of Employer Demand



What Cities Have the Hottest Markets?

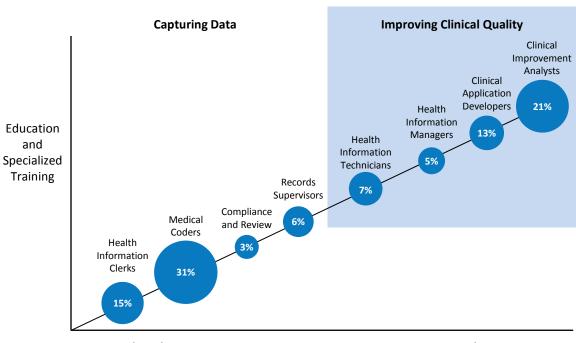
Some Markets "Punching Over Their Weight"

Top MSAs for Health Informatics Job Postings, 2012



What Job Categories are in Highest Demand?

Percentage of Health Informatics Listings by Job Type, 2012



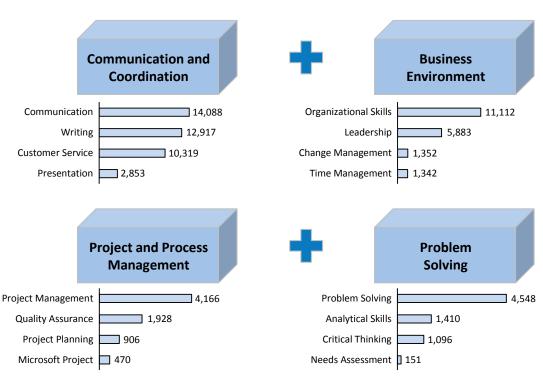
Non-Clinical Statistics and IT

and



Highest-Demand General Skills for Health Informatics

Communications and Organizational Skills Required Across All Job Categories¹



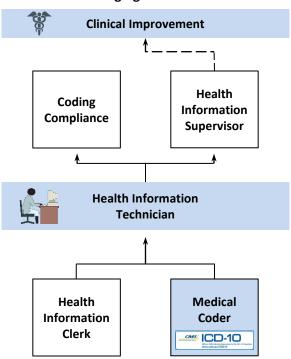
¹ Frequency of mentions in health informatics postings, November 2011

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Are Career Ladders Emerging?

A Ten-Year Roadmap for Medical Coders

An Emerging Career Ladder



Well-Suited for Career Path Mapping

Health Information Managers

- · Advanced Clinical Billing
- Auditing
- HIPAA

RHIA Certification



Health Information Specialist

- Clinical Systems
- Clinical Procedures
- Electronic Health Records

RHIT Certification



Certified Coding Specialist

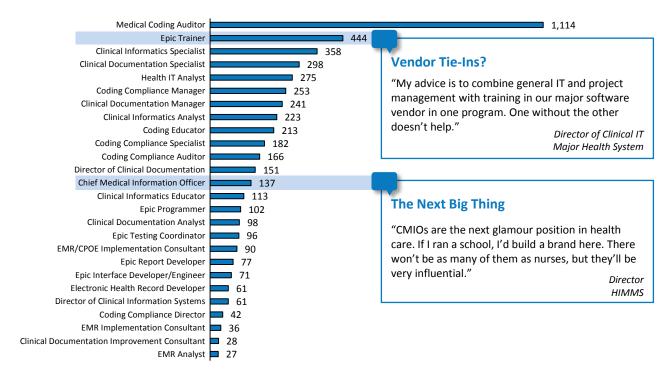
- ICD-10
- Medical Terminology
- Basic Billing Systems

CCA Certification

Advice from Employers 43

What New Job Titles Are Candidates for Tailored Programs?

Most Common Titles in H1 2011 Job Postings



Sizing the Opportunities

High-Level Grades for Growth Potential and Delivery Complexity

	Current Market	Growth Potential	Clinical Requirements	Online Delivery Potential
Top-of-License	A	В	High	D
Health Coach	С	A+	Medium	В
Telehealth Nursing	D	В	Medium	В
Clinical Improvement Analyst	С	A	Medium	B+
Health Information Technician	В	Α	Low	А
IT/Project Management	A	Α	Low	Α
Interprofessional Team Leader	В	В	Medium	С

Questions to Ask Your Program Workforce Boards

How Fast Will My Market Embrace Accountable Care?

Leading Indicators of Employer Demand

- Is the Market Dominated by One or Two Large Systems, or Still Highly Fragmented?

 Market concentration conducive for integrated care delivery
- What Percentage of Physicians are Owned by Health Systems or Large Physician Groups?

 Absent ownership, hard for physicians to accept population risk
- How Much of Area Hospitals' Revenues are from Traditional Fee-for-Service versus Bundled or Risk-Based Payments? The more risk, the more interest in new care and IT roles
- Are Any Area Health Systems Participating in the Medicare Accountable Care Organization Pilot Program?

 Participants are highly motivated to cross-train and upskill staff; good contract education candidates
- Are Health Systems Engaging Consulting Firms (like Deloitte, Premier, or McKinsey) for "Care Transformation," "Accountable Care Readiness," or "Ambulatory IT" Projects?

 You'll have to ask; this information won't be in the papers

Bearish Signs for Accountable Care

- Are Local Health Systems Announcing Major Layoffs or Cost-Cutting Programs? Sure sign of retrenchment; no mood for big ideas
- Did Congress Just Announce Major, Multi-Year Medicare Payment Reductions for Providers?

 If so, don't bother with any of the questions above

Health Care Crowding Out Higher Education

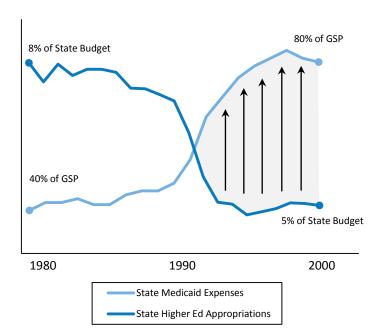
Improving Local Health Care Indirectly Helps Institutional Funding



"Projected increases in Medicaid costs over the next several decades raise serious questions about the future path of state appropriations for higher education."

Peter Orszag Urban-Brookings Tax Policy Center, 2003

State Higher Education and Medicaid Expenditures



Source: David Gunter, Thomas Kane, and Peter Orszag, "State Fiscal Constraints and Higher Education Spending: The Role of Medicaid and the Business Cycle," The Urban-Brookings Tax Policy Center, 2003; Advisory Board interviews and analysis.

How College Leaders Are Using Real-Time Employer Analytics

Spotting Trends Early, Refining Capacity Planning



Sizing Demand for New Programs

- » What are the fastest-growing occupational sectors in my county, state, and region?
- » Is there sustained employer demand for an emerging job category?
- » What is the minimum degree or certification "required" or "preferred" for a given occupation?
- » Who are the employers—large and small—looking for the skills we teach?



Keeping Existing Programs Aligned

- » What specialized skills are in rising (or declining) demand?
- » Are there opportunities for "hot skills" concentrations within a larger program?
- » Are predictable career advancement pathways emerging within a field?
- » Can we design "stackable" curriculum?

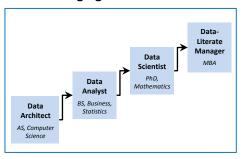
Selected Community Colleges Using Burning Glass

- Central Piedmont Community College
- Kentucky Community College System
- LaGuardia Community College
- Lone Star Community College System
- Macomb Community College
- Mount Hood Community College
- Northwest Technical College System
- Southern Maine Community College

360-Degree Sector Analysis

The Forum's Newest Research Partnership with Burning Glass

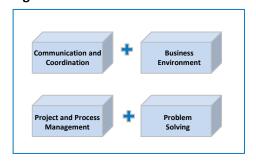
Emerging Career Ladders



Top Job Titles



Highest-Demand Skills and Credentials



Regional Market Analysis

