VERMONT

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M E M O R A N D U M

TO: Commission on Health Care Reform

CC: Susan Besio, Director, Office of Vermont Health Access

FROM: Hunt Blair, Deputy Director for Health Care Reform

DATE: November 13, 2009

RE: Health Information Technology & Higher Education Report

Section 12 of Act 61 of 2007 requires the convening of stakeholders representing the Vermont institutions of higher education to look at work force issues related to the anticipated rapid expansion of the use of Health Information Technology, "to evaluate federal grant opportunities available to establish or expand medical health informatics education programs for health care and information technology students to ensure the rapid and effective utilization of health information technologies," and to provide a Report "no later than November 15, 2009."

A work group was formed in June and met through the summer and fall. It included representatives from the University of Vermont, the Community College of Vermont, the Vermont state colleges, Marlborough College, Champlain College, Vermont HITEC/Fletcher Allen Workforce Institute, the Vermont Department of Labor, MBA Healthgroup, Vermont Information Technology Leaders, Inc., the Division of Health Care Reform, and the Health Care Reform Commission. A number of smaller sub-committees were formed to focus on specific areas of interest.

* * *

The work group first reviewed the current activities around the state related to HIT work force and research and learned that there is a substantial amount of very promising activity. After considering the question of whether it made sense to split the work group into two areas of focus (training/work force development and research), the group agreed that there is a real opportunity for Vermont to aggregate our approach to the workforce development and HIT-driven research funding. These efforts can form a reinforcing "virtuous circle" with training for staff in practices leading to better utilization of the technology which in turn will lead to data for research that can then inform the training and practice.

Members of the group voiced the hope that Vermont could be uniquely well-positioned to take advantage of funding opportunities arising from the American Recovery and Reinvestment Act (ARRA), given our scale and our tradition of working collaboratively on health reform initiatives. Early on in the process, it was observed that in most states, it would not be likely or practical to convene in a single room the breadth and diversity of interested, well-qualified participants represented on the work group. The consensus of the group is that Vermont will be able to submit very attractive and competitive proposals.

One concern voiced during the legislative session was that Vermont's institutions of higher education might end up competing with each other for funding, but the work group identified complementary strengths among the participants that should ensure a "team approach" to funding. There is clear agreement that the state's training capacity will need to be fully utilized to meet HIT work force needs, that various institutions and programs each have contributing roles to play, and that Vermont applications will be strengthened by the kind of collaboration evidenced by the work group.

<p style="text-align:center">* * *</p>

To date, one funding opportunity has been made available by the federal Department of Labor which included a component for HIT work force. A sub-set of the work group members participated in development of a proposal submitted by Vermont DOL earlier in the fall. However, the federal Office of the National Coordinator, which was given statutory authority and appropriations under the HITECH Act sections of ARRA, has not yet promulgated any funding opportunities or announced when guidance will be released.

Despite the current lack of specifics about funding opportunities, the work group was able to do a substantial amount of preparation work – detailed in the Report – that will inform future applications for funding. The Report provides extensive documentation of approaches to HIT work force job titles, roles, and responsibilities, training requirements for HIT work force, career options and pathways, Vermont's current higher education and training options capacity, and three Appendices which inventory specific position roles and responsibilities, the state's HIT Education and Training programs, and Certifications for HIT Positions. The Report was prepared by the work group members themselves and reflects the collaborative nature of the group.

Work group participants will continue to have the opportunity to meet and participate in discussions about HIT work force needs through the monthly meetings of the HIT-HIE General Stakeholders Group convened by the Division of Health Care Reform. In addition, an informal work group has been convened to focus on opportunities for HIT training for clinicians at the state's health care professional education programs. Finally, the Division will continue to focus on the needs for HIT work force, as well as integration of HIT in clinical practice and medical informatics training and research, as part of its ongoing responsibility for overseeing a comprehensive approach to HIT planning and policy coordination.

VERMONT HIT HIGHER EDUCATION REPORT

PREPARED FOR THE

COMMISSION ON HEALTH CARE REFORM

NOVEMBER 15, 2009

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Appendix A: Implementation of HIT Roles & Responsibilities
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INTRODUCTION

Committee Report Objective: To make recommendations for maximizing the flow of federal funds into the state related to establishing or expanding health informatics education and training programs and its timeline for the anticipated activities of each higher education institution and training provider, relative to securing the federal funds.

Commission on Health Care Reform Objective: To evaluate federal grant opportunities available to establish or expand medical health informatics education programs for health care and information technology students to ensure the rapid and effective deployment, support, and utilization of health information technologies.

Report Format: Sections will include a summary of job titles, the key responsibilities related to those job titles, higher education and training programs existing in Vermont, statistical workforce needs and alignment of existing higher education and training programs to job title, and workforce needs. The body of the report will serve to summarize the skill sets and higher education and training programs existing in the Vermont. Appendices are available for detailed delineations of both of these categories.

job titles as identified by prism regional employers

The following is a list of job titles developed as a result of data gathering with hospital providers connected to PRISM Regional, including Fletcher Allen Health Care. These jobs represent a general landscape of the HIT workforce required for the deployment, implementation and on-going support of the EHR at hospital, ambulatory or clinic sites.

- Project Executive Sponsor, Physician Sponsor, Vendor Sponsor
- Physician Champion, Clinical Champion [1]
- Project Manager
- Client Site Manager
- Clinical Transformation Coordinator/Analyst
- Clinical Liaison
- Business Transformation Coordinator/Analyst
- Business Liaison
- Technical Coordinator/Analyst
- Technical Liaison
- Network Coordinator/Analyst
- Reporting Coordinator/Analyst
- Application Coordinator/Analyst
- System Integration/Architect/Tester
- Interface Coordinator/Analyst
- Medical Records Abstractors/Scanners
- Training Coordinator
- Trainers
- Testing Coordinator
- Testers
- Go-Live Support Resources – Functional/Technical (Super-User and End-User Support)
- Post Go-Live Help Desk Support – Tier 1,2,3
- Implementation Consultant
- Systems Administrator

Note: The prerequisite education level of individuals performing these roles varies depending on each employer's hiring practices. Some employers require a prerequisite education level based on American Health Information Management Association (AHIMA) standards, and RHIT certification (Registered Health Information Technician) before an individual can gain employment in a given position. (See below for a sample of one EHR-vendor's (MBA HealthGroup) required education and experience levels, and associated education distribution by job title.) Other EHR vendors and health care providers require different non-health care or non-IT related education experience for entry into training programs and apprenticeships with that employer.

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[1] *In many organizations, other healthcare professionals (in addition to MDs) serve as clinical champions (e.g. RN/NP, PA, Certified MidWife, and MSW.) Source: University of Vermont.*

Additional research or service based positions in academic, nonprofit, hospital, industry, or public service environments (i.e. Professional Clinical Informaticians and Clinical Informatics Researchers), require PhD level education.

job titles identified by mba healthgroup (mba) & education with required training level

The following is a list of job titles were provided by MBA Healthgroup, Inc., an electronic health records vendor, billing, consulting, and health practice private employer, that operates in partnership with AllScripts. These jobs represent a general landscape of the HIT workforce required for the deployment, implementation and on-going support of the EHR in small to mid-size medical practices.
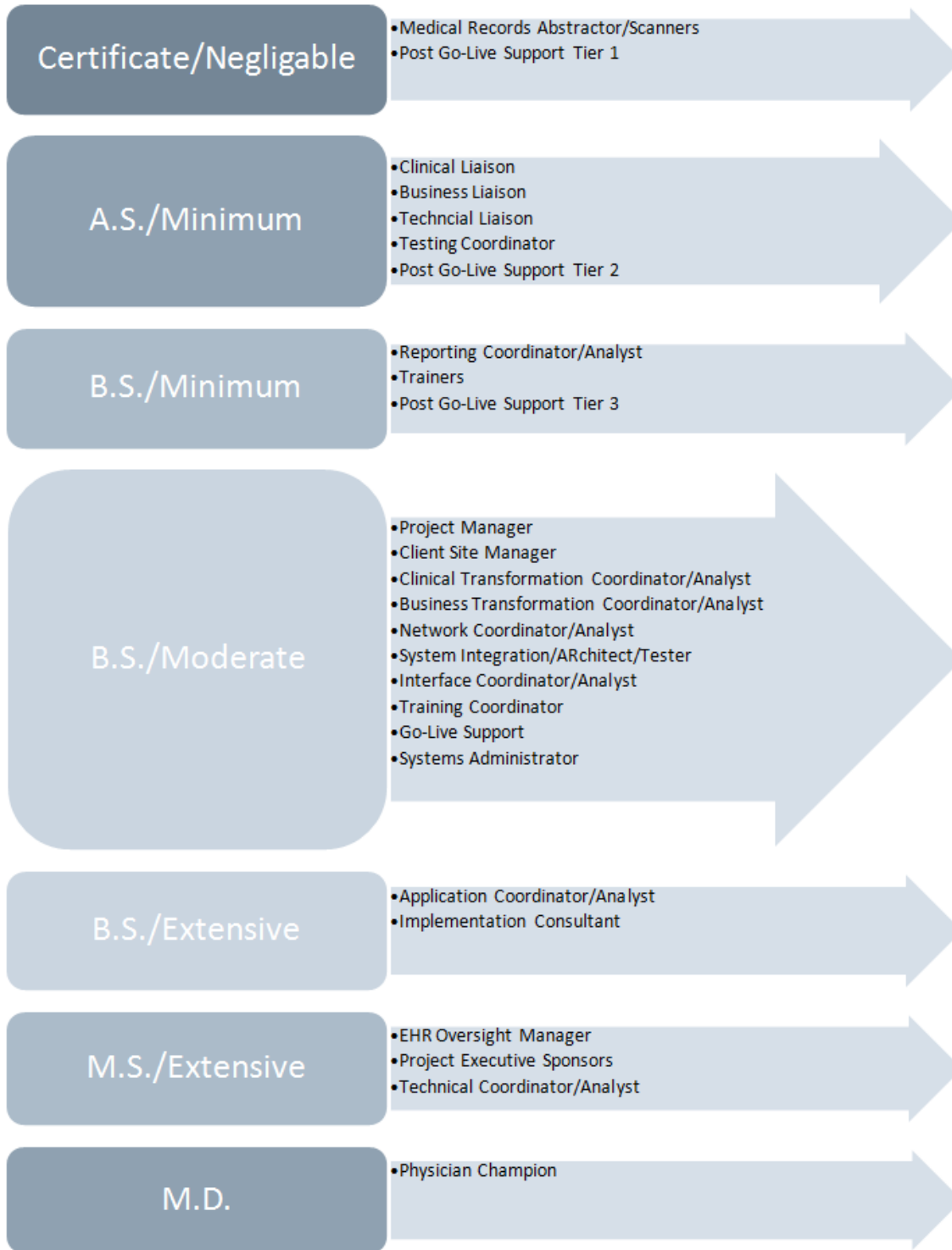
Industry Experience Key:
Extensive = 6-8 yrs. plus, Moderate = 4-6 yrs., Minimum = 2-4 yrs., Negligible 0-2

- EHR Oversight Manager - Master Prepared/Extensive Industry Experience
- Project Executive Sponsor, Physician Sponsor, Vendor Sponsor – Master Prepared/Extensive Exp.
- Physician Champion – M.D. with Software End-User knowledge[2]
- Project Manager – Bachelor Prepared/Moderate Industry Experience
- Client Site Manager – Bachelor Prepared/Moderate Industry Experience
- Clinical Transformation Coordinator/Analyst – Bachelor Prepared/Moderate Industry Experience
- Clinical Liaison – Associates Prepared/Minimum Industry Experience
- Business Transformation Coordinator/Analyst – Bachelor Prepared/Moderate Industry Experience
- Business Liaison – Associate Prepared/Minimum Experience
- Technical Coordinator/Analyst – Master Prepared/Extensive Industry Experience
- Technical Liaison – Associate Prepared/Minimum Industry Experience
- Network Coordinator/Analyst – Bachelor Prepared/Moderate Industry Experience
- Reporting Coordinator/Analyst – Bachelor Prepared/Minimum Industry Experience
- Application Coordinator/Analyst – Bachelor Prepared/Extensive Industry Experience
- System Integration/Architect/Tester – Bachelor Prepared/Moderate Industry Experience
- Interface Coordinator/Analyst – Bachelor Prepared/Moderate Industry Experience
- Medical Records Abstractors/Scanners – Certificate/Negligible Industry Experience
- Training Coordinator – Bachelor Prepared/Moderate Industry Experience
- Trainers – Bachelor Prepared/Minimum Industry Experience
- Testing Coordinator – Associates Degree/Minimum Industry Experience
- Testers – Certificate/Minimum
- Go-Live Support Resources – Functional/Technical (Super-User and End-User Support) – Bachelor Prepared/Moderate Industry Experience
- Post Go-Live Help Desk Support – Tier 1,2,3 All education and experience levels
- Implementation Consultant – Bachelor/Extensive Industry Experience
- Systems Administrator – Bachelor/Moderate Industry Experience

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[2] *ibid*

MBA's EDUCATIONAL DISTRIBUTION BY JOB TITLE

Certificate/Negligable
- Medical Records Abstractor/Scanners
- Post Go-Live Support Tier 1

A.S./Minimum
- Clinical Liaison
- Business Liaison
- Techncial Liaison
- Testing Coordinator
- Post Go-Live Support Tier 2

B.S./Minimum
- Reporting Coordinator/Analyst
- Trainers
- Post Go-Live Support Tier 3

B.S./Moderate
- Project Manager
- Client Site Manager
- Clinical Transformation Coordinator/Analyst
- Business Transformation Coordinator/Analyst
- Network Coordinator/Analyst
- System Integration/ARchitect/Tester
- Interface Coordinator/Analyst
- Training Coordinator
- Go-Live Support
- Systems Administrator

B.S./Extensive
- Application Coordinator/Analyst
- Implementation Consultant

M.S./Extensive
- EHR Oversight Manager
- Project Executive Sponsors
- Technical Coordinator/Analyst

M.D.
- Physician Champion

HIGHER EDUCATION AND TRAINING PROGRAMS EXISTING/PENDING IN VERMONT

There are two models identified and described in this report to serve Vermont's workforce needs today and in the future. One is a post-secondary education model that prepares adults for entry level, mid-level management and leadership positions within the health information technology field. The other is a training model that is demand-side driven by hiring employers with available jobs who require short-term training in order to fill positions.

The post-secondary education (higher education) model builds a pipeline of graduates through professional certificates, and associate, bachelor's, master's, post-doctoral and doctoral degrees with an emphasis or specialization in health care informatics. These programs are aligned with the American Health Information Management Association (AHIMA) and embed industry standards into the curriculum. Curricula are also aligned with guidelines set forth by professional informatics societies/initiatives such as American Medical Informatics Association (AMIA), Healthcare Information and Management Systems Society (HIMSS), and Technology Informatics Guiding Educational Reform (TIGER) initiative. Students and graduates of these programs are eligible to sit for the Registered Health Information Technology (RHIT) written exam that, if successfully completed, provides a national industry-certified designation. These graduates are prepared for full-time employment advancement during and as a result of their educational experience. Programs run from 12-18 months for Professional Certificates, and 2-4 years for Associate, Bachelor's and Master's degrees. Post-doctoral and doctoral education, respectively range from 1-2 years (post-doc) to 4-6 years (doctoral) and prepare individuals for positions in research or service based academic, nonprofit, hospital, industry or public service environments. This education model creates a supply of HIT workers that employers can recruit from as future needs are identified. Several higher education institutions in Vermont offer these competency-based and industry-certified programs including: Castleton State College, Champlain College, Community College of Vermont (CCV), Vermont Technical College (VTC) and the University of Vermont (UVM). UVM focuses their program on fundamental, theoretic and applied biomedical and health informatics skills. Additionally, several Vermont schools offer related Healthcare Management certificates or degrees. (See Appendix B. for more details about all higher education offerings.)

The second is a training model that delivers rapid-development, employer-driven, competency-based, immersion, and responds where there are immediate jobs to be filled. For example, the Fletcher Allen Workforce Institute (FAWI), using the Vermont HITEC model, builds education curricula for careers -- using a demand-driven, as-needed, rapid-cycle curricula and recruitment model (2-3 month cycle time). Demand is demonstrated by employers (like Fletcher Allen Health Care) guaranteeing jobs upfront to all successful graduates. The curriculum is developed when there is a demand for it. The applicant's education requirements for each will vary, and years of experience are often substituted for a formal degree. This model also has an apprenticeship component -- offering the rigor of structured learning cycles while working, accelerating the "years" of experience on the job.

HIGHER EDUCATION INSTITUTIONS
The following are higher education programs that will address the medium-term (12-18 mos.) and long-term (2-4 years) HIT workforce development needs (see Appendix B. for details).

Champlain College
➢ Professional Certificate in Data Coding and Classification (12-18 mos.)
➢ Professional Certificate in Health Data Systems and Technology (12-18 mos.)
➢ Professional Certificates (Undergraduate & Graduate) in Healthcare Management (12-18 mos.)
➢ A.S. Health Informatics (2 yrs.)
➢ A.S. Healthcare Management (2 yrs.)
➢ B.S. Health Informatics (4 yrs.)
➢ B.S. Healthcare Management (4 yrs.)
➢ M.S. in Health Informatics (2 yrs. – offered in 2010)
➢ M.S. in Healthcare Management (2 yrs. – offered in 2010

Community College of Vermont (CCV)
➢ Health Information Specialist Career Certificate (9 mos.)
➢ Health Information – Medical Coding or Medical Transcription (9 mos.) (Program in development)
➢ Medical Assistant Career Certificate (related program - only one in Vermont)

Community College of Vermont (CCV), Vermont Technical College & Castleton State College
➢ A.S. Health Information Technology (2 yrs.) Proposed Program

Marlboro College
➢ M.S.M. Healthcare Administration (2 yrs.) (related degree)

University of Vermont
➢ Course: Introduction to Biomedical Informatics
➢ Course: Applications in Biomedical Informatics
➢ Certificate in Advanced Study in Biomedical Informatics (one academic yr.) – approval pending
➢ Certificate in Medical Terminology (two academic semesters online) – approval pending
➢ Graduate Certificate in Healthcare Management (one-two yrs. part-time) (related degree)

WORKFORCE DEVELOPMENT/JOB TRAINING PROGRAMS

The following are job training programs (existing and to be developed) that will address the short-term (2-3 mos.) HIT workforce development needs.

Fletcher Allen Workforce Institute (FAWI)

➢ Full adoption of the Vermont HITEC model of workforce development
➢ Professional and Industry Education w/Certificates
➢ Certificates developed immediately (2-3 mos.) as-need and demand-driven – most Job Titles
➢ Efforts are underway to have the Vermont State Colleges evaluate the curricula for possible awarding of college credit.
➢ Guaranteed immediate employment including one-year HIT worker apprenticeship at Fletcher Allen
➢ Certificates already developed related to HIT workforce development include: EHR Go-Live Support Analysts, EHR Data Abstractors, Medical Transcriptionists, and Medical Coders. Additional certificate programs have been developed for related fields: EDI Analysts, EDI Programmers, Support Analysts, Development Programmers, Software Installation Consultants, Support Programmers, IT Account Managers, Software Developers, Web Developers, Registration Representatives, Practice Support Specialists, and Phlebotomists.
➢ National certifications by exam from the American Association of Medical Transcriptionist, American Academy of Professional Coders, and National Credentialing Agency for phlebotomists are available for those related programs. The Medical Transcription Certificate is accredited by Burlington College for 32 credits. The EHR Data Abstractors and EHR Go-Live Support Analysts programs do not qualify students to take the Registered Health Information Technician exam.

MBA HEALTHGROUP (MBA)

➢ Introduction to HIT (5 weeks, 36 hours)
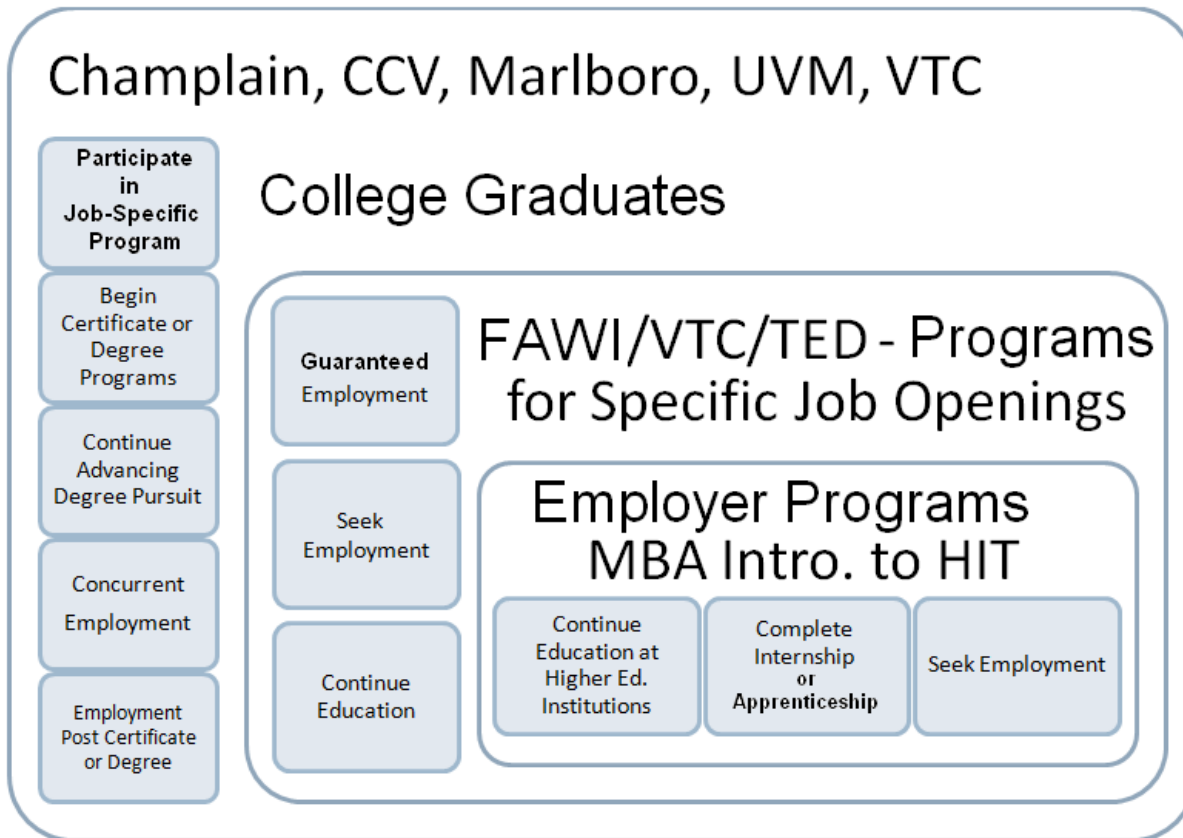➢ Internship Placement or Practical Experience (90 Days)

TECHNOLOGY EXTENSION DIVISION (TED) AT VERMONT TECHNICAL COLLEGE

➢ Non-credit workforce development based on employer need in computer skills, medical coding and transcription and administrative medical specialists.

➢ Since 2006, Technology Extension Division has trained
➢ 35 in Medical Transcription
➢ 70 in Medical Billing & Coding
➢ 21 in Administrative Medical Specialist w/ Billing & Coding

(See Appendix C. for more information on Certifications available for these positions.)

HIT CAREER OPTIONS and PATHWAYS

Note: Candidates' options can be done concurrently or independent of one another

Champlain, CCV, Marlboro, UVM, VTC

College Graduates

- Participate in Job-Specific Program
- Begin Certificate or Degree Programs
- Continue Advancing Degree Pursuit
- Concurrent Employment
- Employment Post Certificate or Degree

- Guaranteed Employment
- Seek Employment
- Continue Education

FAWI/VTC/TED - Programs for Specific Job Openings

Employer Programs MBA Intro. to HIT

- Continue Education at Higher Ed. Institutions
- Complete Internship or Apprenticeship
- Seek Employment

HIGHER EDUCATION AND TRAINING PROGRAMS CAPACITY

Champlain College
➢ 150-180 students over 3 yrs or each year based on student demand
➢ 7-week course schedule with six intake or enrollment periods each year for 15-18 students. Multiple courses are run simultaneously. In every 7-week period, a minimum of 30 students could be engaged in a course of study for a total of 180 students taking courses in a 12 months calendar period of time.
➢ Serves a national audience through 100% online Professional Certificates and Degrees

Community College of Vermont (CCV)
➢ Based on student demand
➢ Serves a Vermont audience
➢ Most courses are available online

Community College of Vermont (CCV), Vermont Technical College & Castleton State College
➢ Based on student demand
➢ Serves a Vermont audience

Fletcher Allen Workforce Institute (FAWI)
➢ 100 to 200 students (jobs and apprenticeships) per year
➢ 5 to 25 students per program
➢ Multiple 8-10 week programs running simultaneously
➢ Serves unemployed and underemployed Vermonters
➢ Education prerequisite defined per program

Marlboro College
➢ Related degree in Healthcare Administration offered.
➢ Two seven-week courses scheduled each trimester; one evening of class each week with online component.
➢ Based on student demand

MBA HealthGroup
➢ 30 Students per calendar quarter/120 per year
➢ 90-Day internship training per quarter - # dependent upon growth

University of Vermont
➢ Programs in Biomedical and Health Informatics
➢ Based on student demand

Technology Extension Division (TED) at Vermont Technical College

➢ Based on student demand

➢ Since 2006, TED has trained 35 in Medical Transcriptionists, 70 in Medical Billing & Coding Professionals, 21 Administrative Medical Specialists w/ Billing & Coding

VERMONT PRIVATE PRACTICE/PROVIDER EHR LANDSCAPE

## Primary Care Private Practice Providers Not Using EHR

Source: MBA HealthGroup Analysis (2009)
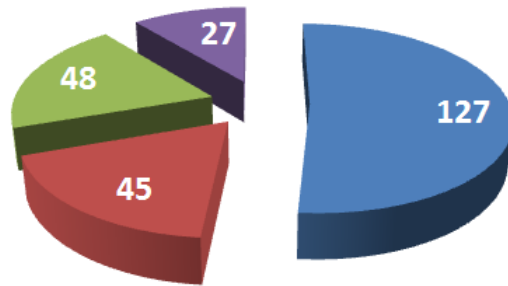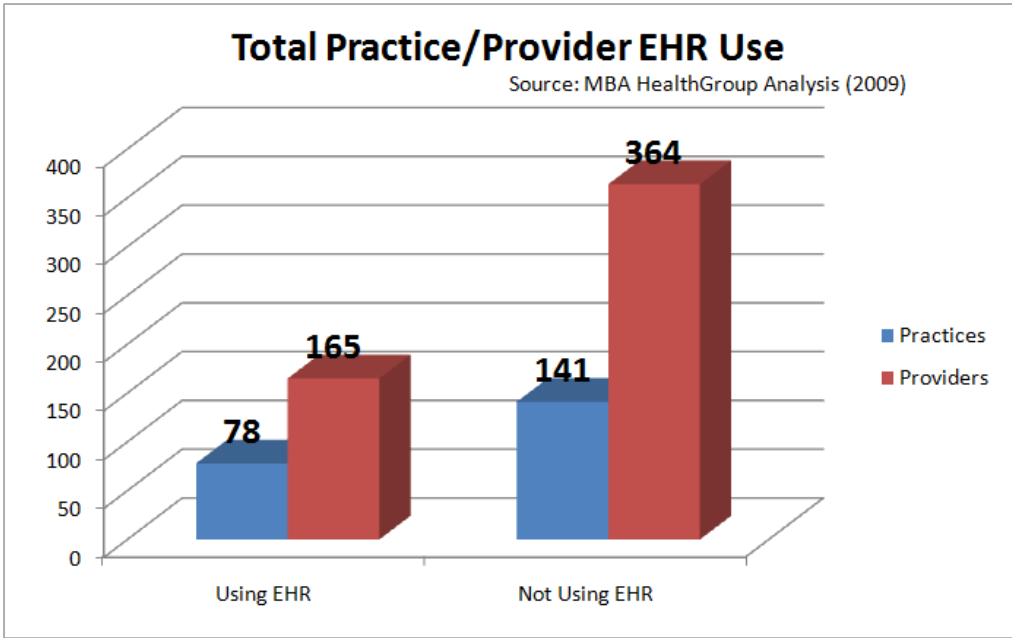

- Family Practice: 127
- Internal Medicine: 45
- Pediatrics: 48
- OB/GYN: 27

Primary Care Private Practices Not Using EHR

Source: MBA HealthGroup Analysis (2009)

- Family Practice: 38
- Internal Medicine: 23
- Pediatrics: 19
- OB/GYN: 9

Total Practice/Provider EHR Use
Source: MBA HealthGroup Analysis (2009)

Specialty Practice/Provider EHR Use
Source: MBA HealthGroup Analysis (2009)
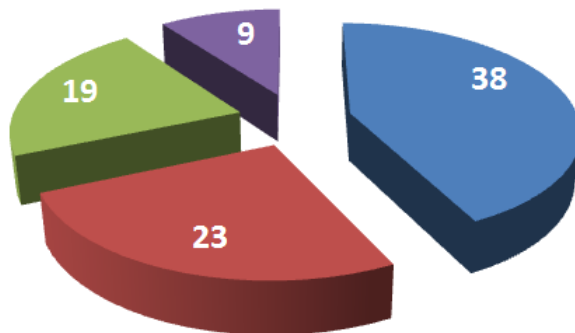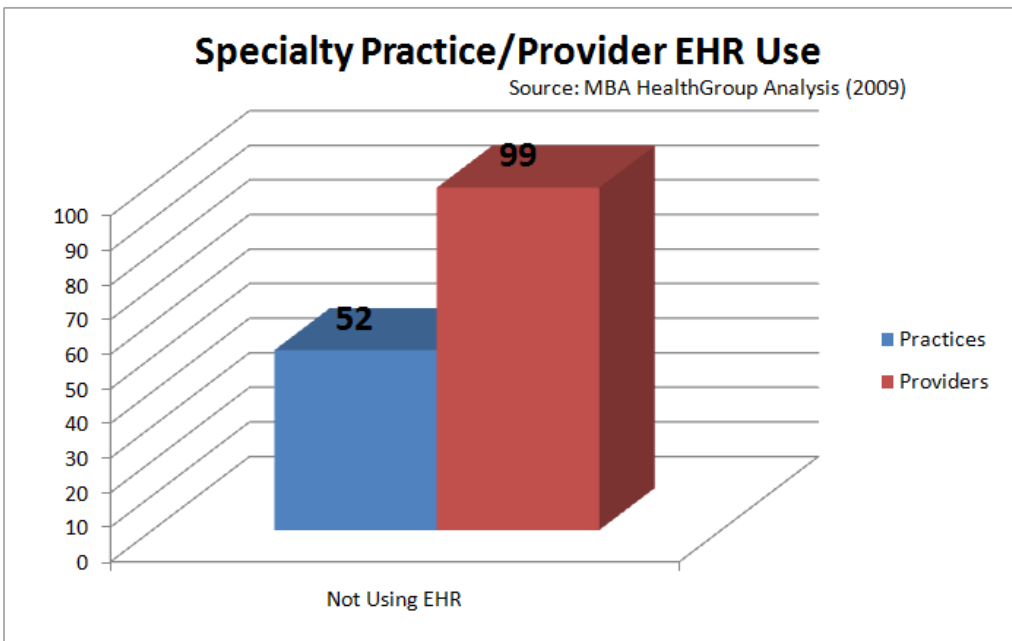
Note: estimated 15% margin unresponsiveness of practices surveyed.

VERMONT HOSPITAL OWNED PROVIDER EHR LANDSCAPE

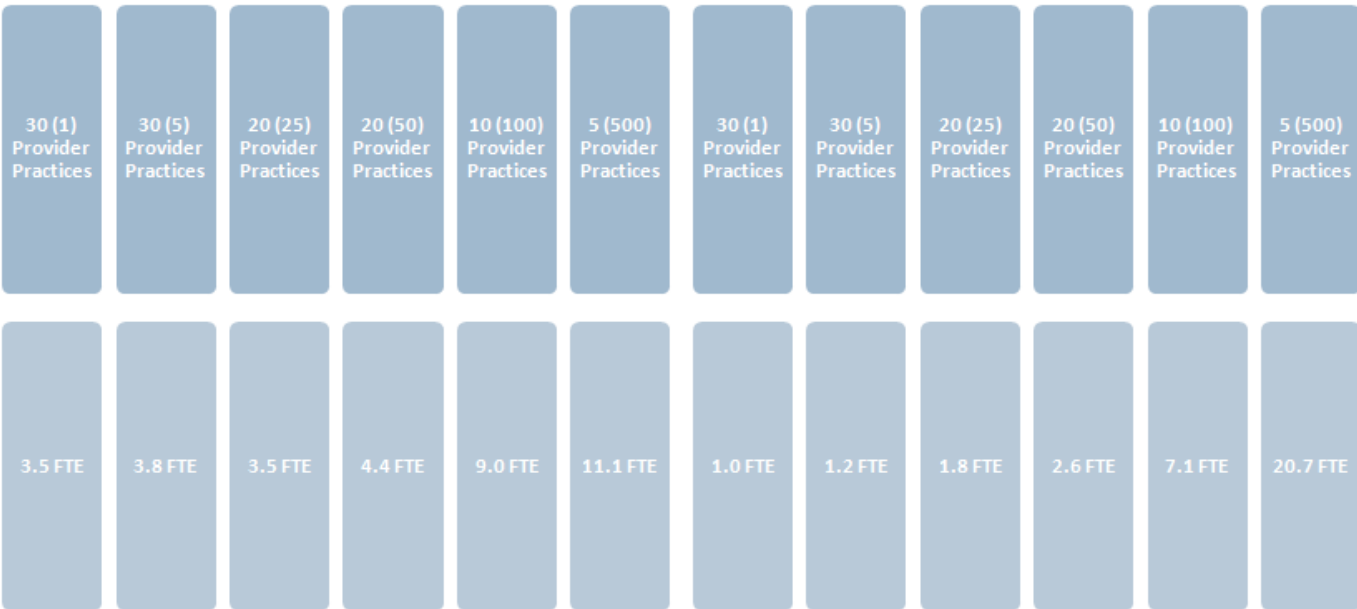| Hospital	Detail
Brattleboro Hospital	26 Providers, No EHR
Brattleboro Retreat	14 Providers, Avatar (waiting for funding through VITL)
CVMC	eCW
Copley	
FAHC	500 Providers est., Epic
Gifford	64 Providers, No EHR
Grace Cottage	15 Providers, eCW
Mt. Ascutney	28 Providers, Pen Chart - Exploring Epic
North Country Hospital	29 Providers, Allscripts Professional
Northwestern Medical Center	19 Providers, Allscripts Enterprise
Porter	48 Providers, No EHR
RRMC	64 Providers, Cerner
SVMC	62 Providers, GE

Source: MBA HealthGroup Analysis

Note: About 252 hospital employed providers do not have an EHR, totaling approximately 568 providers. An assumption is that the hospitals that have chosen an EHR for their providers have already implemented or have plans in place with workforce to implement their EHR. This number does not include FAHC or Hospital Based EHR systems.
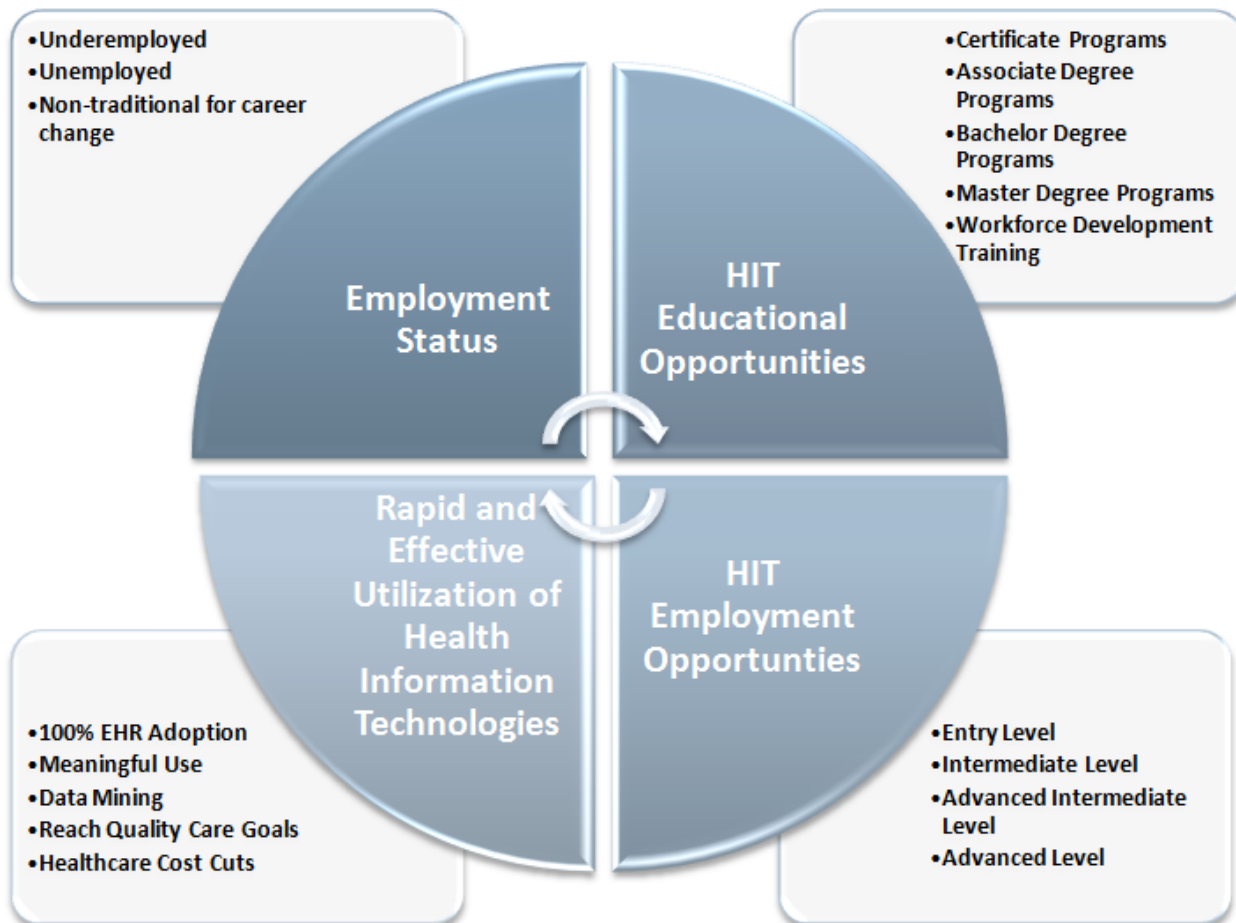
WORKFORCE GROWTH PROJECTIONS (12 Months)

Implementation Consultants						Support Staff					
30 (1) Provider Practices	30 (5) Provider Practices	20 (25) Provider Practices	20 (50) Provider Practices	10 (100) Provider Practices	5 (500) Provider Practices	30 (1) Provider Practices	30 (5) Provider Practices	20 (25) Provider Practices	20 (50) Provider Practices	10 (100) Provider Practices	5 (500) Provider Practices
3.5 FTE	3.8 FTE	3.5 FTE	4.4 FTE	9.0 FTE	11.1 FTE	1.0 FTE	1.2 FTE	1.8 FTE	2.6 FTE	7.1 FTE	20.7 FTE

Source: MBA HealthGroup Analysis (2009)

100% HIT ADOPTION IN 24 MONTHS

- Underemployed
- Unemployed
- Non-traditional for career change

Employment Status

- Certificate Programs
- Associate Degree Programs
- Bachelor Degree Programs
- Master Degree Programs
- Workforce Development Training

HIT Educational Opportunities

Rapid and Effective Utilization of Health Information Technologies

HIT Employment Opportunties

- 100% EHR Adoption
- Meaningful Use
- Data Mining
- Reach Quality Care Goals
- Healthcare Cost Cuts

- Entry Level
- Intermediate Level
- Advanced Intermediate Level
- Advanced Level

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HIT WORKFORCE DEVELOPMENT SUMMARY STATEMENTS

✓ Post-secondary educational programs focused on health information technology and healthcare management career preparation are offered by a number of Vermont higher education institutions, with several others in the approval stages, to meet the development needs of Vermont's HIT workforce. These include Professional Certificates, Undergraduate, Graduate, Post-Doctoral and Doctoral Degrees from private independent and state colleges and the University of Vermont.

✓ Vermont has the capacity to deliver both short-term training (2-3 mos.) via several training providers and medium-term (12-18 mos.) and long term (2-4 years) education opportunities through its higher education institutions. Graduates of these programs will support the entire spectrum of workforce needs through statewide EHR Implementation.

✓ Vermont should secure grant monies to support tuition assistance and related expenses to foster the participation of unemployed, underemployed, non-traditional career-changers, and incumbent healthcare workers in Vermont's HIT workforce. All levels of the HIT workforce continuum require support whether from entry level data abstractors to clinical transformation coordinators.

✓ Funding to support increasing awareness about HIT as a career opportunity and available education and training programs through a comprehensive marketing and public relations program, targeted to prospective students and/or trainees will dramatically impact Vermont and Vermonters in meeting its HIT workforce needs.

Implementation of HIT Roles and Responsibilities

Provided by Gerry Ghazi, Vermont HITEC

IMPLEMENTATION & SUPPORT OF EHRS

A DESCRIPTION OF COMMON ROLES & RESPONSIBILITIES

Presented below is a list of the possible roles and responsibilities necessary for the implementation and on-going support of the EHR at ambulatory or clinic sites. The hospital (or inpatient) roles and responsibilities still need to be researched and defined. The need for each role at a given site implementation will vary depending upon the vendor specific provisions, the skill level of current staff, the practices embraced by the clinic, the culture of the clinic, and ability of staff to utilize the software. What entity will provide the role is also solution specific (i.e. -- depends on hardware/software vendor, clinical/hospital transformation vendor, and customer mix). In addition, the same roles may be needed by multiple entities involved with the EHR solution during implementation.

1) EHR OVERSIGHT MANAGER (FOR COLLABORATIVE PROJECTS)

The EHR Oversight Manager has ultimate authority and responsibility for the project.

Responsibilities include:

• Overall responsibility of all client relationships and project(s) oversight for all sites.
• Responsible for reviewing all site key issues and assuring they are addressed.
• Contract execution for STATE GRANTOR AGENCY, EMR, hosting partners, data trading agreements, and any other applicable contracts for the EHR/HIE project.
• Planning and evaluation of contracted project deliverable and cost management.
• Participates in project oversight for risk assessment, executive relationship management, and project status review.
• Resource procurement and management to meet contracted project plan deliverables.
• Serves as an escalation point for identified project related issues.
• Provides support to Project Managers for the execution of their duties and responsibilities.
• Evaluates project status from a management perspective.
• Attends Project Steering Committee meetings as necessary, attends other clinical advisory committee meetings as necessary.

2) PROJECT MANAGER

The Project Manager manages the overall implementation efforts. The Project Manager is empowered to commit organization resources and has overall responsibility to manage the project budget and project schedule. The Project Manager is certified in project management of the EMR system being deployed.

Responsibilities include:

- Manages tasks, timeline, roll-out and on-site client relationship
- Uses project management tools and measure compliance to standards.
- Coordinate vendor development projects, EMR integration project activities, including project design and scheduling and task and resource allocation and managing the team members and stakeholders responsible for carrying out those tasks
- Identify, communicate, and initiate corrective action to resolve internal and external risks associated with new and existing customers.
- Provide oversight of communication with vendors and stakeholders for the EHR/HIE implementation
- Assign work schedules and communicate responsibilities to project participants
- Works with entities that provide data to the EHR/HIE to verify appropriate agreements are in place and standards are met
- Oversees EHR site analysis of clinical, business and technology
- Conducts Kickoff Meeting to introduce team and review the site analysis process and procedures with office. The PM distributes all necessary questionnaires required to understand the current readiness of the site.
- Conducts site analysis of physician practice with experts in clinical, business workflows and IT. Gathers information on current applications and workflows and technological infrastructure.
- Gathers site information including: list of users and roles, identifies training workstations, and crates a staffing plan for appointment conversion.
- Works with sites to complete readiness checklists including: system infrastructure & network readiness, reporting readiness, maintenance & issue management, hardware checklist (server, PC, workstations, printers), integrated system checklist and web checklist.
- Identify site super users.
- Gets list of users and roles from affiliate office
- Reviews site readiness information with Clinical, Business and Technical Coordinators to establish a project plan.
- Oversees consensus building meetings for final Project Plan.
- Defines clinical decision making structure
- Defines business decision making structure
- Defines reporting structure
- Establishes Change Control process
- Finds consensus on EHR functionality/vocabulary/visit types, visti status, service list, work places, groups, sites, call processes, patient directives (consents, authorization, requests for restrictions, HIPPA notice), problem list vocabulary, results vocabulary, other task names and views, remove reason, correction process, user roles, user favorites (e.g. text generation, problem views, in-box functions, email filtering, medications))
- Establishes Go-live strategy and go live date.
- Establishes the Communication Plan
- Creates the Issue Management and Maintenance Document.
- Creates the Help Desk Plan
- Creates the roll-out sequencing plan.
- Finalizes application suite and interfaces
- Identifies all practice/specialties to be included in implementation
- Addresses privacy and security issues including authentication, access control,
- authorization/restriction, audit controls, destruction, data backup & restore, disaster planning and business continuity planning.
- Creates a staffing plan for appointment conversion
- Finalizes timelines and announces go-live date.
- Reviews project plans with practices including installation, testing, training and support.

- Ensures that the software/hardware configurations are modified for facility needs
- Monitors ongoing installation, reports plan progress to executive management, and provide feedback regarding the status of assigned projects weekly
- Participates in production and help desk activities, as required
- Updates schedules and reports schedule changes as needed
- Coordinates post-live analysis sessions to determine effectiveness of EHR and addresses areas for improvement.

3) CLIENT MANAGER

The Client Manager (CM) is the onsite counterpart to the PM. The Client Manager is a member of the Physician Practice with the leadership skills required to insure proper buy in across the organization. The Client Manager works hand-in-hand with the PM to ensure that the right resources are available at the right time to ensure a successful implementation. The CM is also responsible for communicating the status of the project and addresses any issues throughout the EHR implementation process.

Responsibilities include:

- Point resource who oversees all aspects of the EHR implementation from planning to pose go-live support.
- Coordinate office resources required for each implementation phase.
- Oversees content knowledge transfer regarding use, design, and configuration
- requirements
- Supports clinical, business, and technical system specialist during the implementation
- Provides education on product features
- Advises on availability target time frames
- Reviews EHR/HIE-specific requirements and table coding
- Provides support for testing and activation
- Reviews sequence of tasks and plans for changes in registration, waiting room, provider office, examining room, back office area and traffic patterns.
- Creates a staffing plan for appointment conversion
- Completes all readiness checklists during the site analysis phase
- Gets sign-off from office on go-live strategy
- Provides list of users and roles in office
- Maintains issues log for ongoing system management
- Collects benchmark data
- Plans for post-live measurements
- Gains internal approval for job changes
- Evaluates and selects user devices at point of care
- Completes the DOQ-IT System Survey
- Conducts benefits realization studies per goal for provider productivity, paper chart management, dictation/transcription reduction, E&M coding improvements, charge capture, pharmacy callback reduction and other revenue sources

4) CLINICAL TRANSFORMATION COORDINATOR / ANALYST

The Clinical Transformation Coordinator has a thorough understanding of the clinical processes required to deliver healthcare and the experience to assist local staff in implementing new care processes. The CTC is also knowledgeable and experienced in change management.

Responsibilities include:

- Conducts planning at start of project and ensures adoption at completion of implementation
- Conducts clinical site analysis by gathering all pertinent information regarding clinical processes and workflows used at the Physician Practice.
- Conducts clinical gap analysis (current workflows versus future workflows).
- Gains consensus among project managers, vendors, and site staff on best practices and goals for project implementation with regard to clinical practices and best practice workflows
- Provides clinical installation leadership and support to participating practices
- Works with practices to plan and complete site preparation tasks
- Reviews interface specifications with the practices and works with other project team members on integration issues
- Works with testing coordinator to develop an integrated test plan with test data and test scenarios
- Determines chart conversion strategy

5) CLINICAL LIAISON

The Clinical Liaison is the on-site clinical champion who works tightly with the Clinical Transformation Coordinator and the clinical-application installation team. They serve as clinical experts, working to transform clinical workflows and processes. They play the role of champion across the site, supporting the adoption of the new EHR system. The role of Clinical Liaison is often played by a well respected nurse or physician.

- Implements Chart conversion
- Revises dictation process as applicable
- Identifies documents to be scanned and performs quality check on results
- Revises/prepares forms as applicable
- Identifies data to be abstracted
- Trains abstract staff if applicable
- Oversees data abstractors and quality checks
- Marks charts closed following scanning/abstracting
- Back loads data
- Tests build of clinical applications

6) BUSINESS TRANSFORMATION COORDINATOR / ANALYST

The Business Transformation Coordinator (BTC) is experienced in business practices, processes and workflows. They have in-depth knowledge and experience with evaluating operational flow, organizational policies and procedures and business plans. BTCs are also experienced in change management practices.

Responsibilities include:

- Conducts planning at start of project and ensures adoption at completion of implementation
- Conducts business site analysis by gathering all pertinent information regarding business processes and workflows used at the Physician Practice.
- Conducts clinical gap analysis (current workflows versus future workflows).
- Gains consensus among project managers, vendors, and site staff on best practices and goals for project implementation with regard to business practices and best practice workflows
- Provides business installation leadership and support to participating practices

- Works with practices to plan and complete site preparation tasks
- Reviews interface specifications with the practices and works with other project team members on integration issues
- Works with testing coordinator to develop an integrated test plan with test data and test scenarios

7) BUSINESS LIAISON

The Business Liaison is the on-site business champion who works tightly with the Business Transformation Coordinator and the business-application installation team. They serve as front-end/back-end office experts, working to transform business workflows and processes. They play the role of champion across the site, supporting the adoption of the new EHR system. The role of Business Liaison is often played by a well respected business service representative.

- Performs registration and appointment conversions
- Performs billing conversions
- Back loads data
- Tests build of business applications

8) TECHNICAL COORDINATOR / ANALYST

The Technical Coordinator (TC) understands the overall technical infrastructure including servers, devices, storage, and network setup and is able to coordinate appropriate resources to manage issues. The TC is also knowledgeable and experienced in change management.

Responsibilities include:

- Conducts planning at start of project and ensures adoption at completion of implementation
- Conducts technical site analysis by gathering all pertinent information regarding hardware and software used at the site including PCs, workstations, routers, power sources, software licenses and printers.
- Conducts technical gap analysis (current technology versus future technology).
- Gains consensus among project managers, vendors, and site staff on best practices and goals for project implementation with regard to technology interface practices
- Defines technical strategy and hardware needs
- Creates order list for technology (end user devices and network devices and services).
- Defines hardware / software configurations and printer configurations
- Defines timeline for completion
- Provides technical installation leadership and support to participating practices
- Works with practices to plan and complete site preparation tasks
- Reviews interface specifications with the practices and works with other project team members on integration issues
- Works with testing coordinator to develop an integrated test plan with test data and test scenarios
- Configures environment that will be used for build rehearsal and training

9) TECHNICAL LIAISON

The Technical Liaison (TL) is the on-site technical champion who works tightly with the Technical Coordinator and the install team. They serve as technical experts, working to address technical issues

during the planning and implementation phases. They play the role of champion across the site, supporting the adoption of the new EHR system. The role of Technical Liaison is often played by a respected representative from the hospital IT department. The TL is responsible for deploying the recommended hardware and power sources across the organization.

Responsibilities include:

- Identifies IT staff that will support the office
- Communicates environment strategy to technical staff
- Assigns task for network and printer work
- Places orders for any additional hardware needed including PC, workstations, printers, scanners, UPS, generators, power supplies and telecom.
- Deploys hardware and power sources in EHR environment
- Sets up printers and downtime reports
- Supports back-loading of data
- Supports unit and Integrated test with back loaded data, using scripts
- Supports integrated test of conversion
- Supports integrated test of interfaces
- Deploys networking and hardware
- Deploys e-learning modules at office

10) NETWORK COORDINATOR / ANALYST

The Network Coordinator (NC) is responsible for hardware and operating system management for database servers, core system management, storage area network management and network management.

Responsibilities include:

- Reviews the network and connectivity infrastructure
- Reviews workstations, performs hardware and software configurations, reviews printing needs and completes printer configurations
- Configures network connections and establishes connectivity to the hub organization
- Mounts devices, and adds power sources as necessary to support the EHR infrastructure
- Manages network and connectivity within the practice and any pertinent connections to external sites.

11) REPORTING COORDINATOR/ANALYST

The Reporting Coordinator (RC) oversees the implementation of Reporting at the site and is responsible for coordinating reporting tasks both internally and externally. This person is also the primary contact with leadership within the organization for all reporting related activities and issues. The Reporting Coordinator understands the basic system build decisions (how departments are structured in EHR application software) and workflows that affect the meaning of data.

Responsibilities include:

- Manages the needs identification and analysis process
- Coordinates resources

- Implements the reporting process workflows ensuring that end-users are getting the reports they need
- Monitors web reports
- Fields concerns from the reporting community
- Maintains internal report documentation
- Manages third-party reporting tools
- Manages/maintains the security and integrity of report objects, user access, and control (security), user groups, organization structure, general distribution setup, and other reporting tool-specific tasks
- Identifies Report templates
- Conducts modifications to standard reports
- Reviews Report Inventory and Report Consumer Matrix
- Verifies Report workbench Is running
- Creates Report Distribution Plan
- Completes weekly status reports

12) APPLICATION COORDINATOR / ANALYST

The Application Coordinator (AC) team coordinates all issues that arise during the project for their application areas and are very knowledgeable of the organization's policies, procedures, and business and clinical operations.

Responsibilities include:
- Experience in vendor specific clinical and business applications
- Certified in vendor specific areas.
- Responsible for build of software applications, conversions, testing and go-live support.
- Plans base system build information and configurations for applications and workflows
- Conducts MRN and EMPI analysis
- Reviews information gathered from office
- Creates plan for MRN generation and new patient load
- Creates plan for MRN generation and new patient load
- Incorporates action plans for payers, providers, facility structure, patients, taking into account security and protocols
- Reviews information gathered from office
- Identifies needs for start set specialty build
- Prepares import spreadsheets to build new users
- Plans for any necessary data conversions
- Develop conversion routines
- Finalizes statement form to be used
- Reviews test scripts
- Prepares import spreadsheet for build of new users
- Customizes site information
- Performs data conversions
- Populates databases.
- Designs and builds functions including Base EHR, screen layout, charges, dictation, notes templates & decision support, Orders templates & decisions support, Results templates & decision support, prescription templates & decision support, scanned documents & indexing, letter templates, reports templates, personal health record templates, data warehouse (e.g. DOQ-IT)

- Load and execute conversion routines and test outcomes
- Conducts conversion unit testing
- Conducts functional testing
- Prioritizes and implements requested changes to the system.
- Completes weekly status reports

13) SYSTEM INTEGRATION ARCHITECT / TESTER

The System Integration Architect (SIA) is responsible for developing and managing the system integration plan. System integration includes integration or electronic communications between the office and external sites. The integration architects are responsible for the architecture, development, implementation, and production support for EHR/HIE integration. With strong technical expertise, the integration architects lead the integration team and collaborate in a cross-functional environment, including involvement with project stakeholders.

Responsibilities include:

- Certified in application/vendor specific areas
- Provide architecture, design, development, and implementation of EMR integration tools (EMR Vendors)
- Provide configuration and production support for the EHR/HIE integration
- environment
- Evaluate development, administration, and monitoring tools associated with middleware applications
- Provides knowledge and guidance relating to the data exchange process
- Reviews EHR/HIE-specific requirements and table coding
- Automates implementation processes by working with cross-functional teams
- Interface with internal product teams and customers to gather and analyze requirements
- Modifies standard test scripts to incorporate site specific information
- Provide implementation support, including testing connectivity
- Develops required coding for data exchange
- Supports clinical, business and technical system specialists during the implementation process
- Provides support for testing and activation
- Execute integrated testing of service areas and load testing
- Completes weekly status reports

14) INTERFACE COORDINATOR / ANALYST

The Interface Coordinator (IC) manages a team of interface builders who configure, build and test interfaces to 3rd party SW applications. The IC also is responsible for monitoring and managing interfaces to 3rd party software applications that make up the EHR application suite. The IC understands the database data structures and HL7 standards and requirements. The Interface Coordinator works effectively with and negotiates between the clinical, business and IT site representatives.
The IC is also responsible for managing a detailed project plan and issues list to be reviewed on standing conference calls with the EHR vendor. The IC has the ability to assign resources as necessary and communicates with the application teams to ensure that the application and interface need are being addressed.

Responsibilities include:

- Develops/Modifies required interfaces
- Loads and executes interfaces and test outcomes
- Conducts interface unit and system testing
- Works with third party vendor to resolve issues
- Completes weekly status reports

15) MEDICAL RECORDS ABSTRACTORS

Medical Record Abstractors (MRA) assist in building an abstract of each patient's medical record in the EHR environment. Demographic information is made available through either a conversion or an interface process. Clinical information from paper charts are also abstracted and include at a minimum: patient's problem list, allergies, immunizations, and medications. Charts of patients with upcoming appointments are also abstracted. It takes an abstractor an average of 5 minutes to abstract a simple record and 10-20 minute for a complex record.

16) TRAINING COORDINATOR

The Training Coordinator creates the training plan based on the needs and skill levels of end users.

Responsibilities include:

- Conducts training needs analysis and creates and delivers a training plan to the PM and training staff.
- Assesses the clinical education needs of the staff and plans, develops, implements and evaluates educational programs to meet those needs.
- Assesses employee skill levels; recommends training program consistent with individual skill level and job requirements.
- Design course materials and other documentation, and use e-learning technologies to support users in self-help training efforts
- Designs and coordinates electronic health record training curriculum based on best practices in adult learning. Curriculum would include best operational practices based on established workflow processes for both clinical and business operations.
- Identifies trainers
- Identifies locations(s) of training
- Develops training materials
- Plans the training schedule
- Plans the evaluation and certification process
- Works with technical liaison to deploy e-learning modules in office.
- Conducts EHR orientation and education for the Board of Directors and community members.
- Designs and delivers training curriculum for EHR/HIE participant base.
- Writes clinical, business and system scenarios for training
- Trains Clinical and Business trainers/super-users for onsite training and support
- Coordinated and schedules training classes for providers and clinical staff.
- Coordinated and schedules training classes for office managers and business end users.
- Provides go live coaching and support.
- Promptly address outstanding issues to Practice Project Manager and project team.
- Assesses the learner's mastery of new skills and provides related feedback to Practice Project Manager and Clinical Implementation Lead

- Routinely review the course content and submit revisions with end user feedback
- Completes weekly status reports

17) TRAINERS

Trained by the Training Coordinator, the Trainers can be internal or external resources.
Trainers are knowledgeable in either clinical or business applications and have excellent communication skills.

Responsibilities include:

- Train physicians and clinical staff on the new application through trainer led instruction and one-on-one coaching.
- Trains office managers and business end-users at individual sites
- Provide go live coaching and support.
- Assesses the learner's mastery of new skills and provides related feedback to Practice Project Manager and Clinical Implementation Lead
- Certifies end-users once certification requirements are met

18) TESTING COORDINATOR

The Testing Coordinator is responsible for establishing the testing environment and developing the test plan for the entire EHR system. Testing Coordinators work with onsite staff to identify critical scenarios that are part of the new workflows.

Responsibilities include:

- Defines testing process and environment
- Coordinates regional testing resources
- Creates testing activities and creates/edits testing scripts
- Writes test scenarios and converts test scenarios to use cases.
- Defines and tests sign-off requirements to ensure that the system is thoroughly tested and ready for Dress Rehearsal and Go-Live.
- Reviews the test plans with dedicated testers and oversees the successful completion of testing by all testers
- Defines the testing schedule for each site which includes time for unit testing, site testing, integration testing of interfaces and stress (load) testing.
- Oversees testing by testers and office personnel
- Completes weekly status reports

19) TESTERS

The Testers are responsible for executing the test plans for interfaces, functional tests for clinical and business practice workflows, , and system level requirements.

Responsibilities include:

- Performs unit testing for each application

- Performs system testing across EHR
- Performs integration testing
- Conducts functional and business workflow test scripts
- Performs interface and stress (load) testing.
- Tests data dictionary changes and rules engine changes
- Validates sign-off criteria are met for all tests

20) GO-LIVE SUPPORT RESOURCES (FUNCTIONAL/TECHNICAL)

The Go-Live Support team is responsible for developing a rehearsal checklist/playbook. Dress rehearsal is followed by live system delivery. During live system delivery, support staff move files and tables from the test environment to the production environment. The interfaces are also copied to the production environment. Support staff assists users during this phase and evaluate go-live with users and vendors.

The Go-Live support staff consists of specialists in clinical, front-end and back-end office workflows and technical support staff with the understanding that all significant issues will be identified and addresses in a prompt fashion.

21) POST GO-LIVE HELP DESK SUPPORT

Help Desk Support is made up of three staffing tiers. The first tier handles initial telephone calls from users and routes callers to appropriate support personnel for questions, requests or problems requiring a higher level of expertise. The second and third tier consists of technical, clinical and business support experts. Third tier personnel are identified as those who are authorized to make requests to 3rd party EHR vendors for possible change orders or bug fixes.

Responsibilities include:

- Promptly answering helpdesk calls from any client requesting help with any aspect of the EHR; clinical, business, or technical.
- Addresses - security issues, login, passwords
- Triages calls to appropriate member of support staff.
- Prioritizes change requests, bug reports, or usability issues which would require changes to the EHR system and 3rd party vendor support

HIT Education and Training Program Inventory

Information provided by the following organizations:

Castleton State College
Champlain College
Community College of Vermont
Marlboro College
Technology Extension Division (TED) at the Vermont Technical College
University of Vermont
Vermont HITEC/Fletcher Allen Workforce Institute

Compiled by Melissa Hersh, Champlain College

Introduction

Vermont has a rich inventory of providers ready to deliver health information technology education and training to its workforce. These opportunities range from onsite employer-run trainings, and customized employer-driven "boot camp" intensive experiences, to industry-standards based professional certificates and college degrees. Each type of education and training prepares individuals for the spectrum of job opportunities created by the implementation of electronic health records in our state. These jobs are currently and in the future located at major medical centers, critical care hospitals, small to medium-size medical practices, insurance companies, long-term care facilities, community health centers, and more.

This document serves as an inventory of programs provided in our state currently and where notated, in the near future and was developed through the Vermont Office of Health Access HIT Higher Education Working Group, a sub-group of the HIT Stakeholders Group.

The following organizations participated in this inventory document:

Higher Education Institutions	Training or Employer Providers
Castleton State College (see CCV)	Fletcher Allen Workforce Institute (FAWI)
Champlain College	MBA HealthGroup
Community College of Vermont (CCV)	Technology Extension Division (TED)
CCV, Castleton & Vermont Technical College	
Marlboro College	
University of Vermont	

Inventory Details *(in alphabetical order)*

Champlain College

Champlain College is a post-secondary, NEASC accredited institution of higher education, offering undergraduate, professional certificate and graduate degrees including programs in health informatics and healthcare management.

Specifically, Champlain serves both traditional age and adult students and offers a full range of educational opportunities in health information technology including an Associates degree, two Professional Certificates, a Bachelor's degree and in the near future, a Master's of Science degree, as well as 21 other degrees entirely online. *Champlain's entire Health Informatics curriculum was designed to meet **AHIMA (American Health Information Management Association)** industry standards and students who complete these programs will be prepared to take the Registered Health Informatics Technician (RHIT) written exam for industry certification.*

Credential #1: *Associates of Science (AS) degree in Health Informatics*
Availability: Currently offered
Time to complete: 2 years or less
Learning competencies:
- Utilize and validate coding accuracy and coding systems and demonstrate the role of coding.
- Maintain processes, policies and procedures to assure accuracy and integrity of data.
- Create documentation and apply legal compliance.

- Contribute to quality management and process improvement programs as it relates to EHR.
- Utilize technology applications to collect, store and analyze data.
- Ensure accuracy of clinical data required in reimbursement systems and prospective payment systems (PPS) in healthcare delivery.
- Understand role of coding in an organization's revenue cycle.

Types of jobs/positions: Entry to mid-level supervisors
Available industry certification: Registered Health Information Technician (RHIT) following successful completion of a written exam.

Credential #2: *Bachelor of Science (B.S.) degree in Health Informatics*
Availability: Currently offered
Time to complete: 4 years or less depending on allowable transfer credit
Learning competencies: All of the above plus the following.
- Manage processes, policies and procedures, applying laws, accreditation, licensure and certification standards,

- Produce and manage clinical data for quality management,

- Utilize management and risk management,
- Monitor, verify and interpret clinical vocabularies and terminologies in health information systems,

- Implement data-driven decision-making,
- Use and interpret software applications.

- Meet organizational needs and achieve interoperability of healthcare information systems through database architecture management.
- Support human resource functions: compliance with employment laws, training and continuing education systems, benchmarks, job analyses and descriptions, motivation programs.
- Ensure efficient workflow and achieve project goals through process engineering and project management techniques.

Types of jobs/positions: Mid-level manager or team leader
Available industry certification: Registered Health Information Technician (RHIT) following successful completion of a written exam.

Credential #3: *Professional Certificate in Data Coding and Classification (Undergraduate)*
Availability: Currently offered
Time to complete: 12 to 18 months or less
Learning competencies: Many of the above competencies apply in this certificate, particularly those related to data coding and classification.
Types of jobs/positions: Medical records and health information technician – may have entry level management responsibilities.
Available industry certification: Registered Health Information Technician (RHIT) following successful completion of a written exam.

Credential #4: *Professional Certificate in Health Data Systems and Technology (Undergraduate)*
Availability: Currently offered
Time to complete: 12 to 18 months or less
Learning competencies: Many of the above competencies apply in this certificate, particularly those related to health data systems, technology and process improvement.
Types of jobs/positions: Health informatics administrative and technical support to management team and in some cases responsibilities as a health information manager
Available industry certification: Registered Health Information Technician (RHIT) following successful completion of a written exam.

Credential #5: *Master's of Science in Health Informatics (Graduate)*
Time to complete: 2 years or more
Availability: Offered in 2010
Learning competencies: The competencies provided above plus integrated leadership and capstone projects; designing systems, trouble-shooting and solving highly technical interoperability challenges, systems approach to health informatics
Types of jobs/positions: Leadership position as an enterprise-wide health informatics professional, managing teams of HIT professionals.
Available industry certification: Registered Health Information Technician (RHIT) following successful completion of a written exam.

Community College of Vermont (CCV)

Community College of Vermont (CCV) is one of five Vermont State Colleges and has been accredited since 1975 by NEASC, the New England Association of Schools and Colleges. We provide quality, affordable education to over 9,000 students each year.

CCV serves students where they live and work, at 12 learning centers around the state and via the Internet. CCV is an open-admissions college and their students range in age from 14 to 78. CCV offers about 1000 courses each fall and spring and 400 in the summer.

Credential #1: *Health Information Specialist Career Certificate*
Time to complete: 9 months or more
Availability: Currently offered
Learning competencies: Assemble, review, and complete patient records for a hospital or health clinic.
Types of jobs/positions: Entry-level medical records or data entry positions.
Available industry certification: Students who complete this program may consider taking the Registered Health Information Technician (RHIT) written exam.

Credential #2: Under development – two tracks within the Health Information Certificate to provide medical coding and medical transcription pathways
Time to complete: 9 months or more
Availability: Not yet available
Learning competencies: Under development
Types of jobs/positions: Medical coder or medical transcriptionist
Available industry certification: Students who complete this program may consider taking the Registered Health Information Technician (RHIT) written exam with further education.

Community College of Vermont (CCV), Vermont Technical College, & Castleton State College

Credential #3: *Associate of Science in Health Information Technology* (all offered at CCV, VTC through the Technology Extension Division and Castleton State College)
Time to complete: 2 years
Availability: Proposed - not yet available
Learning competencies:
This degree would prepare professionals with an AHIMA (American Health Information Management Association) standards-based education in preparation for the RHIT credential as registered health information technicians.
Competencies include: Ensure the quality of medical records by verifying their completeness, accuracy, and proper entry into computer systems. Use computer applications to assemble and analyze patient data for the purpose of improving patient care or controlling costs. Often specialize in coding diagnoses and procedures in patient records for reimbursement and research.
Types of jobs/positions:
With experience, the RHIT credential holds solid potential for advancement to management positions, especially when combined with a bachelor's degree. RHITs may be employed in any organization that uses patient data or health information, such as pharmaceutical companies, law and insurance firms, and health product vendors.
Available industry certification:
Students who complete this program would be eligible to take the Registered Health Information Technician (RHIT) written exam.

Fletcher Allen Workforce Institute (FAWI)

Fletcher Allen Workforce Institute (FAWI), working in collaboration with Vermont HITEC (a non-profit corporation), has a mission of educating the unemployed and underemployed in the field of nursing, allied health, and health care information technology, for the purpose of gaining employment in the State of Vermont with Fletcher Allen Health Care and other healthcare providers.

The FAWI model is provider and demand driven: it embraces a student-centric, total immersion competency-based education and apprenticeship philosophy. Each program begins with an up-front 8 to 10 week educational component where classes run 8-9 hours a day, 5 days a week, with 4 hours of homework assigned each night and 8 hours on the weekend. Following the up-front educational component, the students enter a one-year state-registered apprenticeship program to further their skill development while performing the job with their employer. Curricula are reverse engineered by the instructors performing the actual employer-specific job functions on which they will be delivering the education.

From an academic perspective, each program will be reviewed by various two- and four-year colleges for awarding academic credit. From the student perspective, the programs have a career orientation, aptitude assessments, interviewing and selection, education, career readiness, coaching and mentoring, transition into employment, and mentoring in a state-registered apprenticeship. From the employer perspective, it involves business and workforce analysis, recruitment, curriculum development and delivery, transition into the workplace, performance standards, reviews, mentoring and retention.

Training Opportunity #1: *Professional and Industry Education w/Certificates*
Availability: Currently available
Time to complete: Average 8 to 10 weeks per program (320-400 hours), plus guaranteed employment and placement into a one-year HIT worker apprenticeship program.
Learning competencies: Each program is developed on an immediate, as-needed basis, with each session offering successful graduates immediate employment and placement in a one-year apprenticeship program. Each program sets the entrance criteria (HS Diploma-GED, Associate's or Bachelor's Degree), and sets the competencies for and graduation criteria.
Types of jobs/positions: Provider and demand driven. Past programs include: EDI Analysts, EDI Programmers, Support Analysts, Development Programmers, Software Installation Consultants, Support Programmers, IT Account Managers, Software Developers, Web Developers, EHR Go-Live Support Analysts, EHR Data Abstractors, Medical Transcriptionists, Medical Coders, Registration Representatives, Practice Support Specialists, and Phlebotomists.
Available industry certification: As part of each program, FAWI will offer a health care provider-industry completion certificate, USDOL Apprenticeship Certificate, and National Professional Certifications by Examination, each of them being health care information technology job specific. In addition, efforts are underway to have the Vermont State Colleges evaluate the HIT- related curricula for possible awarding of college credit.

MBA HealthGroup™

MBA HealthGroup™ offers services for physician and hospital based practices, hospitals, and health systems. Our clients range from solo family practitioners to 500 physician practices and we offer everything from consulting services to practice management services to medical billing/revenue cycle management to electronic health record hosting, support and implementation. With clients in forty (40) states, MBA HealthGroup™ has a growing presence across the country. To read more about what we can do for you, follow the links below to read about our most popular services: Healthcare Consulting, EHR Implementation Consulting, Medical Billing and Revenue Cycle Management, Starting a Medical Practice, and Hosted EHR/PM Services.

Training Opportunity #1: *Certificate - Introduction to HIT*
(Employer/MBA Certified)
Availability: Currently offered
Time to complete: 5 weeks, 36 hours
Learning competencies: General overview of Health Information Technology to include the Healthcare System as a whole, Practice Management Systems, and Electronic Health Record Systems. Within all these systems the intricacies are covered as well as how each system and its capabilities relate to the other information systems. An emphasis is placed on the value of the use of these systems in improving health care and cutting healthcare costs.
Types of jobs/positions: Entry level implementation, support and hosting for EHR & PM, plus billing tasks. Combining this knowledge with previous education, experience and skills sets could open opportunities to more advanced jobs.
Available industry certification: Offered by MBA HealthGroup.

Training Opportunity #2: *Internship Placement or Practical Experience (as part of a degree program in collaboration with an accredited higher education institution)*
Availability: Currently offered
Time to complete: 90 days
Learning competencies: Extensive practical experience in Health Information Technology to include the Healthcare System as a whole, Practice Management Systems, and Electronic Health Record Systems. Within all these systems the intricacies are covered as well as how each system and its capabilities relate to the other information systems. An emphasis is placed on the value of the use of these systems in improving health care and cutting healthcare costs.
Types of jobs/positions: Mid-level implementation, support and hosting for EHR & PM, plus billing tasks. Combining this knowledge with previous education, experience and skills sets could open opportunities to more advanced jobs.
Available industry certification: None available

Marlboro College

Marlboro College offers a student-centered approach to education that is structurally and culturally different from other colleges. Each student works with their faculty advisor to choose an individualized course of study. Marlboro's mission "to teach students to think clearly and to learn independently" is best served when students experience a wide variety of ideas, opinions and cultural backgrounds. In its profile on Marlboro College, The Princeton Review praises the school for its academic excellence.

In 1997, Marlboro College created the Graduate School in Brattleboro. The Graduate School offers a wide variety of education and training programs, including graduate and distance education, corporate training and joint offerings with other organizations. Marlboro is accredited by NEASC, the New England Association of Schools and Colleges.

RELATED PROGRAM:
Credential #1: *Master's in Management – Health Care Administration (Graduate)*
Availability: Currently offered.
Time to complete: 2 years, part time; trimester schedule, with 7 week courses; class meets one evening/week with online component.
Learning competencies: Prepare leaders with the knowledge of issues, processes, and approaches to deal effectively with the many complex issues facing health care and to achieve success in their work. In addition to skill sets in accounting, finance, marketing, and management, students acquire knowledge of the unique components and issues impacting healthcare systems.
Types of jobs/positions: All levels of health care organization leadership/administration.

The Technology Extension Division at Vermont Technical College

The Technology Extension Division at Vermont Technical College was established in 1991 to meet the education and training needs of Vermont employers. Since then, TED has served hundreds of companies and thousands of employees. TED draws upon the resources of the Vermont State Colleges and nationally recognized training vendors to provide educational programming in sales and marketing, supervision and management, healthcare, computer technology and manufacturing processes and operations.

The Technology Extension Division (TED) at Vermont Technical College will provide a track that fills gaps or updates those working in the field who may require only a bit of additional information. In addition to working with medical coders and medical transcriptionists, we are able to address the needs of health care practitioners who require computer applications training as system end users – but will not be primarily responsible for electronic medical records.

Training Opportunity #1: Non-Credit Workforce Development to Incumbent Healthcare Workers
Availability: Currently offered (more programs can be created based on employer need)
Time to complete: Varies
Learning competencies:
Training would build upon a proven track working with clinicians and staff to provide computer skills, medical coding, and medical transcription education. The Technology Extension Division has spent more than 10 years education incumbent employees at health care partners around the state (including Central Vermont Medical Center, and other entities in the Dartmouth-Hitchock Alliance).
Types of jobs/positions: Mid-level technicians, medical coders, and medical transcriptionists. Upgrades and computer skills training for clinicians.
Available industry certification:
Certification in coding is available from several organizations. The American Academy of Professional Coders (AAPC) offers three distinct certification programs in coding. The American Health Information Management Association (AHIMA) also offers certification for Certified Healthcare Privacy and Security because of growing concerns for the security of electronic medical records.

Association for Healthcare Documentation Integrity (AHDI) awards two voluntary designations, the Registered Medical Transcriptionist (RMT) and the Certified Medical Transcriptionist (CMT). Medical transcriptionists who are recent graduates of medical transcription educational programs, or have fewer than 2 years experience in acute care, may become a registered RMT. The RMT credential is awarded upon successfully passing the AHDI level 1 registered medical transcription exam.

University of Vermont
The University of Vermont combines faculty-student relationships most commonly found in a small liberal arts college with the resources of a major research institution. The university is home to 9,867 undergraduates, 1,384 graduate students, 453 medical students and 1,303 full- and part-time faculty. Located in Burlington, Vermont (perennially voted one of America's most exciting small cities), UVM's setting in a valley on the shores of Lake Champlain, between the Adirondack and the Green mountain ranges, inspires visitors and residents. UVM is accredited by NEASC, the New England Association of Schools and Colleges.

Credential #1: *"Introduction to Biomedical Informatics" and "Applications in Biomedical Informatics" courses – currently electives in program towards a Graduate Certificate, Master's of Science or Ph.D. in Clinical and Translational Science*
Availability: Currently offered
Time to complete: N/A
Learning competencies: Overview of the field of biomedical informatics; understanding the organization of medical information, the effective management of information using computer technology, and the impact of such technology on medical research, education, and patient care; exposure to real-world examples and skills related to the acquisition, representation, analysis, and use of different types of

biomedical information; gain hands-on experience with applying basic informatics skills and knowledge to address research and clinical questions

Types of jobs/positions: Biomedical Informatics, research and service to academia, healthcare organizations, industry, and other related settings, i.e. Informaticians.

Available industry certification: None available.

<u>**Credential #2:**</u> *Medical Technology Sequence (certificate approval pending)*

Availability: Sequence of courses currently offered for completion of a professional certificate

Time to complete: Two academic semesters online

Learning competencies: This sequence provides integrated courses to cover the spectrum of healthcare technology application, support and management to improve patient safety, technology availability, device usage, cost effectiveness, and longevity.

Types of jobs/positions: This sequence is designed for hospital staff, including engineers/technicians, nursing educators and managers, and administrators. These medical technology courses are also highly applicable as future job training for current nursing and health science students.

Available industry certification: None available.

<u>**Credential #3:**</u> *Certificate in Advanced Study in Biomedical Informatics*

Availability: Certificate approval pending

Time to complete: One academic year

Learning competencies: TBD

Types of jobs/positions: Biomedical informatics research and service in academia, healthcare organizations, industry, and other related settings (Informatician)

Available industry certification: None available.

RELATED PROGRAM:

<u>**Credential #4:**</u> *Graduate Certificate in Health Care Management*

Availability: Currently available

Time to complete: One to two years part-time

Learning competencies: In a rapidly changing health care arena, the University of Vermont's Graduate Certificate in Healthcare Management offers advanced level courses that are interdisciplinary to meet the needs of a diverse healthcare industry, while focusing on core competencies. These competencies are in the areas of policy, management, analysis and decision making, informatics, and ethics. The curriculum is taught by industry professionals and offers skills to assess, plan, and evaluate decisions in the healthcare environment, an ability to facilitate critical partnerships and collaboration, an understanding of the importance of leadership in health care administration, communication and information technology skills, a broad ethical framework for making leadership decisions and a competitive advantage with enhanced skills to lead and manage an organization. Curriculum includes courses from the University of Vermont School of Business Administration, School of Nursing and Health Science, and the graduate program in Public Administration and the University of Vermont Center for Clinical and Translational Science.

Types of jobs/positions: Healthcare professionals trained in medicine, nursing, occupational or physical therapy, pharmacy and administration.

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APPENDIX C.

CERTIFICATIONS FOR HIT POSITIONS

Provided by Maureen Hebert, Vermont Technical College &
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American Health Information Management Association's (AHIMA)
Registered Health Information Technician (RHIT)

Professionals holding the RHIT credential are health information technicians who:

- Ensure the quality of medical records by verifying their completeness, accuracy, and proper entry into computer systems.
- Use computer applications to assemble and analyze patient data for the purpose of improving patient care or controlling costs.
- Often specialize in coding diagnoses and procedures in patient records for reimbursement and research. An additional role for RHITs is cancer registrars - compiling and maintaining data on cancer patients.

With experience, the RHIT credential holds solid potential for advancement to management positions, especially when combined with a bachelor's degree.

Although most RHITs work in hospitals, they are also found in other healthcare settings including office-based physician practices, nursing homes, home health agencies, mental health facilities, and public health agencies. In fact, RHITs may be employed in any organization that uses patient data or health information, such as pharmaceutical companies, law and insurance firms, and health product vendors.

Eligibility Requirements

RHIT applicants must meet one of the following eligibility requirements:

- Successfully complete the academic requirements, at an associate's degree level, of an HIM program accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)1

OR

- Graduate from an HIM program approved by a foreign association with which AHIMA has a reciprocity agreement2

The academic qualifications of each candidate will be verified before a candidate is deemed eligible to take the examination. All first-time applicants must submit an official transcript from their college or university.3

1. Students interested in obtaining a Post-Baccalaureate Certificate, Certificate of Completion, or Transfer of Credits information must contact the CAHIIM-accredited program in which they wish to enroll regarding their institutional policies. Please visit the program directory Web site at www.cahiim.org/directory to access the list of CAHIIM-accredited programs.

2. AHIMA and the Canadian Health Information Management Association (CHIMA) shall permit a graduate of a program in HIM at the associate or baccalaureate degree level to apply to write the appropriate certification examination consistent with the academic level achieved and given independently by the two associations. The graduate must meet the educational competencies for certification as a technician or administrator established by the association to which the application is made.

3. Beginning October 6, 2008, students in CAHIIM-accredited programs for RHIT or RHIA, enrolled in their final term of study, are now eligible to apply for and take their respective certification exam early. Eligible students include the following:

- Students currently enrolled and in their last term of study
- Students who have completed their course work but have not yet graduated
- Graduates that are currently waiting for their official transcripts

Coding

Certification in coding is available from several organizations. Coding certification within specific medical specialty areas is available from the Board of Medical Specialty Coding and the Professional Association of Healthcare Coding Specialist (PAHCS). The American Academy of Professional Coders (AAPC) offers three distinct certification programs in coding. The AHIMA also offers certification for Certified Healthcare Privacy and Security because of growing concerns for the security of electronic medical records. Certification in cancer registry is available from the NCRA. Continuing education units are typically required to renew credentials.

American Health Information Management Association's (AHIMA)

 Certified Coding Associate (CCA)

The CCA validates competence of coding fundamentals in new graduates and those new to the coding profession. The credential balances limited job experience with tested knowledge, opening doors to new employment opportunities and positioning CCAs for advancement over non-credentialed individuals. Completing a qualified training program (such as the Coding Basics online program) or on-the-job training provides immediate marketability.

Learn More

Eligibility Requirements

> CCA examination candidates must have a high school diploma from a United States high school or an equivalent educational background.

Although not required, it is strongly recommended that candidates have at least six months experience in:

· A healthcare organization applying ICD-9-CM and CPT coding conventions and guidelines,

or

· Have completed an AHIMA-approved coding certificate program

or

· Have completed other formal coding training program

<u>Certified Coding Specialist (CCS)</u>

Certified Coding Specialists are mastery-level professionals skilled in classifying medical data from patient records, generally in the hospital setting. These coding practitioners review patients' records and assign numeric codes for each diagnosis and procedure. To perform this task, they must possess expertise in the ICD-9-CM and CPT coding systems. In addition, the CCS is knowledgeable in medical terminology, disease processes, and pharmacology. Professionals experienced in coding inpatient and outpatient records should consider obtaining this credential.

Eligibility Requirements

CCS exam candidates must have earned a high school diploma from a United States high school or have an equivalent educational background.
Although not required, it is strongly recommended that candidates have at least three years of on-the-job experience in:

· Hospital-based inpatient coding for multiple case types (for example, circulatory, pregnancy, neoplasms, genitourinary, musculoskeletal, respiratory, and endocrine, nutritional and metabolic diseases, and immunity disorders)
· Hospital-based Ambulatory/Outpatient Care coding for multiple case types (for example, eye, musculoskeletal, integumentary, ENT, injury and poisoning, cardiac catheter, interventional radiology, and pain management) **AND**
· Completed coursework in anatomy and physiology, pathophysiology, and pharmacology, or demonstrated proficiency in these areas

<u>Certified Coding Specialist-Physician-based (CCS-P)</u>

The CCS-P is a mastery-level coding practitioner with expertise in physician-based settings such as physician offices, group practices, multi-specialty clinics, or specialty centers. This coding practitioner reviews patients' records and assigns numeric codes for each diagnosis and procedure. To perform this task, the individual must possess in-depth knowledge of the CPT coding system and familiarity with the ICD-9-CM and HCPCS Level II coding systems. The CCS-P is also an expert in health information documentation, data integrity, and quality.

Eligibility Requirements

CCS-P exam candidates must have earned a high school diploma from a United States high school or have an equivalent educational background.
Although not required, it is strongly recommended that candidates have at least three years of on-the-job experience in:
· Coding for physician services in multiple settings (for example, hospital, emergency room, operating room, and physician office or clinic) utilizing codes in the E/M, surgery, medicine and/or anesthesia, radiology and laboratory chapters of CPT and HCPCS II **AND**
· Completed coursework in anatomy and physiology, pathophysiology, and pharmacology, or demonstrated proficiency in these areas

Sources:

American Health Information Management Association, 233 N. Michigan Ave., Suite 2150, Chicago, IL 60601-5800. Internet: http://www.ahima.org

American Academy of Professional Coders, 2480 South 3850 West, Suite B, Salt Lake City, UT 84120. Internet: http://www.aapc.com

AAPC Medical Coding Certification

The AAPC is the nation's largest medical coding certification body with more than 62,000 credentialed coders. AAPC's certifications allow medical coders, billers and other health care professionals to demonstrate superior knowledge and expertise of current outpatient medical coding principles and validate their proficiency in coding accurately and efficiently.

With increased regulation and reduction in payments to physicians, the demand for certified coders who can better capture lost revenue and diminish post-payment risk has never been greater. Strong national recognition by employers, physician societies and government organizations, and an ever-growing requirement of AAPC credentials in coding positions at outpatient facilities make these certifications a must for anyone interested in pursuing a career in the medical coding field.

Which credential is right for me?

Learn More

Certified Professional Coder (CPC®)
AAPC's gold standard CPC® credential demonstrates a broad encompassing knowledge and expertise in reviewing and assigning the correct coding of physician services, procedures and diagnosis for medical claims. It validates an individual's ability to assign codes based on national coding guidelines and operative reports, comprehend medical terminology and human anatomy and apply billing reimbursement guidelines. The CPC® examination consists of questions regarding the correct application of CPT®, HCPCS Level II procedure and

supply codes and ICD-9-CM diagnosis codes used for billing professional medical services to insurance companies.

Take CPC® exam if you code in the following places or situations:

- Physician office or group
- Hospital-associated physician office or group
- Health system-associated physician office or group
- Home health agency
- Physician group at University and or in teaching setting
- Compliance auditor or forensic auditor of physician claims
- Physician Billing service
- Ambulatory surgery center (ASC)
- Outpatient hospital services *not* reimbursed by Ambulatory Patient Category (APCs) groups
- If you are a consultant, educator, legal counsel, physician or other care-giver seeking credential to demonstrate your command of outpatient medical coding for physician services

Certified Professional Coder – Outpatient Hospital (CPC-H®)

The CPC-H® credential validates proficiency in accurately coding outpatient facility/hospital services. The examination consists of questions regarding the correct application of CPT®, HCPCS Level II procedure and supply codes and ICD-9-CM diagnosis codes used for coding and billing outpatient facility services to insurance companies.

Learn More

Take CPC-H® exam if you code in the following places or situations:

- Billing Ambulatory Patient Category groups (APCs) for facility outpatient services.
- Working in hospital outpatient billing and coding department
- Auditing facility outpatient service billing and coding
- Ambulatory Surgical Center
- Performing utilization review for outpatient services
- If you are a consultant, educator, legal counsel, physician or other care-giver seeking credential to demonstrate your command of outpatient medical coding in a facility/hospital environment

Certified Professional Coder – Payer (CPC-P®)

The CPC-P® credential concentrates on coding and billing after it's been submitted to the payer. The CPC-P® certification exam will test the examinee's basic knowledge of coding-related payer functions with emphasis on how those functions differ from provider coding. The relationship between coding and payment functions will be explored in depth. Those who pass this exam validate their aptitude, proficiency, and knowledge

Learn More

within the payer environment.

Take CPC-P® exam if you code in the following places or situations:

- Claims manager for a payer (private insurance, Medicare, Medicaid, etc.)
- Auditor for a payer
- Utilization review
- Post-billing auditor for a physician group or facility
- Billing service
- If you are a consultant, educator, legal counsel, physician or other care-giver seeking credential to demonstrate your command of medical coding in a payer environment

Certified Interventional Radiology Cardiovascular Coder (CIRCC®)
The CIRCC® (Certified Interventional Radiology Cardiovascular Coder™) credential was created for individuals who are working in the complex and specialized areas of interventional radiology and cardiovascular coding and charging. The exam covers diagnostic angiography, non-vascular interventions, percutaneous vascular interventions, diagnostic cardiac catheterization and basic coronary arterial interventions as well as ICD-9-CM, basic coding (E&M, modifiers, etc.), anatomy and terminology. Those who pass this exam validate this additional level of education, knowledge and expertise required in this complex and specialized arena.

Learn More

Specialty Credentials
The AAPC has developed specialty credentials to enable working coders to demonstrate superior levels of expertise in selected specialty disciplines. Whether a coder wishes to show expertise in a specialty they currently work in or wish to move to another specialty these credentials are designed to prove superior knowledge and skills. Exams aptly measure preparedness for "real world" coding by being operative/patient-note based. Those who pass this exam demonstrate their coding expertise in a specialty with unique coding, reimbursement, and compliance challenges.

Learn More

Medical Assistants

Some **medical assistants** are trained on the job, but many complete 1-year or 2-year programs. *Education and training.* Postsecondary medical assisting programs are offered in vocational-technical high schools, postsecondary vocational schools, and community and junior colleges. Programs usually last either 1 year and result in a certificate or diploma, or 2 years and result in an associate degree. Courses cover anatomy, physiology, and medical terminology, as well as typing, transcription, recordkeeping, accounting, and insurance processing. Students learn laboratory techniques, clinical and diagnostic procedures, pharmaceutical principles, the administration of medications, and first aid. They

study office practices, patient relations, medical law, and ethics. There are various organizations that accredit medical assisting programs. Accredited programs often include an internship that provides practical experience in physicians' offices, hospitals, or other health care facilities.

Formal training in medical assisting, while generally preferred, is not always required. Some medical assistants are trained on the job, although this practice is less common than in the past. Applicants usually need a high school diploma or the equivalent. Recommended high school courses include mathematics, health, biology, typing, bookkeeping, computers, and office skills. Volunteer experience in the health care field also is helpful. Medical assistants who are trained on the job usually spend their first few months attending training sessions and working closely with more experienced workers. Some States allow medical assistants to perform more advanced procedures, such as giving injections, after passing a test or taking a course.

Certification and other qualifications. Employers prefer to hire experienced workers or those who are certified. Although not required, certification indicates that a medical assistant meets certain standards of competence. There are various associations

Sources:

American Association of Medical Assistants, 20 North Wacker Dr., Suite 1575, Chicago, IL 60606. Internet: http://www.aama-ntl.org

American Medical Technologists, 10700 West Higgins Rd., Suite 150, Rosemont, IL 60018. Internet: http://www.amt1.com

For lists of accredited educational programs in medical assisting, contact:

Accrediting Bureau of Health Education Schools, 7777 Leesburg Pike, Suite 314 N, Falls Church, VA 22043. Internet: http://www.abhes.org

Commission on Accreditation of Allied Health Education Programs, 1361 Park St., Clearwater, FL 33756. Internet: http://www.caahep.org

Transcription

There are no "formal" educational requirements to be a medical transcriptionist. Education and training can be obtained through traditional schooling, certificate or diploma programs, distance learning, and/or on-the-job training offered in some hospitals, although there are countries currently employing transcriptionists that require 18 months to 2 years of specialized MT training. While medical transcription does not mandate registration or certification, individual MTs may seek out registration/certification for personal or professional reasons. Obtaining a certificate from a medical transcription training program does not entitle an MT to use the title of Certified Medical Transcriptionist (CMT). The CMT credential is earned by passing a certification examination conducted solely by the Association for Healthcare Documentation Integrity (AHDI), formerly the American Association for Medical Transcription (AAMT), as the credentialing designation they created. AHDI also offers the credential of Registered Medical Transcriptionist (RMT). According to AHDI, the RMT is an

entry-level credential while the CMT is an advanced level. AHDI maintains a list of approved medical transcription schools

Certification and other qualifications. The AHDI awards two voluntary designations, the Registered Medical Transcriptionist (RMT) and the Certified Medical Transcriptionist (CMT). Medical transcriptionists who are recent graduates of medical transcription educational programs, or have fewer than 2 years experience in acute care, may become a registered RMT. The RMT credential is awarded upon successfully passing the AHDI level 1 registered medical transcription exam. The CMT designation requires at least 2 years of acute care experience working in multiple specialty surgery areas using different format, report, and dictation types. Candidates also must earn a passing score on a certification examination. Because medicine is constantly evolving, medical transcriptionists are encouraged to update their skills regularly. RMTs and CMTs must earn continuing education credits every 3 years to be recertified. As in many other fields, certification is recognized as a sign of competence.
Graduates of an ACCP approved program who earn the RMT credential are eligible to participate in the Registered Apprenticeship Program sponsored by the Medical Transcription Industry Association through the U.S. Department of Labor. The Registered Apprenticeship program offers structured on-the-job learning and related technical instruction for qualified medical transcriptionists entering the profession.

Source: Association for Healthcare Documentation Integrity , 4230 Kiernan Ave., Suite 130, Modesto, CA 95356. Internet: http://www.ahdionline.org

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