HEALTHCARE WORKFORCE DEMAND IN MONTANA
A Report by the Montana Healthcare Workforce Advisory Committee
May 2007

I. Background

In the spring of 2006, the Montana Office of the Commissioner of Higher Education approached the Montana Area Health Education Center (AHEC) and Office of Rural Health, asking the Advisory Board to provide leadership on healthcare workforce issues. The Director, Kristin Juliar, was asked to organize and chair a statewide Montana Healthcare Workforce Advisory Committee (MHWAC).

The purpose of the Committee is to provide guidance to the state on how to assure that there is well-trained workforce sufficient in numbers, breadth, and quality to meet the needs of all regions of the state. The Committee has broad representation from around the state, and among health providers and higher education. (*See Appendix A for the Membership List*).

The Committee, in collaboration with the Governor's State Workforce Investment Board (SWIB), has been working since Spring 2006 to analyze all available data on the state's healthcare workforce. Sheila Stearns, Commissioner of Higher Education, in a letter dated January 8, 2007, charged the Committee to provide recommendations to the Board of Regents and campuses for the next 5 to 10 years in regard to resource allocation.

The Committee has identified professions in high demand as well as investments in the state's educational infrastructure that would improve access to education in rural and underserved areas.

II. Strategic Healthcare Workforce Investments

After careful analysis of Montana's healthcare workforce, the Committee has identified health professions in high demand and recommends strategies that should be used to address high-demand workforce needs.

Recommended Investments in the Delivery of Education and Programs

1. Programs that increase clinical education sites and opportunities, including clinical education in rural and underserved area
2. Distance education (Internet and Interactive TV) programs targeted to rural and underserved areas
3. Flexible education programs to reach non-traditional student populations (e.g. evening, remote offerings in rural areas, fast track or accelerated programs)
4. Healthcare workforce planning, projections and analysis at the state and regional level
5. Programs that increase the pipeline of health professions – K-12, incumbent workers, underserved populations
6. Feasibility studies and program planning for high-priority professions

Health Professions in High Demand

Demand for health professions varies depending on the region of the state. The State Workforce Investment Board Healthcare Task Force provided data indicating that many rural communities,

especially those at a distance to higher education, are experiencing shortages in nearly all professions. Even in areas with a good supply of health professionals, the aging of the workforce will result in shortages within a five- to ten-year time span. More detailed information on demand for health professionals is included later in this report.

The Committee recommends that the health professions at all levels of postsecondary preparation be considered when investments in education are made.

Associate Degree, Certificate and Diploma Programs

A significant proportion of the healthcare workforce receives education and training in two-year colleges. Allied health programs are often very small, but play an important statewide role in providing essential personnel.

- Allied health – Many small but vitally important diagnostic, therapeutic and clinical professions and assistants require associate degrees, certificates or diplomas.
    - *Assistants*: Physical therapy assistants, pharmacy assistants, certified nursing assistants, medical assistants, and surgical assistants are in demand in varying degrees in different regions and locations. This is a growing category of healthcare occupations, performing important work delegated by other health professionals.
    - *Imaging:* Radiology technicians, sonographers and other imaging technicians are in demand and often hard to recruit to rural communities. New technologies increase demand for training.
    - *Therapeutic*: in addition to radiation therapists and respiratory therapists, there is a growing number of very small therapeutic professions fields that are needed to provide care
- Dental hygienists and dental assistants are in demand throughout the state
- Associate Degree Nursing – Nurses are in demand, particularly in rural areas at a distance from a nursing program. New graduates are finding employment in the state and are also recruited by other states experiencing more extreme shortages. Demand for nurses will increase due to the aging of both the population and nursing workforce.
- Practical Nurses – Licensed Practical Nurses are needed for long term care and other healthcare settings
- Emergency Medical Technicians – The EMT workforce is aging, and there is need to continue to train EMT's for volunteer and paid positions.

Baccalaureate

- Nurses - Baccalaureate nurses are in demand throughout the state. The BSN provides the educational groundwork for advanced practice nursing, clinical nurse specialists, nurse practitioners and nursing faculty. Changes in health care delivery systems are increasing the demand for baccalaureate prepared nurses, e.g. Magnet Hospital Programs; increase in care provision in homes and community settings
- Clinical Laboratory Scientists/Medical Technologists: Critical to the operation of clinics and hospitals, CLS/MT are in demand throughout the state. Currently, CLS students must complete their education in another state.

Graduate Education

- Physical Therapists (PT) and Occupational Therapists (OT): Employers report continued demand for PT's and OT's in both rural and urban areas of the state.
- Physicians: Much of the state is classified as medically underserved, with a shortage of

primary care physicians in much of rural Montana. Specialists are in demand by regional healthcare providers.

- Dentists: Much of rural Montana is designated as a dental shortage area. Many Montanans lack access to any dental care.
- Mental Health: Montana has one of the largest and most severe shortages in the nation in the area of mental health services. Psychiatrists, psychiatric nurses, psychiatric social workers and mental health workers are in very short supply.
- Speech Pathologists: Schools and healthcare providers are in need of speech pathologists.
- Nurses with Advanced Degrees are in demand for advanced practice nursing, management, and education. Nursing faculty with master's degrees and doctorates are needed. Demand for nurses with advanced degrees is strong nationally.

Faculty

- A residual effect of these shortages is a lack of individuals with the educational credentials to serve as faculty. Health professionals with graduate degrees make much more in hospital and clinic settings than they would be paid as faculty in a college or university setting.

A survey of the membership of the Montana Healthcare Workforce Advisory Committee was conducted to identify some of the top health professions in high demand. The list is not a scientific ranking, but rather an overview of Committee members' perceptions of statewide need. In addition to the occupations on this list, regions of the state or certain specialized professions may have education and training needs that are not reflected on this list.

1. Clinical Laboratory Science/Medical Technologists
2. Mental/Social Health Services
3. Registered Nurses
4. Physicians
5. Nurses, Masters Level Preparation
6. Dentists
7. Radiologic Technician/Radiation Therapist
8. Speech Pathologists
9. Licensed Practical Nurses
10. Pharmacists
11. Pharmacy Assistant
12. Dental Hygienists
13. Emergency Medical Technicians
14. Nurse Practitioners
15. Physicians, Specialists
16. Certified Nursing Assistants

A note on allied health: A number of allied health positions were identified as being in moderate demand. Less attention is often paid to allied health positions due to the small numbers in individual professions, but it does not mean that those positions and professions are not needed in the state. In fact, as described in more detail later in this report, the Governor's Report from the SWIB's Healthcare Task Force identified many of these occupations as significantly under-represented in Montana.

A National Market

Because healthcare workforce shortages exist nationally for nurses, allied health professionals,

dentists and physicians, Montana must compete in a national recruitment environment. Severe shortages of nurses in other states, for example, mean that nurses are recruited by out of state employers and offered high wages, or for positions as traveling nurses with flexible hours and excellent pay. Wages, incentives, and educational programs in Montana must be considered in the context of competition from other states.

Coordination with the Governor's State Workforce Investment Board

The State Workforce Investment Board (SWIB) is responsible for advising the Governor on the creation, implementation and continuous improvement of a comprehensive state workforce development system, designed to train the maximum number of unemployed and underemployed Montanans as possible. In 2006, the SWIB appointed an advisory committee to advise the SWIB on healthcare workforce issues. This time limited group was tasked to prepare a report that would help the SWIB understand demand for healthcare occupations and strategies that would benefit Montana.

The MHWAC was formed as an outcome of a series of studies, from a healthcare perspective, on the present and future need for healthcare professionals. MHWAC was formed in collaboration with OCHE to advise the state on the role of higher education in assuring a high quality workforce in sufficient numbers to meet the healthcare needs of the state. The MHWAC intends continue its work on an on-going basis, and anticipates a continued collaborative working relationship with the SWIB. Data developed for the SWIB by Brad Eldredge of the Montana Department. of Labor and Industry, and Tyler Trevor of OCHE, have been very helpful to the work of MHWAC.

Several members of MHWAC also served on the SWIB Healthcare Advisory Committee, and the reports prepared for the SWIB have been very helpful in guiding the work of MHWAC. In addition to individuals who have participated in both groups, Emily Sirota Lipp and Leisa Smith have provided ongoing communications among the two groups.
In 2006, the SWIB created a Healthcare Task Force, which released a report of its work in January, 2007 (http://swib.mt.gov/docs/HCTF_Report_small.pdf). The Task Force identified a number of causes of the healthcare workforce shortage in Montana.

- Montana is aging. By 2025, Montana is predicted to be the 3rd oldest state in the country, with 25% of the population 65 and older. Regions such as Eastern Montana are even older and are losing population. The healthcare workforce is also aging and leaving the workplace.
- Montana's large size and low population results in geographic isolation, and makes recruitment and retention especially challenging.
- Wages and benefit constraints of small practices and hospitals result in extended vacancies and excessive turnover in many communities.
- Education is often inaccessible in the most rural and underserved areas of the state.

SWIB Healthcare Task Force recommendations included:

- Communication and coordination with other organizations and agencies working on the healthcare workforce issues
- Advocacy for public/private partnerships, and bringing business partners to the table
- Youth outreach including a focus on Native Americans
- Partnerships between large and small hospitals and communities to help small communities meet workforce needs
- Use of technology for distance education and telemedicine

- Apprenticeships
- Improved healthcare workforce data collection and analysis
- Identify and support innovative partnerships already in place.

The report of the MHWAC will be shared with the SWIB committees via joint members and staff. The Committee anticipates that the SWIB will continue to provide data, analysis and recommendations that will guide healthcare workforce development efforts.

Why Should Montana Invest in Health Professions?

- Healthcare is the largest source of private sector employment in Montana, with 50,800 employees according to the Dept. of Labor and Industry.
- Healthcare wages and salaries are higher than many other occupations
- Much of Montana is classified as medically underserved, with most of the state in health professions shortage areas.
- Montana is surrounded by other states with acute health professions shortages, and cannot count on recruiting from other states.
- By 2010, about 1/3 of the Montana population will be over 65. People over 65 have 3 times the doctor appointments and 2 times the hospital stays of people under 65.
- Many current health professionals and faculty will retire in the next few years.

III. Demand for Specific Healthcare Professions

Physicians

The report, " WWAMI Expansion Report to the MT Board of Regents, March, 2006" identified the need for an increase in practicing primary care physicians to address shortages in 46 for the 56 counties. The study recommended an increase of 20 WWAMI medical students, but concluded that even that expansion would not result in enough primary care physicians to fill gaps until 20 decades had passed. The report emphasized the importance of education medical students in Montana:

- *About 40% of WWAMI's Montana graduates return to Montana (above average)*
- *About 50% of WWAMI's total graduates practice in Montana (so participation in the program is an effective recruiting tool);*
- *The WWAMI affiliated Family Practice Residency Program in Billings has a 60% retention rate (25% above the national average);*

The report stated: "*Our close relation with the UW medical school (one of the top five research medical schools in the country) via WWAMI has led to about $20 million in research being conducted in Montana that would not have been otherwise possible.*"

The number of WWAMI slots has remained constant (20) for the past 32 years while and the undergraduate population has increased about 30%. This has significantly reduced access to a publicly sponsored medical education for our students -- from one slot per 32,000 citizens to one per 46,000 citizens – which is less than half the national average of one per 17,400 citizens. Even the four states that surround Montana have an aggregate availability of one public medical position for each 22,000 citizens, which affords those students about double the availability of public medical school as our own students.

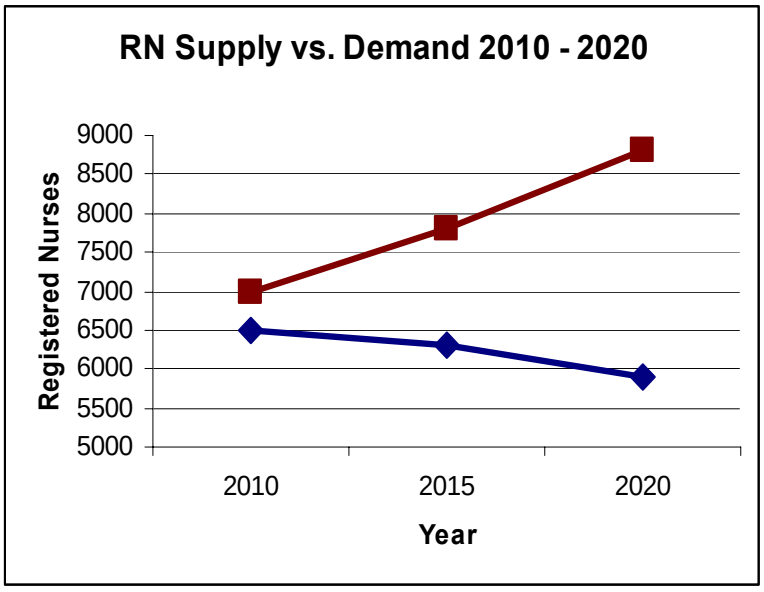
There are a significant number of qualified applicants from Montana who are currently turned-away from the WWAMI medical school. The WWAMI program, over the past six years, has accepted only about 1 in 3 qualified applicants (about 67 qualified applicants for 20 annual slots), which clearly indicates excess demand for the program and gives us confidence that any reasonable program expansion will still be over-subscribed.

The existing WWAMI program in Montana is also in the process of adding a 3rd year medical school track in Montana and altering the admissions process to give more consideration to applicants that are most likely to return to the state's rural areas to practice. With the addition of a 3rd year program in Montana, our WWAMI students can complete almost 75% of their medical education in the state (some clinical rotations in the 4th year are already conducted here). The combined effect of these changes is to increase the number of Montana's WWAMI-trained physicians who will serve our rural population. These changes are being implemented regardless of whether the WWAMI program is expanded, but they mean an expansion will have an even greater impact on providing increased healthcare access for our citizens.

The report also included the following recommendation for residency programs:
"*Appoint a team to conduct a feasibility study for new or expanded residency programs in Montana. This team should consist of, as a starting point, the state's Area Health Education Center board members with any additional members deemed necessary. This review would include the following:*

1. *Determine the feasibility of starting new residency programs in specialties that will help address the physician work force needs of the state such as Internal Medicine, Surgery, Psychiatry, Pediatrics and Family Medicine.*
2. *Evaluate the capacity and community willingness to expand the existing Family Medicine program.*
3. *Consider programs that could operate in combination with the current residency: Family Medicine/Psychiatry, Family Medicine/ER or a geriatric fellowship.*
4. *Consider a residency track or branch site within the state attached to an established program based elsewhere in the WWAMI region.*"

Nursing



In 2004 there were approximately 8, 344 registered nurses in our state. By 2014 experts anticipate that this occupation will grow to almost 10,821. These statistics also indicate that the state will slightly fall short of the annual RN opening rate of 423 due to the current RN production rate of 387. According to the *Health Resource and Service Administration (HRSA)* **(Table 1, left)**, Montana will likely experience RN vacancy levels of 500 by 2010. This number is anticipated to *TRIPLE* to 1,500 by 2015 and nearly *QUADRUPLE* by 2020 to 2,900. The supply of nurses varies among the regions of Montana. For example, regional healthcare centers such as Billings enjoy the high RN ratios to the

population. Regions with smaller facilities and/or at greater distance to RN educational programs experience the lowest RN ratio to population. A further concern is that in many regions, the RN workforce is older, closer to retirement age and the supply of new nurses to fill these retirement vacancies is not keeping up with demand.

An report by Dave Gibson for OCHE in 2006 called for making advanced practice nursing a priority. Based on discussions with hospitals throughout the state, the report identified the shortage of nurses with graduate training as a constraining factor in practice and education. Nursing education programs have great difficulty recruiting master's prepared nurses, who are in high demand in practice settings.

Dentists

"University of Washington MT Regional Initiatives in Dental Education Feasibility Study, January 10, 2007" was funded by the 2005 Montana Legislature. The report is summarized in this section of the Montana Healthcare Workforce Demand report.

There is no dental school in Montana. The state currently provides support to three students per year to attend dental school out-of-state (a ratio of 0.3 slots per 100,000 people – only about a fifth of the national average of 1.6 dental slots per 100,000.) As a result Montana must import dentists to meet its population needs. The current state-support for dentistry (about one WICHE slot and two University of Minnesota slots) is inadequate to replenish the supply of dentists approaching retirement age. The low level of support for dental education also disadvantages Montana youth who wish to attend dental school. Most dentists in Montana now come from other states: only 44% of dentists surveyed in 2000 were from Montana.

The problem of educating Montana's dental workforce has been extensively studied. The 2005 Legislature commissioned a study for the Rural Initiatives in Dental Education (RIDE) program. RIDE would be a Dental WWAMI Program in collaboration with the University of Washington. The RIDE study, released in January, 2007, reports a national average of 63.6 per 100,000 – or one dentist for about 1500 people. From 1991 to 2000 there was a drop of 5% in the dentist to population ratio for Montana. The most recent data reveals a total of 482 active dentists, for a dentist to population ratio of 51.5 per 100,000.

In addition, the age distribution of dentists demonstrates the skew towards an older workforce (Table 2). Montana dentists are older than the national average – 70 are 45 yrs or older, 26.7 are age 55 and older.

Age Range	Montana State Dentists	
	No.	% (US Ave)
25-34	35	9.0 (14.7)
35-44	82	21.1 (24.8)
45-54	168	43.2 (31.7)
55-64	76	19.5 (19.1)
65 & Older	28	7.2 (9.7)

Table 2: Age Distribution of Dentists

The dental workforce is not evenly distributed in Montana. In general, shortages are most severe in rural areas. Thirty five (35) of 56 counties have been identified as dental health professional shortage areas (HPSA's), and some counties have no dentists at all. According to the most recent practice data, the dentist to population ratio in all districts of Montana is lower than the national

average. There is roughly one dentist per 2000 people in Montana. However the ratio across the state varies widely from a ratio of 1 per 1,582 in Kalispell (just about the national average), to 1 per 3,308 in Havre, and 1 per 3,639 in Lewistown.

In the *Future of Dentistry*, the American Dental Association (ADA) called for exploration of **regionalization** and other more efficient models of dental education to address rising costs of dental education The American Dental Education Association estimated that more than 8,000 dentists are needed to fill dental health profession workforce gaps. A 2004 Institute of Medicine (IOM) **report on rural health** specifically called for community-based dental education in rural areas to address dental workforce maldistribution.

In 2000, *Oral Health in America: Report of the Surgeon General* highlighted the disparities in oral health and access to care for vulnerable populations, and called for re-thinking dental education to better address workforce and access issues. An earlier IOM report discussed the evolving scientific evidence of oral-systemic health interactions, calling for greater integration with medicine and the health care system. **Inter-professional training** of dental and medical and possibly other health professional students at MSU is another goal of the RIDE project.

Although extensive regional education as planned for the RIDE project, with students spending up to 40% of their time in community sites, has not been implemented anywhere yet, there is a national trend towards community-based dental education to encourage students to remain in underserved areas. This effort has been spurred by the Robert Wood Johnson Foundation (RWJF) Pipeline, Profession and Practice Program, of which the UWSOD is one grantee. While it is too early to determine the effectiveness of the RWJF program in encouraging students to remain in underserved communities, unpublished information from the University of Colorado – which sends students to underserved sites for up to 5 months in their fourth and last year of dental school - suggests a significant portion of these students go on to work in such sites after graduation. Data from the WWAMI program for regional medical education indicates that it has been effective in bringing a larger number of WWAMI-trained medical students to practice in Montana than the national average. It is expected that there will be comparable or better return rates in dentistry because of the lack of requirement for a dental residency after dental school. This greatly increases the likelihood that students will remain in the state after graduation.

Allied Health

Because numbers are small relative to nursing and physicians, shortages in many allied health professions are notoriously difficult to quantify. Commissioner of Higher Education Sheila Stearns visited hospitals throughout the state in 2006 to identify their workforce needs. Most frequently reported undergraduate shortages were for imaging, laboratory, and respiratory therapists. Graduate education needs were for pharmacists and physical therapists.

In its earlier report, the SWIB Healthcare Task Force identified the following two-year degree allied health occupations as under-represented (less than 1.0) in Montana in comparison to national benchmarks:

Occupation
Medical Assistants 0.58
Physical Therapy Assistants 0.65
Medical Laboratory Technicians 0.71
Occupational Therapist Assistants 0.86

Dental Assistants 0.94
Diagnostic Medical Sonographers 0.94
Pharmacy Techs 0.95
Home Health Aides 0.97
Registered Nurse 1.0

Shortages in many of these occupations, particularly those in assisting fields, intensify shortages in the graduate-level occupations in the same field. For instance, the demand for physical therapists increases when a shortage of physical therapist assistants exists because tasks that could be delegated to a PTA must be assumed by the PT. The same "ripple" demand effects are triggered by shortages of medical assistants, dental assistants, dental hygienists, and occupational therapy assistants, all of which have been identified as shortage areas in Montana. The cost of healthcare also rises when the time of graduate-level professionals is consumed with associate-degree level procedures.

Not surprisingly, two-year degree programs in Montana in these high-demand allied health occupations are few in number. Between the tribal colleges, the community colleges, the colleges of technology and the two-year missions of two four-year colleges, 17 institutions grant two-year degrees in Montana. Yet according to *Your Guide to Montana's Certificate and Associate Degree Programs (2006),* Montana offers:

Cert. Nurs. Asst.	2 programs	Butte	Missoula	
Dental Assistant	2 programs	Great Falls	Pablo	
Dental Hygiene	1 program	Great Falls		
Diagnostic Imaging	1 program	Butte		
EMT	3 programs	Billings	Great Falls	Kalispell
Medical Assisting	2 programs	Billings	Kalispell	
Occup. Ther. Asst.	0 program	[terminated in Great Falls in 2000]		
Pharmacy Tech	1 program	Missoula		
Phys. Ther. Asst.	1 program	[re-activated in Great Falls in 2007]		

Two-year colleges offering allied health degree programs face several challenges:

- Accreditation requirements for these programs impose a faculty:student ratio that limits enrollment, which in turn makes them extremely expensive to offer and limits the ability of any single program to respond to workforce shortages statewide.
- The difficulty of attracting and retaining faculty at the comparatively low salary rates of Montana's two-year colleges creates another challenge for program start-up and sustainability.
- The prerequisite course work, particularly in science, while disparate across campuses, is quite rigorous and students often come to the colleges under-prepared academically. As a result, student attrition at the prerequisite level is high.
- The nature of the clinical experience complicates the possibility of reaching rural and place-bound residents through distance learning.

Two-year colleges are responding to these challenges in creative ways:

- As noted in a later section of this report devoted to Distance Education, several colleges offer entire healthcare occupation degree programs, or a substantial portion of the course work for these degrees, online so that rural and placebound Montanans have access to career preparation in these high-demand fields.
- MSU – Great Falls is working with the Northcentral Montana Healthcare Alliance to use its

REACH teleheath network to provide course work to rural and placebound residents of Northcentral Montana communities. MSU – Northern uses of VisionNet to deliver course work in nursing to distant sites.

- Benefis Healthcare supplements the salaries of two healthcare faculty for MSU – Great Falls and loans a faculty for a third program to address the issues of attracting and retaining faculty.
- The Montana State University-Billings is exploring a preceptor support program that would increase the ability of community based health providers to provide faculty for allied health programs.
- The Office of the Commissioner of Higher Education has shown leadership in aligning the requirements and curricula for two-year allied health programs. Particularly at the prerequisite level, this alignment could lead to sharing of curriculum, instruction, and assessment methods that will improve student retention and degree completion rates.

Laboratory Science:

The Mayo Clinic estimates that from 70-80% of all objective information used in diagnosis and treatment comes from the laboratory. The four major areas of testing performed in clinical laboratories are microbiology, chemistry, hematology and immunohematology (blood banking). Extensive study and knowledge in these clinical disciplines is required to provide accurate and timely results to physicians for proper patient care. Montana has a state licensure law which requires national certification before testing and reporting of patient results. In order to become a Clinical Laboratory Scientist, a student must successfully complete a year-long training program before they qualify for national exams that permit them to practice in clinical laboratories in Montana and throughout the United States.

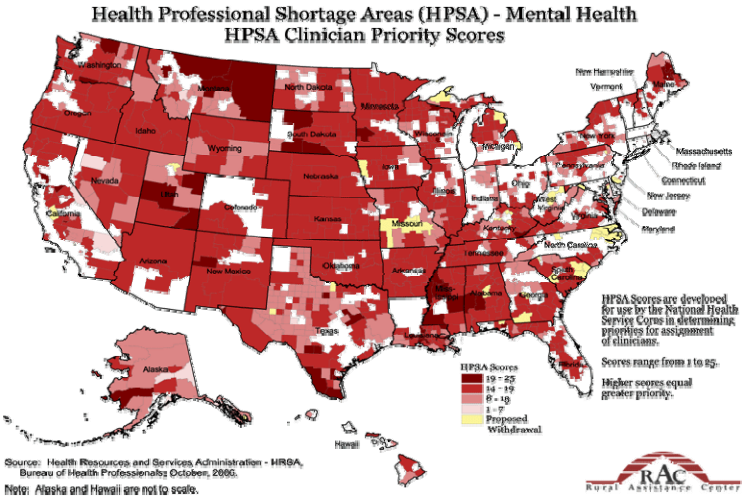
Currently there is national shortage of clinical laboratory personnel (~20% vacancy rate). The National Bureau of Labor Statistics projects 7,000 new jobs each year in the field with an additional 5,000 vacancies due to retirements, etc. There are only 4,100 graduates a year from all schools of CLS, leaving a national shortage of approximately 8,000 per year. According to a 2002 Clinical Laboratory Managers Association (CLMA) survey the average age of a Montana CLS is 45 and there is a 12% vacancy rate. Of even more importance in a rural state such as Montana is that of the 72 labs surveyed by CLMA, 44 had three or less CLS in their lab. This means that if one leaves and cannot be replaced, the healthcare facility and patients are at risk. A 2005 laboratory workforce report from the Center for Health Professions at UC-San Francisco stated that Montana has 68% of clinical laboratory professionals compared to the national ratio (RN's are at 107%). Their report stated that the shortage of laboratory personnel will dwarf the shortage of nurses. There are many reasons for the higher demand. These include 1) an aging population which will require more services and more tests; 2) new and complex tests are continually being introduced which require an even more highly skilled workforce; 3) bioterrorism, emerging infectious diseases and emergency preparedness which adds another level of complexity for laboratory personnel and 4) the expanded roles of CLS in both health care and biotech industries.

Montana's rural hospitals and clinics, including Indian Health Service laboratories, have a very difficult time recruiting and filling vacant positions. It is not uncommon to have a position unfilled for a year or more before a professional is hired. Many times facilities are forced to hire temporary personnel from CLS staffing agencies at three times the expense for the facility. One Eastern Montana facility reported they had two physicians, three nurses but only one laboratory technician who physically cannot function much longer. In addition, one larger hospital in Billings has one fourth of their staff of 24 employees in their 60's and ready to retire in the next five

years. These facilities and many others are anxious to take students in a training program because statistics show that where students train is most often where they become employed. Currently Montana has only one remaining hospital-based training program which is Benefis Healthcare in Great Falls. It trains only four students each year which is not enough to satisfy state-wide needs. Montana State University (MSU), University of Montana (UM) and MSU-Billings (MSU-B) currently have undergraduate curriculums which prepare students for CLS training programs. All three universities affiliate under a Montana University System (MUS) agreement with three programs - the University of North Dakota (UND), Sacred Heart Medical Center in Spokane, WA and HealthOne Hospital in Denver, CO - where students train in their senior year or after graduation. Unfortunately, because they are out of state programs, most of our students never return to Montana. This year MSU has 11 students attending training programs throughout the nation and only 1 has indicated she will return to Montana for employment (a classic "brain drain" scenario).

Mental Health

In 2006 the National Alliance on Mental Illness (NAMI) published *Grading the States 2006: A Report on America's Health Care System for Serious Mental Illness* in which Montana was one of eight states to receive a grade of 'F' while the nation as a whole received a 'D.' The report which described Montana as "a relatively poor state. . .with chronic shortages of healthcare providers, low pay, and a constant challenge to provide quality services" also noted "it is difficult to see how progress is made at all, given the tiny infrastructure in the state." The largest, most severe mental health shortage area in the nation is Eastern Montana.



The Montana Mental Health Ombudsman's 2005 report indicated that the Eastern Service Area needs better mechanisms to inform consumers about access and resources available as 'Need for information about access' was one of the top three consumer concerns from the Eastern Service Area related to the Ombudsman's office.

The AHEC Program recently developed a funding proposal for a statewide Montana AHEC with regional centers. The proposal identifies several strategies for addressing the mental health workforce needs of the state. The Family Residency Program in Billings has taken a leadership role in the incorporation of behavior health into the residency, and there is support around the state to develop a psychiatric residency program. MSU Billings is home to the state's only clinical psychology program and can provide leadership in developing behavioral health programs.

Dave Gibson, in a summary of OCHE visits to hospitals around the state wrote: **"Consider a mental health education initiative in the Silver Bow, Deer Lodge, and Powell County area:** This region has the largest concentration of mental health workers in the state – centered of course on the state hospital in Warm Springs and the state prison in Deer Lodge. Ed Amberg, Director of the Warm Springs Hospital, estimates there are at least 800 mental health workers in the region. Working with Montana Tech, UM, and the state facilities in the region, the MUS should

explore developing career pathways, and associated education components, for mental health workers. This will have two primary benefits. First, the MUS could develop a model in this relatively concentrated area that might be applicable in other areas of the state. The need for mental health workers is high in almost every region in Montana. Second, it would be a good arena for the MUS to team-up with two major state agencies (DPHHS & Corrections) to jointly solve a problem for the state. This partnership might also lead to other opportunities to help our state's government and citizens. Both Corrections and DPHHS have indicated a strong willingness to try and tackle the mental health worker shortages in partnership with the MUS." This complex issue will require additional analysis and planning, but is considered a top priority by many throughout the state.

Distance Education

A 2006 OCHE analysis of MUS health professions graduates found that graduates tend to stay within the area in which they are educated. Many counties in Montana have not seen any new health professions graduates return to their counties for employment. The MTHWAC and OCHE have identified an increased use of distance education as a priority for meeting workforce needs in rural, underserved areas. The MSU College of Nursing has submitted a proposal to increase distance education offerings for graduate nursing students throughout the state.

The MSU-Great Falls College of Technology and the Northcentral Montana Healthcare Alliance are collaborating on distance delivery of two year healthcare courses through the REACH telehealth network. The GF campus also has substantial portions of prerequisite course work for allied health degrees online, as well as entire degree programs including Health Information Coding and Medical Transcription. The UM-Montana Tech CoT has developed an innovative model for distance delivery of CNA and Rad Tech coursework. The UM-Missoula CoT is involved in a collaborative model of distance delivery of several Surgical Technology courses. Miles City Community College is developing health profession core courses online for delivery throughout Eastern Montana and beyond.

In addition to the individual and collaborative efforts undertaken by the MUS campuses to develop and deliver quality online healthcare-related courses, the Committee has also noted that the campuses currently offer 186 online healthcare related courses, and an additional 15 courses are presently under development. The campuses also already offer 13 online certificate and degree programs through the Masters level in healthcare-related fields. These online offerings are available for anytime/anywhere delivery in order to best meet the flexibility needs of the working consumer.

K-12 Pipeline

Montana does not have a comprehensive approach to health occupations in the schools. There are currently only 8 health careers programs in the state. This has started to change, with the hiring and support of a Health Occupations Students of America (HOSA) Director in the Office of Public Instruction. The AHEC program is exploring expanded partnerships with HOSA, to connect K-12 programs to postsecondary education.

Two summer programs, at MSU (Bozeman) and UM (Missoula), funded through a federal Bureau of Health Professions grant program, existed through 2006 when the funding was eliminated. The MSU Billings COT has a pipeline program, working with the schools in the region, and MSU – Great Falls has collaborated with the Great Falls Public Schools since 1999 to design and deliver a high school "med prep" curriculum, including an introduction to healthcare careers. Overall,

however, Montana high school students receive little guidance on how to prepare, enroll and plan for success in health professions. Most schools offer no opportunities for exploration of health careers.

Programs that more closely link secondary health careers programs to higher education are important. Students will be better prepared for the rigor of health professions education, will have a clearer idea of the range of opportunities, and will assure a smooth transition from high school to postsecondary education. Programs that specifically target minority, rural, low income and first generation students should be supported. Dual-credit opportunities, like the EMS course at MSU-Great Falls that is extremely popular with high school students, should also be more broadly available.

Clinical Coordination

A growing problem facing nursing and allied health programs is securing clinical education placement sites for students. Students in nursing and allied health programs must complete a hands-on clinical education experience – in a healthcare setting. Currently many healthcare facilities that provide these experiences report they are at full capacity and are not able to expand to meet the growing needs of programs. This issue is critical because if programs cannot secure clinical education space for students they cannot expand their graduation rates.
In response to this situation, several states and regions have developed clinical coordination systems to identify clinical opportunities. The Oregon Center for Nursing has developed an easy to use and popular web based clinical coordination system. Maricopa Community Colleges in Arizona, with multiple nursing programs in the Phoenix area, developed a similar, highly successful system. Minnesota is administering legislative funds to implement two clinical education site coordination pilot initiatives aimed to address the bottleneck issues within clinical education experiences. The pilots, lead by Anoka Ramsey Community College and Minnesota State Community and Technical College, will model an initiative after similar clinical coordination efforts that have proven significantly successful in Arizona and Oregon.
These three projects are highly collaborative efforts linking higher education and clinical sites. A calendar scheduling process, negotiated among the partners, preserves existing clinical relationships. The calendar allows the clinical sites to post potential openings, and the higher education partners can identify locations and times for placing students. A coordinator manages the process and works with all parties to build cooperation.

Diversity of the Healthcare Workforce

In Montana, the major minority population is the American Indian. American Indians represent 6.4 percent (59,883) of the total state population. It is estimated that one-half of the Indian population lives on a reservation. There are seven Indian Reservations in Montana; representing eleven tribes (Blackfeet, Crow, Salish, Kootenai, Pend d'Oreilles, Assiniboine, Gros Ventre, Sioux, Northern Cheyenne, Chippewa-Cree and Little Shell). A Tribal College is located on each reservation. Although many programs have been developed to link Tribal Colleges to the Universities (AIRO, INBRE, CO-0P), and excellent health professions programs exist on some campuses, there is a continuing need to improve preparation for the rigor of health professions education, link young people to the University environment, and improve transitions from Tribal Colleges to University health professions education.

Demographic Data Supporting Need

Sources of demographic data described above include the MT Primary Care Office; the MT

Office of the Commissioner of Higher Education; MT Dept. of Labor and Industry; MT Dept. of Public Health and Human Services; MT State Workforce Investment Board; MT Dental Association; MT Mental Health Ombudsman. Reports: "Report on State Hospitals Tour, OCHE", January 8, 2007"; "Report of the State Workforce Investment Board, Healthcare Workforce Force Committee", December 2006; "University of Washington MT Regional Initiatives in Dental Education Feasibility Study, January 10, 2007", WWAMI Expansion Report to the MT Board of Regents, March, 2006", Minutes and reports of the Montana Healthcare Workforce Advisory Committee, September – December, 2006, "Report of the MT Primary Care Liaison Group on the Governor's Blue Ribbon Panel on the Healthcare Workforce", March 2006"; National Alliance on Mental Illness (NAMI) published *Grading the States 2006: A Report on America's Health Care System for Serious Mental Illness.*

IV. Summary

Montana faces and will continue to face significant challenges in providing an adequate healthcare workforce for the state, particularly in rural and frontier communities. Shortages exist at all educational and professional levels. Healthcare is an economic driver for Montana; healthcare jobs are in high demand and pay well. It is to the economic advantage of the state to invest in the healthcare workforce.

Strategies to improve the supply and quality of the state's workforce are dependent upon the continued attention and investment of the Montana University System, in partnership with healthcare providers, professionals, state agencies, and healthcare consumers.

Montana can look to the progress other states have made through on-going partnerships, strategic investments, improved data collection and analysis, and innovative community efforts. The Montana Healthcare Workforce Advisory Committee supports:

A. Making healthcare workforce education and training a priority for the Montana Board of Regents and the State Workforce Investment Board

B. Targeting special initiative funds to the well documented high demand health professions and occupations, particularly those that benefit rural and underserved populations

C. Developing detailed plans to implement the recommended educational strategies for

    1. Programs that increase clinical education sites and opportunities, including clinical education in rural and underserved communities
    2. Distance Education (Internet and ITV) programs targeted to rural and underserved areas
    3. Flexible education programs to reach non-traditional student populations (e.g. evening, remote offerings in rural areas, fast track or accelerated programs, other)
    4. Healthcare workforce planning, projects and analysis at the state and regional level
    5. Programs that increase the pipeline of health professions – K-12, incumbent workers, underserved populations
    6. Feasibility studies and program planning for high priority professions

D. Utilizing the expertise of the healthcare community in making decisions about healthcare workforce investments.

The Montana Healthcare Workforce Committee is representative of a broad range of interests in healthcare across the state, and believes that workforce education and training will be an important issue for many years to come. **The Committee volunteers the expertise of its members in developing strategies and initiatives that will improve the supply and quality of the healthcare workforce for Montana.**

In the spirit of the charge to the Committee and the commitment by the members to a high quality healthcare workforce for the state, MHWAC respectfully requests that the Board of Regents accept these recommendations on resource allocation in higher education.

APPENDIX A
MONTANA HEALTHCARE WORKFORCE ADVISORY COMMITTEE MEMBERS

- Kristin Juliar, Chair. Director, Area Health Education Center/Office of Rural Health
- Arlene Parisot, Office of the Commissioner of Higher Education
- Roger Barber, Office of the Commissioner of Higher Education
- Dick Brown, Montana Hospital Association .
- Rose Hughes, Montana Health Care Association
- Bob Ross, South Central Mental health Center, Billings
- Mary McCue, Montana Dental Association
- Kristianne Wilson, Billings Clinic
- Tammy Buyok, St. Peter's Hospital – Helena:
- Terry Olinger, Benefis Healthcare, Great Falls
- Marge Levine, Montana Primary Care Association
- Peg Norgaard , NE Montana Health Services, Wolf Point:
- Karen Shaw, Liberty County Hospital, Chester
- Jay Erickson, Montana Medical Association
- Linda Hyman, WWAMI Medical Program and WWAMI Clinical Program
- Tom James, Montana Family Medicine Residency Program
- Dave Forbes, School of Pharmacy, UM:
- Elizabeth Nichols, School of Nursing, MSU
- Karen Van Daveer, MT Tech COT Nursing
- Jacque Dolberry , SKC Nursing Program:
- Cheryl Richard, FVCC Allied Health Program
- Dave Garloff, Dean, Allied Health, MSU—Billings
- Mary Moe, Dean, Great Falls COT Allied Health Program
- JoAnn Dotson, Department of Public Health and Human Services:
- Lisa Addington, Bureau Chief for Healthcare Licensing Department of Labor
- Karen Sullivan, SWIB Healthcare Taskforce Chair, or designee
- Emily Lipp Sirota, Economic Development. Office of the Governor:

Appendix B – Online Education

Appendix II

Montana University System - Fully On-Line Program Inventory
Healthcare Related Programs for Certificates & Degrees
As of January 2007

Campus & Program	Total Credits	Two Plus Two Model?	Mode of Delivery	Certificate or Degree Level	Delivered via Registrar or Cont'g Education?	Program Partners	Number of Partner Courses
UM - Missoula							
Surgical Technology	66		On-line*	AAS	Registrar	MSU-B	7 > 50% on-line
External Pharmacy Doctor	53		On-line	Dr. of Pharmacy	Registrar		
Masters of Public Health Online	39		On-line	MPH	Registrar		
(*Denotes on-site lab or class requirement)							
UM-MT Tech							
Industrial Hygiene	37		On-line	Masters	Registrar		
Occupational Safety & Health *	128		On-line	Bachelors	Cont'g Educ	Any accredited university	32
*Note: 30 cr delivered on-line by UM-Tech							
UM - Western							
MSU - Bozeman							
MSU - Billings							
Health Admin (BSHA)	120		On-line	BSHA	Registrar		
Health Admin (MHA)	53		On-line	MHA	Registrar		
(* Denotes an on-site requirement as well)							
MSU - Northern							
Nursing (BSN completion)	120	Yes	On-line	BS	Registrar		Must already have AS
(Req'd: AS with 72 cr and BS with 48 cr)							
MSU - Great Falls CoT							
Health Information Coding	47		On-line	Certificate	Registrar		
Health Information Technology	72		On-line	AAS	Registrar		
Medical Billing	41		On-line	Certificate	Registrar		
Medical Transcription	35		On-line	Certificate	Registrar		
Medical Transcription	60		On-line	AAS	Registrar		

Appendix C Healthcare Educational Programs

MONTANA DEGREES & CERTIFICATES

	Award Level	Blackfeet Community College	Carroll College	Dawson Community College	Flathead Valley Community College	Fort Belknap College	Fort Peck Community College	Health Works Institute	Little Big Horn College	Miles Community College	MSU-Billings	Montana State University-Bozeman	MSU-COT-Great Falls	MSU-Northern	MSU-Billings-COT	MT Tech	MT Tech-COT	Rocky Mountain College	Salish Kootenai College	University of Montana	UM Missoula COT	University of Great Falls	UM-Helena COT
Clinical Laboratory Science/Medical Technology/Technologist	Bachelors										¤								¤				
Clinical/Medical Social Work	Associate			¤																			
Dental Assisting/Assistant	Certificate											¤							¤				
	Associate																		¤				
Dental Hygiene/Hygienist	Associate											¤											
Emergency Medical Technology/Technician (EMT Paramedic)	Associate				¤							¤		¤									
Health Information/Medical Records Administration/Administrator	Associate																		¤				
Health Information/Medical Records Technology/Technician	Certificate				¤							¤											
	Associate									¤		¤											
Health Services/Allied Health/Health Sciences, General	Associate					¤																	
Health/Health Care Administration/ Management	Bachelors										¤												
	Master's										¤												
Health/Medical Preparatory Programs, Other	Associate	¤					¤		¤														
Licensed Practical/Vocational Nurse Training	Certificate				¤							¤				¤			¤	¤		¤	
	Associate													¤					¤			¤	
Massage Therapy/Therapeutic Massage	Certificate							¤															
Medical Administrative/Executive Assistant and Medical Secretary	Certificate									¤						¤							
	Associate				¤					¤					¤								
Medical Informatics	Associate															¤				¤			
	Bachelors														¤								
Medical Insurance Coding Specialist/Coder	Associate				¤		¤			¤			¤		¤								
Medical Office Assistant/Specialist	Associate				¤					¤					¤								
Medical Radiologic Technology/Science - Radiation Therapist	Associate				¤										¤		¤						
Medical Reception/Receptionist	Certificate									¤			¤		¤		¤			¤			
Medical Transcription/Transcriptionist	Certificate				¤								¤						¤				
	Associate												¤										
Medical/Clinical Assistant	Certificate																					¤	

MONTANA DEGREES & CERTIFICATES

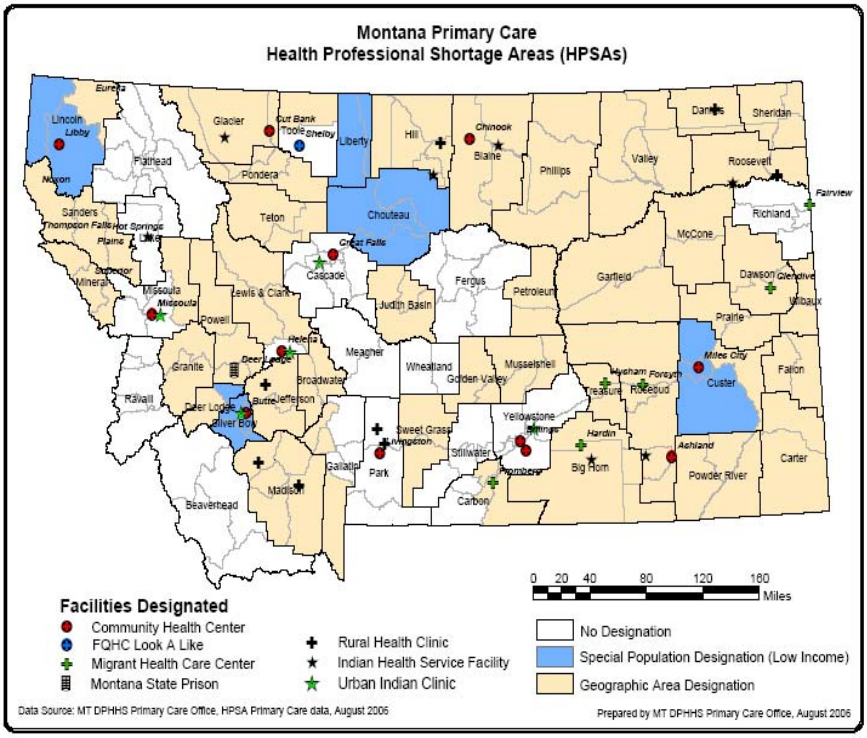
	Award Level	Blackfeet Community College	Carroll College	Dawson Community College	Flathead Valley Community College	Fort Belknap College	Fort Peck Community College	Health Works Institute	Little Big Horn College	Miles Community College	MSU-Billings	Montana State University-Bozeman	MSU-COT-Great Falls	MSU-Northern	MSU-Billings-COT	MT Tech	MT Tech-COT	Rocky Mountain College	Salish Kootenai College	University of Montana	UM Missoula COT	University of Great Falls	UM-Helena COT
	Associate				¤								¤		¤					¤			
Mental and Social Health Services and Allied Professions, Other	Associate				¤																		
	Bachelors																				¤		
	Master's																				¤		
Nursing/Registered Nurse (RN, ASN, BSN, MSN)	Certificate											¤										¤	
	Associate				¤					¤				¤	¤	¤	¤		¤		¤		¤
	Bachelors		¤									¤		¤		¤			¤				
	Master's											¤											
Occupational Health and Industrial Hygiene	Bachelors															¤							
	Master's															¤							
Pharmacy (PharmD [USA], PharmD or BS/BPharm [Canada])	Prof.																			¤			
Pharmacy Technician/Assistant	Certificate																			¤	¤		
Pharmacy, Pharmaceutical Sciences, and Administration, Other	Master's																			¤			
Physical Therapy/Therapist	Associate												¤										
	Master's																						
	Doctorate																			¤			
Physician Assistant	Bachelors																	¤					
Public Health	Certificate																			¤			
	Master's																			¤			
Radiologic Technology/Science - Radiographer	Associate				¤								¤		¤		¤				¤		
Rehabilitation and Therapeutic Professions, Other	Certificate										¤												
	Bachelors										¤									¤			
	Master's										¤									¤			
Respiratory Care Therapy/Therapist	Associate												¤								¤		
Speech-Language Pathology	Bachelors																			¤			
	Master's																			¤			
Substance Abuse/Addiction Counseling	Associate	¤		¤	¤		¤												¤		¤		
	Master's																						
Surgical Technology/Technologist	Certificate												¤										
	Associate				¤																¤		

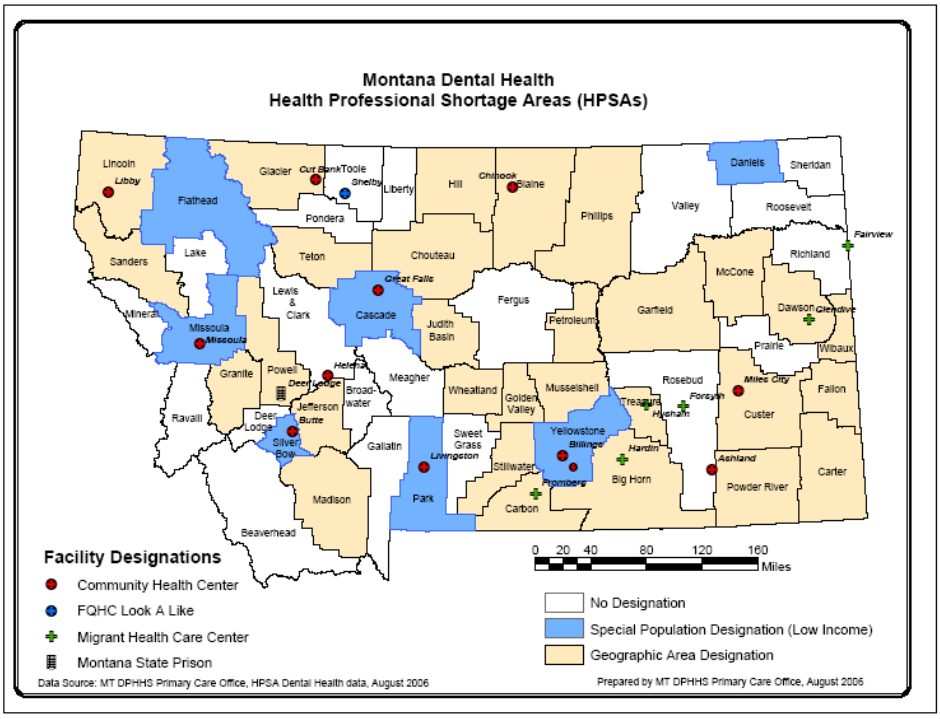
MONTANA DEGREES & CERTIFICATES

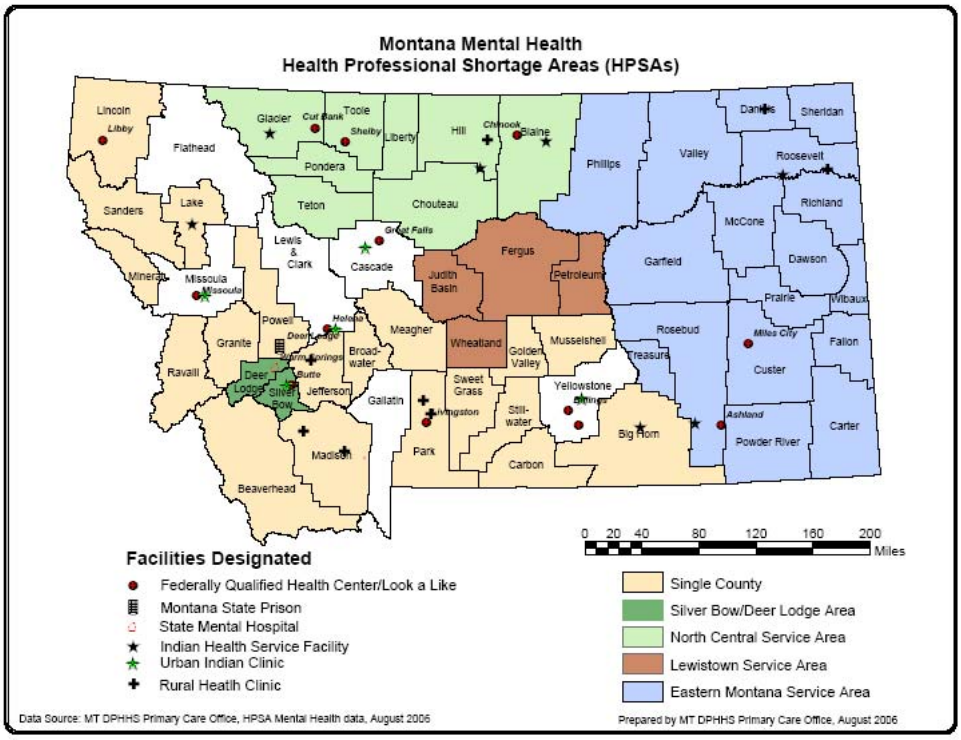
	Award Level	Blackfeet Community College	Carroll College	Dawson Community College	Flathead Valley Community College	Fort Belknap College	Fort Peck Community College	Health Works Institute	Little Big Horn College	Miles Community College	MSU-Billings	Montana State University-Bozeman	MSU-COT-Great Falls	MSU-Northern	MSU-Billings-COT	MT Tech	MT Tech-COT	Rocky Mountain College	Salish Kootenai College	University of Montana	UM Missoula COT	University of Great Falls	UM-Helena COT
Vocational Rehabilitation Counseling/Counselor	Bachelors																	¤					

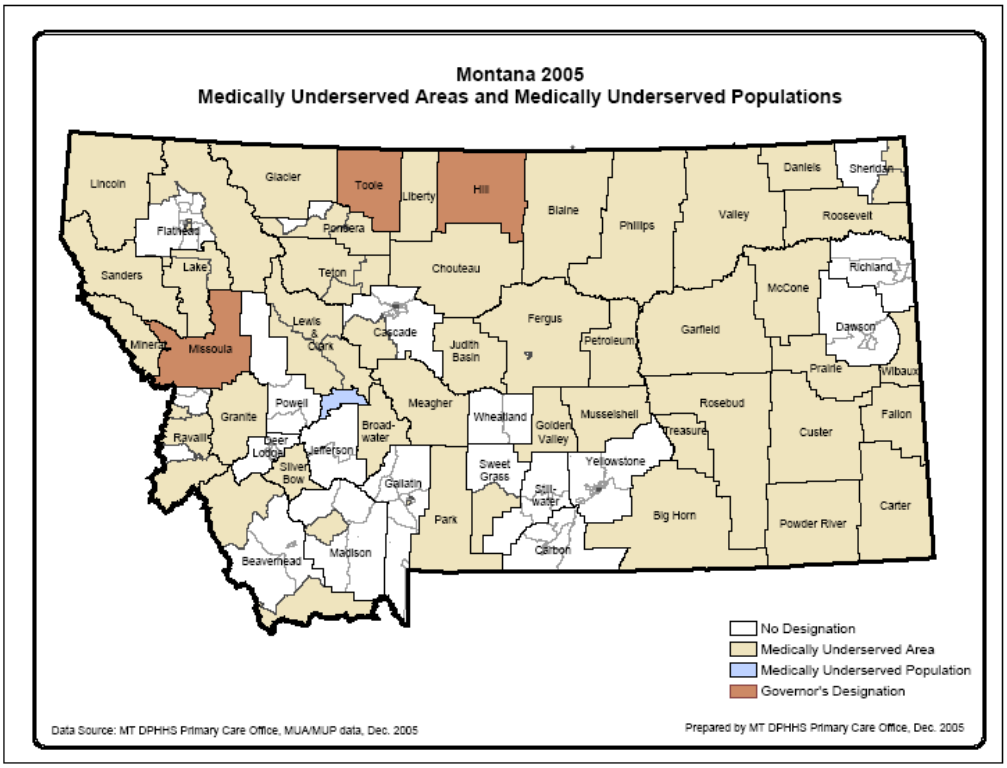
University of Montana = http://www.umt.edu/
UM-Helena = http://www.umhelena.edu/Home/tabid/349/Default.aspx
Montana Tech = http://www.mtech.edu/
Montana Tech COT = http://www.mtech.edu/cot_tech/
UM-Western = http://www.umwestern.edu/
UM-COT = http://www.cte.umt.edu/
MSU-Bozeman = http://www.montana.edu/
MSU-Billings = http://www.msubillings.edu/
Billings COT = http://www.cot.msubillings.edu/
MSU-Northern = http://www.msun.edu/
MSU COT Great Falls = http://www.msugf.edu/
Dawson Community College = http://www.dawson.cc.mt.us/
FVCC = http://www.fvcc.edu/
Miles Community College = http://www.milescc.edu/
Chief Dull Knife = http://www.cdkc.edu/
Blackfeet Community College = http://www.bfcc.org/
Fort Belknap Community College = http://www.fbcc.edu/
Fort Peck Community College = http://www.fpcc.edu/
Little Big Horn College = http://www.lbhc.cc.mt.us/
Salish Kootenai College = http://www.skc.edu/
Stone Child College = http://www.montana.edu/wwwscc/
Carroll College = http://www.carroll.edu/
University of Great Falls = http://www.ugf.edu/
Rocky Mountain College = http://www.rocky.edu/
Health Works Institute = http://www.healthworksinstitute.com/

Appendix 2 Maps






Montana Mental Health
Health Professional Shortage Areas (HPSAs)
Lincoln
Libby
Flathead
Glacier
Cut Bank
Toole
Shelby
Liberty
Hill
Chinook
Blaine
Pondera
Teton
Chouteau
Phillips
Valley
Daniels
Sheridan
Roosevelt
Richland
McCone
Dawson
Prairie
Wibaux
Fallon
Carter
Sanders
Lake
Great Falls
Lewis & Clark
Cascade
Fergus
Judith Basin
Petroleum
Garfield
Mineral
Missoula
Powell
Helena
Deer Lodge
Granite
Broad-water
Meagher
Wheatland
Golden Valley
Musselshell
Rosebud
Treasure
Miles City
Custer
Ravalli
Silver Bow
Butte
Jefferson
Gallatin
Sweet Grass
Yellowstone
Still-water
Big Horn
Ashland
Powder River
Madison
Park
Carbon
Beaverhead
0 20 40 80 120 160 200
Miles
Facilities Designated
Federally Qualified Health Center/Look a Like
Montana State Prison
State Mental Hospital
Indian Health Service Facility
Urban Indian Clinic
Rural Health Clinic
Single County
Silver Bow/Deer Lodge Area
North Central Service Area
Lewistown Service Area
Eastern Montana Service Area
Data Source: MT DPHHS Primary Care Office, HPSA Mental Health data, August 2006
Prepared by MT DPHHS Primary Care Office, August 2006


Montana 2005
Medically Underserved Areas and Medically Underserved Populations
Lincoln
Glacier
Toole
Liberty
Hill
Blaine
Phillips
Valley
Daniels
Sheridan
Roosevelt
Flathead
Pondera
Teton
Chouteau
Sanders
Lake
Richland
McCone
Dawson
Lewis & Clark
Cascade
Fergus
Judith Basin
Petroleum
Garfield
Mineral
Missoula
Prairie
Wibaux
Powell
Meagher
Wheatland
Golden Valley
Musselshell
Rosebud
Fallon
Granite
Broad-water
Treasure
Custer
Ravalli
Deer Lodge
Silver Bow
Jefferson
Gallatin
Sweet Grass
Yellowstone
Still-water
Big Horn
Carter
Park
Powder River
Madison
Carbon
Beaverhead
No Designation
Medically Underserved Area
Medically Underserved Population
Governor's Designation
Data Source: MT DPHHS Primary Care Office, MUA/MUP data, Dec. 2005
Prepared by MT DPHHS Primary Care Office, Dec. 2005

Strategic Plan – Goal II

Assist in the expansion and improvement of the state's economy through the development of high value jobs and the diversification of the economic base.

Goal II (1): Increase responsiveness to workforce development needs by expanding and developing programs in high demand fields in the state.

Goal II (1): Increase responsiveness to workforce development needs by expanding and developing programs in high demand fields in the state.

1) Increase employer satisfaction with graduates.
2) Increase degrees and certificates awarded in high-demand occupational fields.
3) Increase job placement rates.
4) Grow enrollment, for certificates and degrees, in 2-year programs.

1. Increase employer satisfaction with graduates.

Goals:

1. The Two-Year Council will develop measures to consistently measure the number of businesses and students utilizing continuing education or customized training in the MUS;

2. The Two-Year Council will develop recommendations to the Board of Regents on the best measures from the statewide business survey to evaluate responsiveness to Montana businesses; and

3. The Two-Year Council will develop recommendations for 2010 for continuing education, customized training, and business' satisfaction with MUS graduates.

1. Increase employer satisfaction with graduates.

Recommendations:

1. Measure employer satisfaction at the program level within each institution and provide periodic summary reports to the Board of Regents *(common template to be designed by Two-Year Council).*

2. Measure enrollment in customized training and continued education at the institutional level and provide periodic summary reports to the Board of Regents.

Note:

The 2-year Council is not in favor of utilizing a statewide collection of survey data to depict employer satisfaction. Reasons: 1) 2-year programs are often unique to individual institutions, 2) programs are widely dispersed throughout the state; and 3) 2-year programs are often tailored to meet the varying needs of the local communities they serve.

Also the nature of customized training and continuing education varies widely between institutions and often enrollments are not recorded in administrative information systems.

2. Increase degrees and certificates awarded in high-demand occupational fields.

Goals: Healthcare Degrees & Certificates

1. Develop goals for increasing healthcare degrees & certificates

Recommendations:

MUS Healthcare Degrees & Certificates

goals

Degrees	1994-95	1999-00	2004-05	2005-06	2009-10
2-year degrees & certificates	288	313	482	517	740
4-year degrees & above	337	278	327	394	450
Total	625	591	809	911	1190

source: IPEDS Completions Survey, healthcare equals CIP code 51.00
note: data include community colleges

Goals based on annual average growth rate, 2000 to 2005

2. Increase degrees and certificates awarded in high-demand occupational fields.

Goals: Construction Related Degrees & Certificates

1. Develop a consistent definition of what programs are included in construction trades across the MUS and set prospective goals

Recommendations:

MUS Construction Related Degrees & Certificates

Degrees	1994-95	1999-00	2004-05	2005-06	goals 2009-10
2-year degrees & certificates	151	201	212	188	249
4-year degrees & above	177	177	170	162	177
Total	328	378	382	350	426

note: data include community colleges

Construction Related Degrees Include the Following CIP Codes:

14.0800	Civil Engineering
15.0000	Engineering Technologies/Technicians
46.0000	Construction Trades
47.0100	Electrical/Electronics Maintenance and Repair Technology
47.0200	Heating, Air Conditioning, and Ventilation Technology/Technician
47.0300	Heavy/Industrial Equipment Maintenance Technologies
48.0500	Precision Metal Working
49.0202	Construction/Heavy Equipment/Earthmoving Equipment Operation

Goals based on average annual growth rate, 1995 to 2005

3. Increase job placement rates.

Goals:

1. Link graduates with labor market data; and

2. Establish goals using baseline data.

Recommendations:

1. Utilize existing Perkins data source to track number and percent of Construction & Healthcare 2-year degree completers into the Montana labor market.

3. Increase job placement rates.

Job Placement - Healthcare Majors

Students majoring in healthcare programs that enter the workforce in Montana within six months of leaving the institution (students may not have earned a degree or certificate)

goal

2-year Institutions		2001-02	2002-03	2003-04	2004-05	2005-06	2009-10
Colleges of Technology (COT)	# leaving institution	211	197	235	366	346	
	# gaining employment	170	171	204	317	317	
	% gaining employment	81%	87%	87%	87%	92%	
Community Colleges (CC)	# leaving institution	34	26	33	55	93	
	# gaining employment	26	23	30	47	76	
	% gaining employment	76%	88%	91%	85%	82%	
COTs and CCs (% Employed)		80%	87%	87%	86%	90%	**90%**

source: Perkins Accountability Measures

Note: % employed reflects the percentage of students majoring in a particular field that leave the institution and gain employment in ANY industry, not just the one related to their field of study.

3. Increase job placement rates.

Job Placement - Construction Related Majors

Students majoring in construction related programs that enter the workforce in Montana within six months of leaving the institution (students may not have earned a degree or certificate)

2-year Institutions		2001-02	2002-03	2003-04	2004-05	2005-06	goal 2009-10
Colleges of Technology (COT)	# leaving institution	89	86	113	108	118	
	# gaining employment	53	71	74	88	94	
	% gaining employment	60%	83%	65%	81%	80%	
Community Colleges (CC)	# leaving institution	15	19	10	41	33	
	# gaining employment	9	18	9	39	19	
	% gaining employment	60%	95%	90%	95%	58%	
COTs and CCs (% Employed)		60%	85%	67%	85%	75%	**85%**

Note: % employed reflects the percentage of students majoring in a particular field that leave the institution and gain employment in ANY industry, not just the one related to their field of study.

4. ~~Grow enrollment, for~~ Increase the number of certificates and degrees in 2-year programs.

Goals:

1. Develop goals for increasing the number of degrees & certificates conferred by Montana two-year programs.

Recommendations:

Associate Degrees Conferred

Associate of Applied Science, Associate of Arts, & Associate of Science, 1990-00 to 2005-06

Institutional Type	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	goal 2009-10
Colleges of Technology[1]	632	674	687	764	800	772	782	
Community Colleges	450	392	408	448	511	523	497	
Integrated 2-year Programs[2]	153	145	148	188	175	166	148	
Total	1235	1211	1243	1400	1486	1461	1427	1570
% Change		-1.9%	2.6%	12.6%	6.1%	-1.7%	-2.3%	

Notes
1) includes associate degrees conferred at MT Tech & MSUB
2) UM-Western & MSU-Northern
source: IPEDS Completions Survey

Goal based on 10% growth rate, 2006 to 2010

4. ~~Grow enrollment, for~~ Increase the number of certificates and degrees in 2-year programs.

Recommendations:

Certificates Conferred

Certificates of Achievement Below the Baccalaureate Level, 1999-00 to 2005-06

Institutional Type	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	goal 2009-10
Colleges of Technology[1]	239	168	127	140	122	138	167	
Community Colleges	33	18	20	36	132	54	107	
Integrated 2-year Programs[2]							2	
Total	272	186	147	176	254	192	276	304
% Change		-31.6%	-21.0%	19.7%	44.3%	-24.4%	43.8%	

Notes

1) includes associate degrees conferred at MT Tech & MSUB

2) UM-Western & MSU-Northern

source: IPEDS Completions Survey

Goal based on 10% growth rate, 2006 to 2010

Carl D. Perkins Act of 2006: Innovative Program Development for Career and Technical Education Students

MAJOR COMPONENTS OF PERKINS IV

SECTION	DECISION POINTS	KEY CHANGES
Administration	The eligible agency, the Board of Regents, and its grantee, the Office of Public Instruction, will administer the six year State Plan for the Carl D. Perkins Career and Technical Education Act, 2006 (Perkins IV) using a collaborative leadership model. 1. *Leadership Chart* *2. Career Fields and Clusters Model*	• The State Leadership Board (OCHE and OPI) will review state activities and progress in improving CTE programs, making key decisions about the allocations of "reserve funds" under section 112, leadership funds under section 124, and managing the Tech Prep activities, Title II. This joint leadership structure will be informed by the ongoing involvement of a State CTE Advisory Committee. • State staff will be organized to support the development of the Career Fields and Clusters model adopted by the state.
Local Programs (Title I)	The State will allocate to eligible recipients [secondary and postsecondary] 90% of the 85% local funds on a formula basis for programs that conform to the specifications of Perkins IV and the federal definition of career and technical education. The State has designated the split of these funds as: 65% secondary and 35% postsecondary. *3. Federal Definition of Career and Technical Education*	Each local program must: • offer not less than one career and technical **program of study (Big Sky Pathways)** through a coordinated, non-duplicative progression of courses that align with secondary and postsecondary education and lead to a degree, certificate or industry-recognized credential. • provide activities that prepare special populations for high skill, high wage, or high demand occupations. • describe how career guidance and academic counseling will be provided to CTE students. • Describe efforts to improve recruitment and retention of CTE teachers, faculty and counselors.

SECTION	DECISION POINTS	KEY CHANGES
Reserve (Section 112)	The State will reserve 10% of the 85% of local funds as allowed by the legislation to be distributed in an alternative manner determined by the state, for uses described in Section 135 (Local Uses of Funds). These funds may be made available to career and technical education programs in rural areas, areas with high percentages of CTE students and areas with high numbers of CTE students.	• Funds under section 112(c), the Reserve Fund, will be distributed on a competitive basis. The CTE State Leadership Board, with input from the State CTE Advisory Committee, will develop priorities for use of the Reserve funds. • Use of the Reserve funds will be targeted to help eligible recipients carry out key priorities of the state, such as identifying promising practices for improving performance in the Performance Indicators, creating effective assessments instruments, identifying content standards for CTE programs, improving professional development and teacher recruitment and retention, and strengthening services to special populations. *4. Memorandum of Understanding*
Accountability (Section 113)	The State shall establish and support State and local performance accountability systems to assess effectiveness of the State and the eligible recipients in achieving statewide progress.	If a state fails to meet at least 90% of an agreed upon state adjusted level of performance for **ANY** of the core indicators, the state shall develop and implement a program improvement plan. After providing notice and opportunity for a hearing, the Secretary may withhold all or a portion of the state's **administrative and leadership** funds. In accordance with procedure, as the Secretary may impose sanctions on a state, so may the State impose sanctions upon local recipients and withhold all or a portion of funding. The state will need to measure student achievement on technical skill assessments aligned with industry-recognized standards.

SECTION	DECISION POINTS	KEY CHANGES
Tech Prep (Title II)	The State will maintain Tech Prep as a separate title (Title II) but will change its operational and funding structure. To differentiate this new concept from its predecessor, it will be referred to as the *Consortium for Educational Advancement (CEA)—the New Tech Prep in Montana.*	A competitive process will be used to award the design and development of **up to three statewide** CEA(s) responsible for design and implementation of the Montana Career Fields and Clusters Model and their respective *Big Sky Pathways.* Any two-year postsecondary institution in Montana may apply to be the lead entity for the CEA using a pairing of Career Fields or a consolidation of Career Fields into one or two consortium(s).
State Leadership (Section 124)	10% of the Perkins funds are reserved for State Leadership activities. The set-asides for Nontraditional Training and Employment and serving individuals in institutions are $60,000 and .5% respectively. The remaining funds are dedicated to required uses, technical assistance and liaison activities at the regional and national level.	Professional development must be high quality, sustained, intensive and classroom focused in order to have a positive and lasting impact on instruction and the teachers performance in the classroom, and not one-day, short-term workshops or conferences. Technical assistance for eligible recipients is added as a required use of state funds rather than a permissible use.

"(Perkins programs) helps students see a connection between the academic subjects in the classroom and the application of that knowledge in the working world. For many students, this connection is critical to their decision to stay in high school and graduate with a diploma." Rep. Mark Souder (R-IN) July 27, 2006

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is made between the Montana Superintendent of Public Instruction and the Montana Commissioner of Higher Education, hereinafter referred to as the Parties, for the purpose of clarifying certain expenditures to be directed to community based organizations such as Career Training Institute and similar organizations, and has as its purpose the setting forth of a commitment to certain expenditures from federal special revenue for the biennium ending June 30, 2009.

Based upon careful consideration of the issues relating to the expenditures of federal grant funds under the Carl D. Perkins Career and Technical Education Act of 2006 and the issues related to the contributions which may be made to fulfill the purposes of that Act through Montana community-based organizations in partnership with eligible Montana Perkins grant recipients, the Parties agree as follows:

1. Contracts for partnerships between eligible recipients and community-based organizations for federal grant-related services to special populations for the biennium ending June 30, 2009 will be offered in a minimum total amount of $360,000.00.

2. Such contracts will be used to support the purpose of the federal Carl D. Perkins Career and Technical Education Act of 2006, which is to develop more fully the career and technical skills of secondary and postsecondary students who elect to enroll in career and technical education programs.

3. Expenditures made pursuant to this commitment shall be consistent with the Montana State Perkins Plan, as approved by the Montana Board of Regents and the United States Department of Education. If qualified partnerships do not apply for the offered contracts, the funds committed in this Memorandum will revert to the local eligible recipients.

4. For purposes of this Memorandum, community-based organizations will mean Montana non-profit organizations.

DATED this 10th day of April, 2007

SUPERINTENDENT OF
PUBLIC INSTRUCTION

Linda McCulloch

COMMISSIONER OF
HIGHER EDUCATION

Sheila M. Stearns

Acknowledged:

Sheila M. Hogan, Executive Director
Career Training Institute
Spokesperson, Network of Private Community-Based Organizations

		Fiscal 2008						Fiscal 2009					
		General Fund	State Special Revenue	Federal Special Revenue	Proprietary	Other	Total	General Fund	State Special Revenue	Federal Special Revenue	Proprietary	Other	Total
1		4,077,289	100,000	232,915	0	0	4,410,204	4,078,389	100,000	232,915	0	0	4,411,304
2		a. Governor's Postsecondary Scholarship Program (Restricted)											
3		1,530,000	0	0	0	0	1,530,000	2,510,000	0	0	0	0	2,510,000
4		b. WICHE/WWAMI/MN Dental Program											
5		5,197,136	0	0	0	0	5,197,136	5,382,581	0	0	0	0	5,382,581
6	3.	OCHE -- Improving Teacher Quality (03)											
7		0	0	385,000	0	0	385,000	0	0	395,000	0	0	395,000
8	4.	OCHE -- Community College Assistance (04) (Biennial)											
9		~~9,020,064~~	0	0	0	0	~~9,020,064~~	~~9,020,064~~	0	0	0	0	~~9,020,064~~
10		8,254,210					8,254,210	8,390,361					8,390,361
11		a. Legislative Audit (Restricted/Biennial)											
12		~~30,528~~	0	0	0	0	~~30,528~~	0	0	0	0	0	0
13		27,936					27,936						
14	5.	OCHE -- Talent Search (06)											
15		72,848	0	4,467,217	0	0	4,540,065	72,881	0	4,471,456	0	0	4,544,337
16	6.	OCHE -- Workforce Development (08)											
17		91,092	0	~~5,827,643~~	0	0	~~5,918,735~~	91,092	0	~~5,829,109~~	0	0	~~5,920,201~~
18				6,307,643			6,398,735			6,309,109			6,400,201
19		~~a. Community-Based Organization Education Partnerships for Special Populations (Restricted)~~											
20		0	0	~~480,000~~	0	0	~~480,000~~	0	0	~~480,000~~	0	0	~~480,000~~
21				0			0			0			0
22	7.	OCHE -- Appropriation Distribution Transfers (09)											
23		116,549,958	17,285,323	0	0	0	133,835,281	122,289,766	16,089,436	0	0	0	138,379,202
24		a. Legislative Audit (Restricted/Biennial)											
25		575,741	0	0	0	0	575,741	0	0	0	0	0	0
26		b. Equipment and Technology (OTO)											
27		2,000,000	2,000,000	0	0	0	4,000,000	0	0	0	0	0	0

		Fiscal 2008						Fiscal 2009					
		General Fund	State Special Revenue	Federal Special Revenue	Proprietary	Other	Total	General Fund	State Special Revenue	Federal Special Revenue	Proprietary	Other	Total
1		5,197,136	0	0	0	0	5,197,136	5,382,581	0	0	0	0	5,382,581
2	3.	OCHE -- Improving Teacher Quality (03)											
3		0	0	385,000	0	0	385,000	0	0	395,000	0	0	395,000
4	4.	OCHE -- Community College Assistance (04) (Biennial)											
5		9,020,064	0	0	0	0	9,020,064	9,020,064	0	0	0	0	9,020,064
6		a.	Legislative Audit (Restricted/Biennial)										
7		30,528	0	0	0	0	30,528	0	0	0	0	0	0
8	5.	OCHE -- Talent Search (06)											
9		72,848	0	4,467,217	0	0	4,540,065	72,881	0	4,471,456	0	0	4,544,337
10	6.	OCHE -- Workforce Development (08)											
11		91,092	0	5,827,643	0	0	5,918,735	91,092	0	5,829,109	0	0	5,920,201
12		a.	Community-Based Organization Education Partnerships for Special Populations (Restricted)										
13		0	0	480,000	0	0	480,000	0	0	480,000	0	0	480,000
14	7.	OCHE -- Appropriation Distribution Transfers (09)											
15		116,549,958	17,285,323	0	0	0	133,835,281	122,289,766	16,089,436	0	0	0	138,379,202
16		a.	Legislative Audit (Restricted/Biennial)										
17		575,741	0	0	0	0	575,741	0	0	0	0	0	0
18		b.	Equipment and Technology (OTO)										
19		2,000,000	2,000,000	0	0	0	4,000,000	0	0	0	0	0	0
20		c.	Workforce Training -- Program Development (OTO)										
21		1,500,000	0	0	0	0	1,500,000	0	0	0	0	0	0
22		d.	Research Agencies Equipment (OTO)										
23		1,000,000	0	0	0	0	1,000,000	0	0	0	0	0	0
24		e.	High School Honors Tuition Waivers (OTO)										
25		0	500,000	0	0	0	500,000	0	500,000	0	0	0	500,000
26		f.	Dental Hygiene Program at Great Falls College of Technology (Restricted)										
27		235,000	0	0	0	0	235,000	235,000	0	0	0	0	235,000

Amendments to House Bill No. 820
Committee Study Bill

Requested by Senator David Wanzenried

For the Senate Finance and Claims Committee

Prepared by Alan Peura
April 27, 2007 (2:32pm)

1. Page E-2, line 11.
Strike: "6,295,362 6,295,751" [federal special revenue FY08 and FY09]
Insert: "5,815,362 5,815,751" [federal special revenue FY08 and FY09]

2. Page E-2.
Following: line 11
Insert: "a. Community-Based Organization Education Partnerships for Special Populations (Restricted) 480,000 480,000" [federal special revenue FY08 and FY09]

- END -

Explanation - This amendment to the university system budget has **no fiscal impact** as it moves $480,000 of federal special revenue each year from the unrestricted budget line onto a new restricted budget line to be used solely to support continuing education and training services to special populations through Montana's Community Based Organizations in partnership with secondary or postsecondary education institutions.

This federal special revenue is from the Carl D. Perkins federal grant that is used for workforce development education programs.

Montana State Senate

SENATOR DAVID E. WANZENRIED
SENATE DISTRICT 49

HELENA ADDRESS:
PO BOX 200500
HELENA, MONTANA 59620-0500
PHONE: (406) 444-4800

HOME ADDRESS:
903 SKY DRIVE
MISSOULA, MT 59804-3121

The Big Sky Country

COMMITTEES:
FINANCE AND CLAIMS
EDUCATION SUBCOMMITTEE
JUDICIARY
NATURAL RESOURCES

March 21, 2007

Arlene Parisot, Workforce Development Director
Commissioner of Higher Education
46 N. Last Chance Gulch
Helena, MT 59601

Dear Ms. Parisot:

It has come to my attention that the proposed Carl D. Perkins transitional State Plan drastically reduces the amount of funds available to Montana's Community Based Organizations (CBOs) in partnership with Secondary or Postsecondary institutions to provide education and training services to special populations through Rural Reserve funding.

I was disappointed to hear of this as I have been a long time supporter of the services provided by CBOs to this vulnerable population. I understand that under the new Perkins legislation, services to special populations is a requirement rather than a permissive use of funds and it does not seem prudent to decrease funding to approximately $90,000 to serve this population.

Based on my experience and understanding of the services provided to the special populations by the CBOs, I believe such a drastic reduction in funding is a mistake. Therefore, my intention is to line item $480,000 per year in the Commissioner of Higher Education's budget to ensure services for this population continues under the CBO/Education partnership.

I look forward to discussing this further with you.

Sincerely,

Senator David Wanzenried

Perkins Advisory Board

Mark Branger
Montana Association of Career and Technical Education (MACTE) Executive Secretary & CTE Teacher/Administrator, Huntley Project School
1477 Ash Street
Worden, MT 59088
1.406.967.2540 x3306
mbranger@huntley.k12.mt.us

Cheryl Graham
CTE Teacher, Bainville High School, MACTE
409 Tubman St.
Bainville, MT 59212
1-406-769-2321
cgraham@nemontel.net

Cleo Sutton
Construction Manager and Coordinator of Montana BILT Project – also retired secondary and post-secondary CTE construction trades instructor
MSU-Billings College of Technology
3803 Central Avenue
Billings, MT 59102
1-406-247-3062
csutton@msubillings.edu

Jane Baker
Dean, Montana Tech College of Technology
MTech of the UM COT
25 Basin Creek Road
Butte, MT 59701
1-406-496-3714
jbaker@mtech.edu

Theresa Busch
Local Applications Project Mgr
Great Falls COT
2100 16th Avenue S
Great Falls, MT 59405
1-406-446-2698
tbusch@msugf.edu

Connie Roope
Training Director
Career Training Institute
347 N Last Chance Gulch
Helena, MT 59601
1-406-443-0800
croope@ctibrc.org

Perkins IV federal definition of career and technical education:

‘‘(5) CAREER AND TECHNICAL EDUCATION.—The term ‘career and technical education’ means organized educational activities that—

‘‘(A) offer a sequence of courses that—

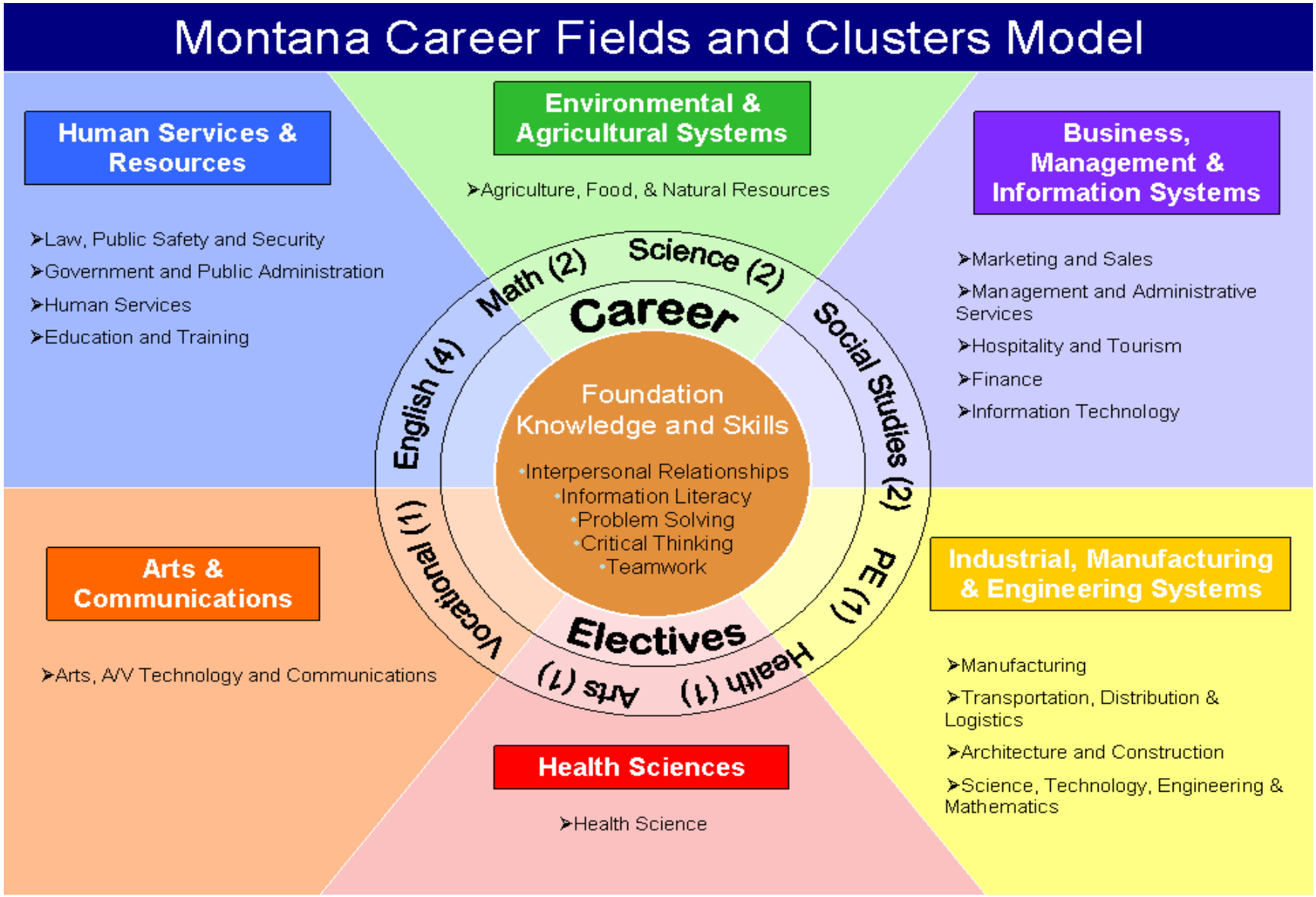
‘‘(i) provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions;

‘‘(ii) provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; and

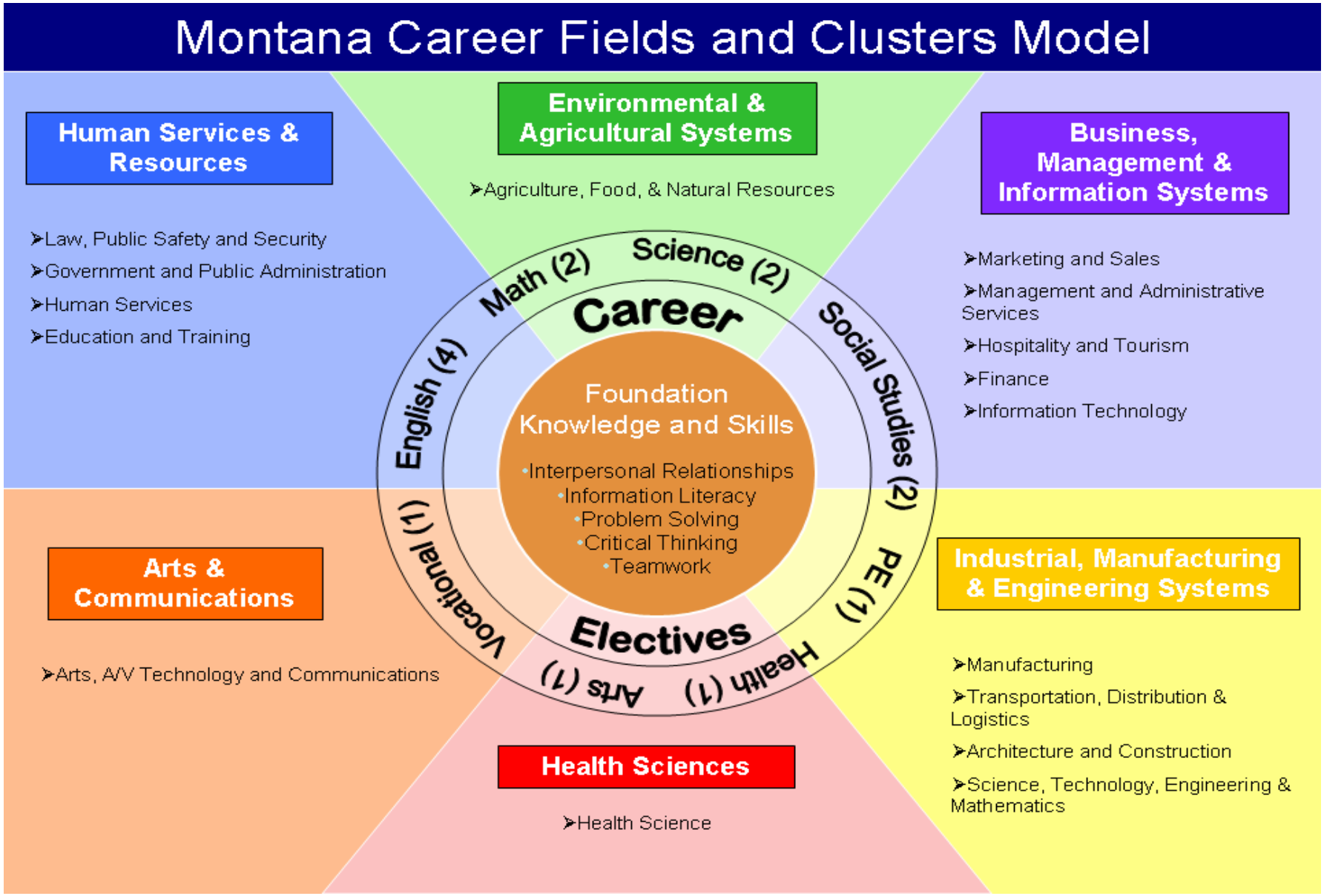
‘‘(iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph; and

‘‘(B) include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual.”

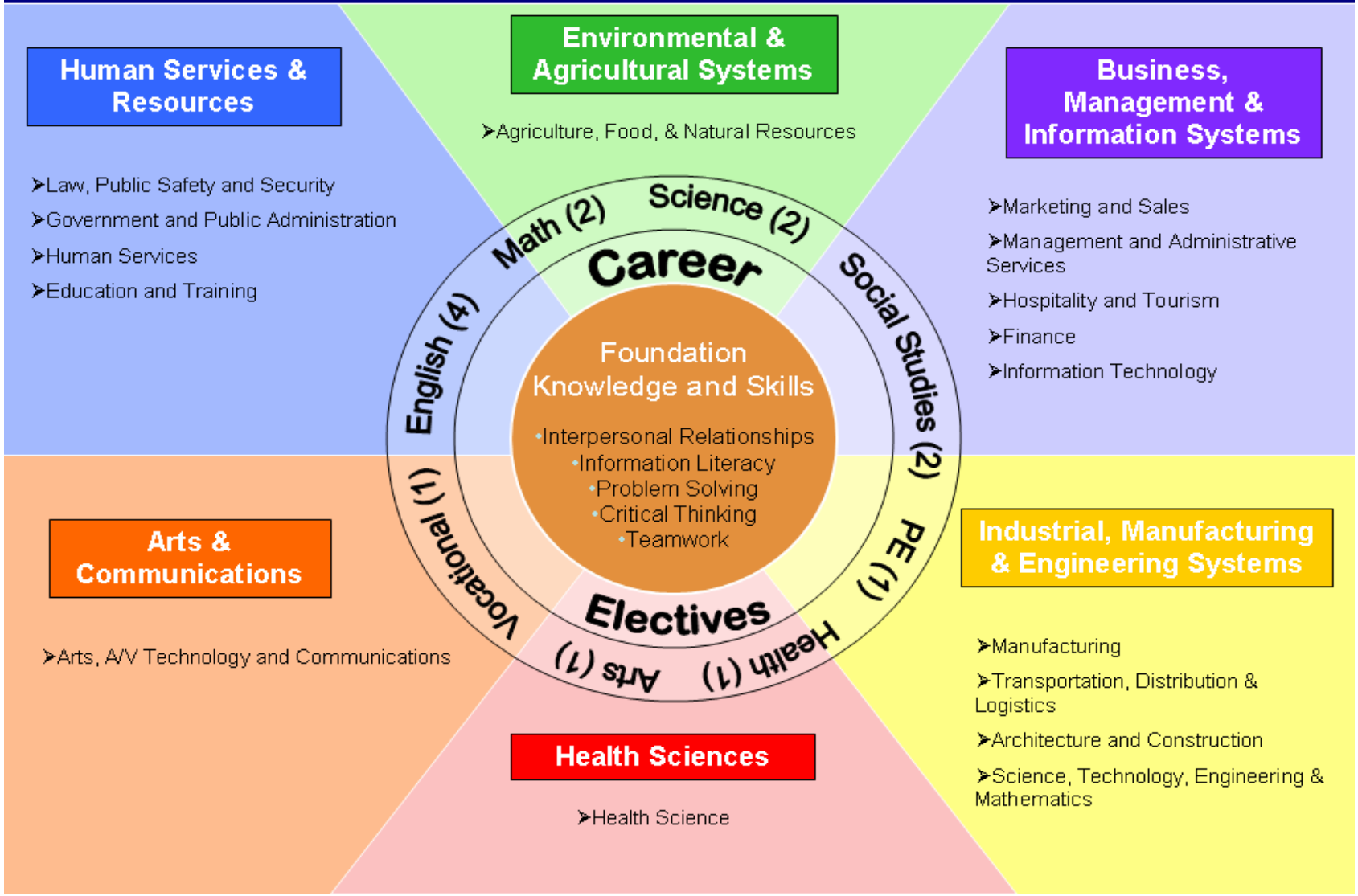
Montana Career Fields and Clusters Model



Montana Career Fields and Clusters Model



Montana Career Fields and Clusters Model



Montana Career and Technical Education (CTE) Leadership Structure
Carl D. Perkins Career Technical Education Act, 2006