# Vermont Health Workforce Demand Modeling: Summary of Key Findings

Having an accurate picture of future statewide and local population demand for health care services and health professions is a key to successfully implementing innovative and efficient service delivery models. To support these goals, in 2016, the Vermont Health Care Innovation Project Health Care Workforce Work Group commissioned IHS Markit (IHS) to develop projections of current and future demand for health workers between 2015 and 2030.

Key findings and highlights of future Vermont health work force demand include:

* Between 2015 and 2030, Vermont is projected to experience a slight overall population decline (-0.9%), offset by growth in demand for health care services driven by a 50% increase in the 65+ population.
* Absent changes in care delivery patterns future changes in demand for physician specialties are expected to align with population changes, including:
	+ Decreases for pediatric and OB/GYN (-10%), and neonatal-perinatal (-13%) specialties reflecting future shrinkage among younger age cohorts.
	+ Large demand increases for specialties serving older populations (e.g., geriatrics (63%), hematology/oncology (33%), and urology (32%).
* Among non-physician health professions, in line with population aging, growth in demand will be highest for direct care services professions, including nurse aides (47%), and home health aides (41%).
* Demand for physician assistants and advanced practice nurses will grow faster than physician demand, assuming mid-level providers play a broader role in care delivery.
* Across Vermont care settings, considering population demographic projections, nursing homes, residential care facilities and home health will experience the highest relative growth in demand; with school-based settings projected to incur decreased demand.
* A number of scenarios were modeled exploring the demand implications by 2030 of changing care use and delivery patterns under a high performing Vermont health care system. Results by selected example include:
	+ **Scenario 1: Increased use of integrated care**: Little projected impact on FTE demand for physicians and mid-level providers overall, but future statewide demand would shift from medical specialties towards primary care.
* **Scenario 2: Integrating mental health and substance use services into primary care practices**: Reducing care fragmentation might lead to 4,600 additional patients receiving counseling annually and increase demand for clinical social workers (+31 FTEs), MH/SU providers (+3 FTEs) and support staff (+14.5 FTEs).
* **Scenario 3: Achieving Healthy People 2020 population health goals around obesity, hypertension, cholesterol and blood glucose levels and smoking prevalence:** Achieving these lifestyle and clinical goals would result in 13,900 fewer cases of heart disease, 7,200 fewer strokes, and 4,200 fewer heart attacks and raise the 2030 population by 8,900 mostly elderly adults.
	+ - Demand for physicians would be about 21 FTEs *higher* because the number needed to support an additional 8,900 adults more than offsets the reduced demand associated with a healthier population.
* **Scenario 4: Modeling workforce implications of the state’s Medicaid population having health care use patterns similar to the privately insured population**: Projected impacts of shifting health care use patterns include lower demand for physicians (-90 FTEs), RNs (-467 FTEs) and APRNs (-35 FTEs).
* Other factors likely to influence future demand for Vermont health professions include:
	+ The extent and pace of care migration from institutional to community and home-based settings spurred by new delivery models (e.g., ACOs).
	+ Changing payment and coverage policies (e.g., possible ACA repeal) may influence demand patterns for health care services and professions.
	+ More effective population health management (e.g., chronic disease team-based care management) will increase demand for social workers, care managers and others.
	+ Unanticipated and unmet need for mental health and substance use services (e.g., the growing opioid crisis).
	+ Economic developments: The last recession (2008-2009) influenced workforce supply and demand by slowing retirements and consumer demand for many health services.
	+ The intersection of health information technology with new models of care.
* Current health care workforce modeling limitations largely stem from data constraints, including:
	+ Lack of robust data to model how care delivery patterns might change over time in response to emerging market factors.
	+ Lack of supply projections to quantify the magnitude of any future workforce shortages (or surpluses) and identify mitigating strategies.
	+ Challenges modeling population need for health care services and workforce versus service utilization and workforce requirements based on population demand.