

2007-2020

RURAL ROTATION PROGRAM

UTAH MEDICAL EDUCATION COUNCIL

www.umec.utah.gov

SECTION 1: CURRENT STATUS OF UTAH RURAL HEALTHCARE

1.1 RURAL ROTATION PROGRAM

Of the total population in Utah, about 15.4% are living in a census-designated rural county^{1,2}. Access to healthcare is an important aspect to the well-being of those living in rural counties. However, 26 out of the 29 counties in Utah are experiencing some form of Primary Health Professional Shortage Area (HSPA) designation³. This means that the population to clinician ratio falls below 3,500 people to every primary care physician in these counties. Additionally, only 4.9% of new medical students plan on practicing in rural or non-urban areas⁴, which could potentially exacerbate shortage issues in rural healthcare.

The objectives of the Utah Medical Education Council (UMEC) *Rural Rotation Program* are two-fold: to provide needed professionals to underserved areas of Utah; and to provide clinicians with experience practicing in a rural setting. This will potentially improve the chances that healthcare professionals choose to practice in a rural area upon graduating.

When the UMEC initiated its rural program, there were only six medical residents in three areas. The program has since expanded in many aspects including the number of rotations, the number of locations, and the variety of healthcare professions. Because each county experiences a variety of different shortages, the UMEC has sponsored rotations for several specialties, however, there is an emphasis on primary care.

¹ Kem C. Gardner Policy Institute State and County Projections, 2017.

<https://gardner.utah.edu/demographics/population-projections/>

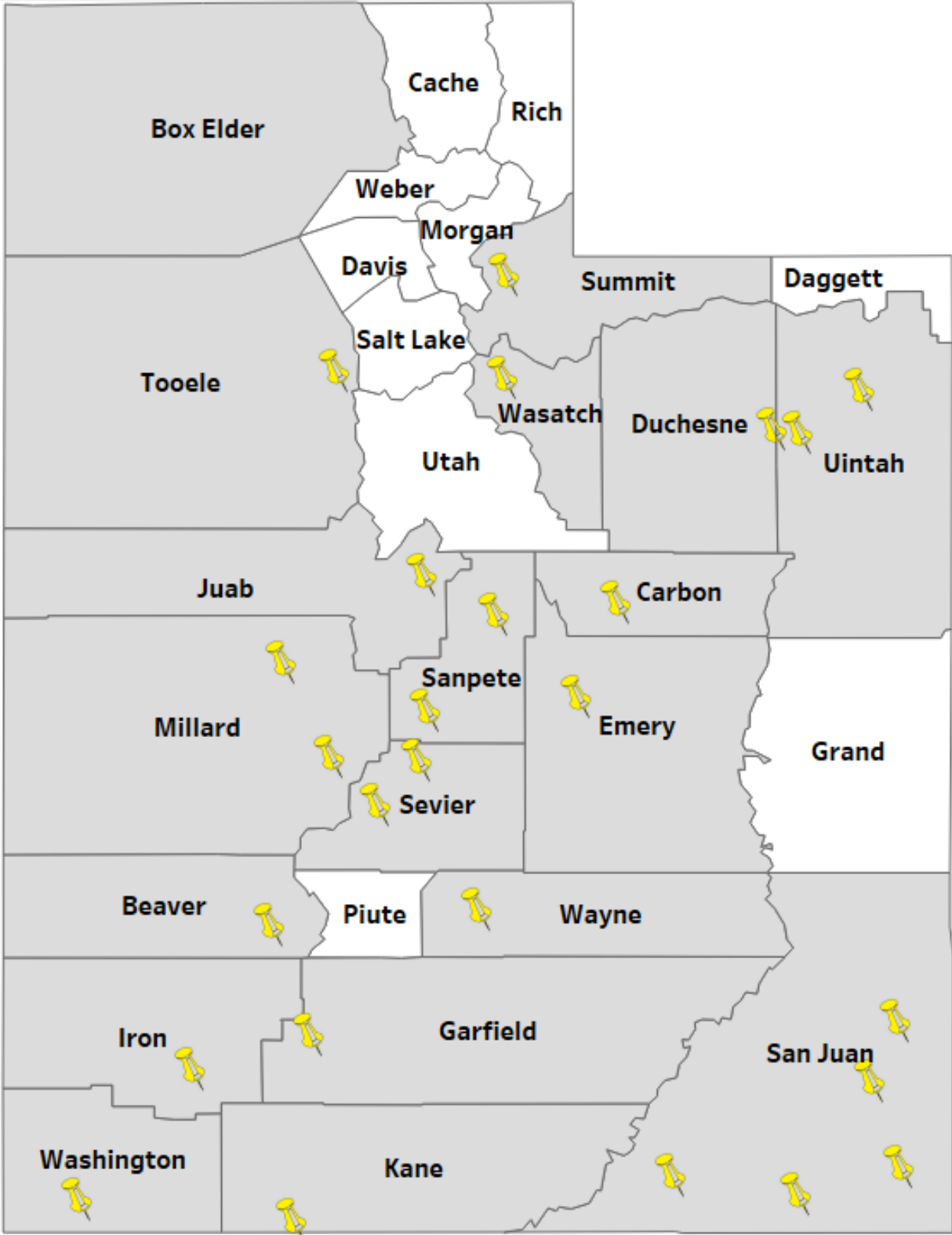
² Note: Another way to look at this is through Rural-Urban Area Commuting (RUCA) codes, which identifies about 10.5% of Utah's population living in a designated rural area by measuring density and commuting patterns. See United States Department of Agriculture (USDA) Economic Research Service: State Fact Sheet - <https://www.ers.usda.gov/data-products/state-fact-sheets/>

³ HPSA's are defined as areas experiencing "shortages of primary medical care, dental or mental health providers and may be geographic, demographic, or institutional".

<https://ruralhealth.health.utah.gov/workforce-development/primary-care-office-pco/shortage-designations/>

⁴ Matriculating Student Questionnaire, Association of American Medical Colleges, 2019

Locations of Clinical Rural Rotations, 2020



SECTION 2: OUTLINE OF THE UMEC RURAL ROTATION PROGRAM, FY 2020

2.1 RURAL ROTATIONS IN 2020

In 2020, the UMEC *Rural Rotation Program* consisted of medical residents, dental residents (DDS), advanced practice registered nurse students (APRNs), pharmacy students, and physician assistant students (PAs). These 118 residents/students took part in 120 rotations in 34 rural locations across 21 different Utah counties. Some medical residents and students also partook in split rotations, meaning they did a full rotation in two different locations.

Table 2 – Rotations and Residents/Students, FY 2020

Profession	# of Students	# of Clinical Rotations
Medical Residents	32	32
Dental Residents (DDS)	10	10
Pharmacy Students	29	29
Physician Assistant Students (PAs)	24	26
Medical Students (MS)	0	0
Advanced Practice Registered Nurse Students (APRNs)	16	16
TOTAL	111	113

Table 3 – Locations of Rotations by Profession, FY 2020

Location	Medical Resident	Dental Resident	Pharmacy Students	PAs	APRNs	Medical Student	Total
Beaver	1	---	---	---	---	---	1
Bicknell	---	---	8	---	2	---	10
Blanding	7	---	4	---	---	---	11
Brigham City	---	---	---	1	---	---	1
Bullfrog	---	---	---	6	2	---	8
Castle Dale	---	---	---	3	---	---	3
Cedar City	1	---	---	1	1	---	3
Coalville	1	---	---	---	---	---	1
Delta	1	---	---	---	1	---	2
Escalante	---	---	2	---	1	---	3
Fillmore	---	---	---	---	1	---	1
Ft. Duchesne	---	---	---	1	---	---	1
Gunnison	---	---	---	1	---	---	1
Heber City	---	---	1	---	1	---	2
Hildale	---	---	---	---	1	---	1
Kanab	---	---	---	---	3	---	3
Montezuma Creek	---	10	---	1	---	---	11
Monticello	4	---	---	---	---	---	4
Monument Valley	---	---	---	2	---	---	2
Mt. Pleasant	---	---	2	2	1	---	5
Nephi	5	---	---	---	---	---	5
Panguitch	---	---	1	1	1	---	3
Price	---	---	---	5	---	---	5
Richfield	7	---	---	1	---	---	8
Roosevelt	---	---	---	1	1	---	2
Salina	4	---	---	---	---	---	4
Santa Clara	---	---	2	---	---	---	2
Stansbury Park	1	---	7	---	---	---	8
Vernal	---	---	2	---	---	---	2
Total	32	10	29	26	16	0	113

A vast majority of participating students (57.7%) came from the University of Utah⁵. This year, there were no participating students from out of state programs.

Table 4 – Rotations and Participants by University, FY 2020

University/School	Participants	Rotations
University of Utah	64	65
Rocky Mountain University	12	13
Westminster College	12	12
Utah Valley Family Medicine	11	11
McKay Dee Family Medicine	8	8
Brigham Young University	3	3
St. Marks Family Medicine	1	1
TOTAL	111	113

Table 5 – Provider Type by University, FY 2020

University/School	Medical Resident	Dental Resident	Pharmacy Students	PAs	APRNs	Medical Student
University of Utah	12	10	29	13	1	---
Rocky Mountain University	---	---	---	13	---	---
Westminster College	---	---	---	---	12	---
Utah Valley Family Medicine	11	---	---	---	---	---
McKay Dee Family Medicine	8	---	---	---	---	---
Brigham Young University	---	---	---	---	3	---
St. Marks Family Medicine	1	---	---	---	---	---
TOTAL	32	10	29	26	16	0

⁵ In order for out-of-state students to qualify for these rural rotations, they must show a background or interest in working in rural Utah.

SECTION 3: OUTLINE OF UMEC RURAL ROTATION PROGRAM, 2007-2020

3.1 RURAL ROTATION PROGRAM SINCE INCEPTION: 2007 – 2020

Since 2007, the UMEC has sponsored 1,258 rotations for 1,103 healthcare residents/students. Rotations have been undertaken by medical residents (27.7%), pharmacy students (30.9%), PAs (21.8%), dental residents (9.0%), medical students (5.4%) and APRNs (5.2%). These rotations have provided services in 51 different areas, covering 26 of the 29 counties in Utah. San Juan and Washington counties have had the highest number of rotations.

Table 6 – Rotations and Residents/Students, 2007-2020

Profession	# of Students	# of Clinical Rotations
Medical Residents	306	323
Dental Residents (DDS)	99	99
Pharmacy Students	341	371
Physician Assistant Students (PAs)	240	334
Medical Students (MS)	60	71
Advanced Practice Registered Nurse Students (APRNs)	57	60
TOTAL	1103	1258

Clinical Rotations, ALL ROTATIONS (2007-2020)

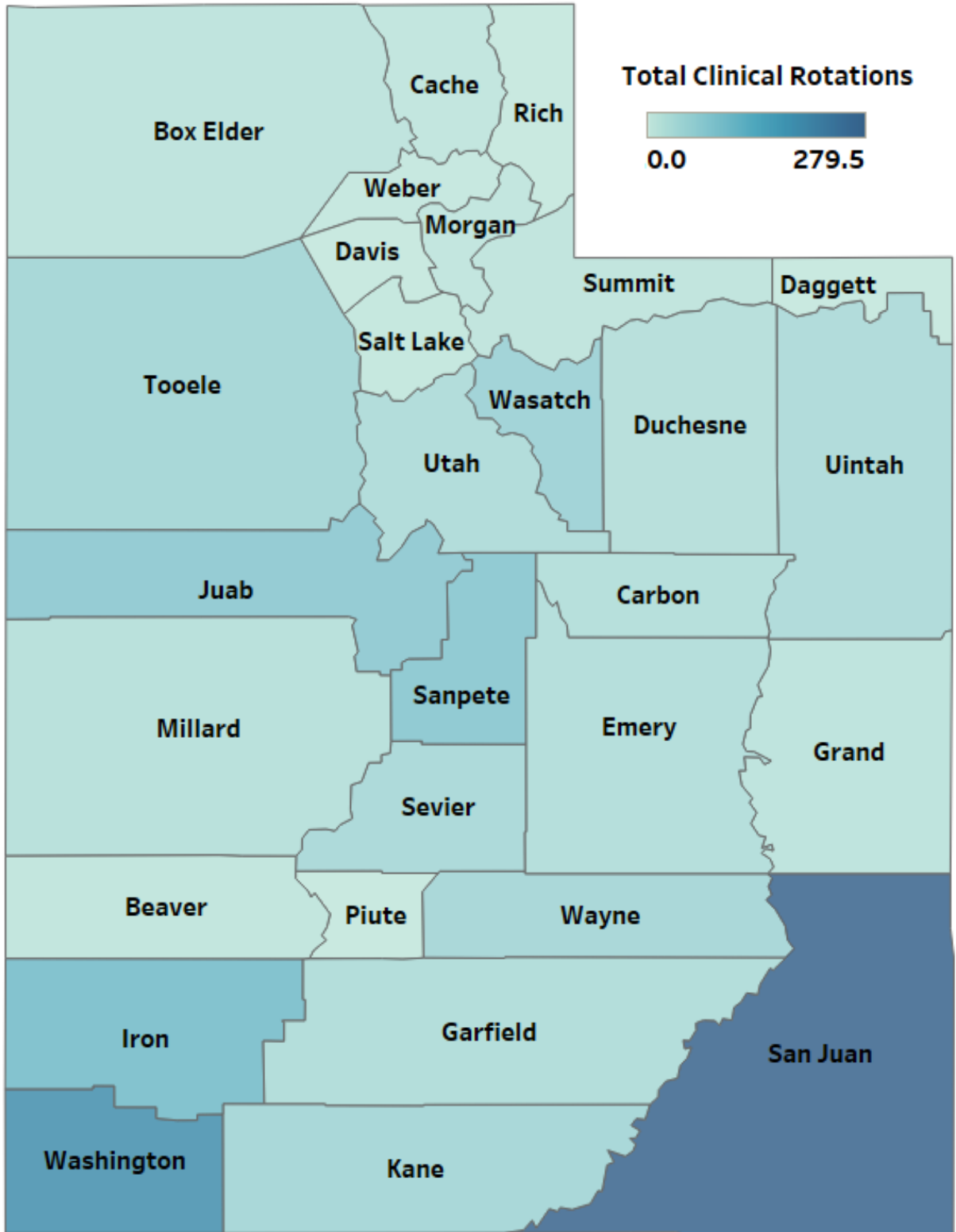


Table 7 – Location by Providers, FY 2007-2020

Location	Medical Resident	Dental Resident	Pharmacy Students	PAs	APRNs	Medical Students	Total
American Fork	---	---	---	---	---	3	3
Beaver	4	---	2	2	---	3	11
Bicknell	4	---	35	4	2	---	45
Big Water	---	---	---	1	---	---	1
Blanding	43	---	66	---	4	1	113
Bountiful	1	---	---	---	---	---	1
Brigham City	---	---	---	1	---	---	1
Bullfrog	---	---	---	18	2	---	20
Castle Dale	---	---	---	8	---	1	9
Cedar City	9	---	35	44	2	15	105
Coalville	10	---	---	2	---	---	12
Delta	2	---	2	2	2	---	8
East Carbon	---	---	---	---	1	---	1
Enterprise	---	---	---	5	---	---	5
Ephraim	---	---	---	1	---	1	2
Escalante	---	---	2	---	1	---	3
Fillmore	1	---	---	3	11	---	15
Ft. Duchesne	---	---	---	3	---	4	7
Grantsville	---	---	---	7	---	---	7
Green River	---	---	---	20	---	---	20
Gunnison	1	---	---	4	2	---	7
Heber City	50	---	3	---	1	1	55
Highland	---	---	---	2	---	---	2
Hildale	---	---	---	---	1	---	1
Hurricane	---	---	2	9	1	1	13
Kanab	14	---	---	4	8	1	27
Logan	2	---	7	---	---	1	10
Manti	15	---	---	---	---	---	15
Moab	9	---	4	---	---	2	15
Montezuma Creek	16	99	1	21	---	1	138
Monticello	9	---	---	---	---	3	12
Monument Valley	---	---	---	14	---	---	14
Morgan	---	---	---	10	---	---	10
Moroni	---	---	---	1	---	1	2
Mt. Pleasant	9	---	44	4	1	---	58
Nephi	62	---	14	---	1	1	78
Ogden	4	---	---	---	---	1	5
Orderville	---	---	---	---	1	---	1
Panguitch	3	---	11	5	2	7	28
Payson	---	---	11	2	---	---	13
Pleasant Grove	---	---	---	---	---	1	1
Price	1	---	1	21	---	2	25
Provo	---	---	---	---	---	1	1
Richfield	20	---	---	9	2	2	33
Roosevelt	3	---	11	9	1	---	24
Salina	5	---	---	3	---	---	8
Salt Lake City	5	---	---	---	1	---	6
Santa Clara	---	---	16	---	---	---	16
Santaquin	---	---	13	---	---	---	13
St. George	7	---	37	85	13	17	159
Stansbury Park	5	---	17	---	---	---	22
Tooele	1	---	15	3	---	---	19
Tremonton	---	---	6	7	---	---	13
Vernal	10	---	16	---	---	1	27
Total	323	99	371	334	60	71	1258

The *Rural Rotation Program* has included participants from both in-state and out-of-state institutions, with the University of Utah providing the majority of participants. Their programs account for 70.3% of participants and 65.7% of rotations.

Table 8 – Rotations and Participants by University, 2007-2020

University/School	Participants	Rotations
University of Utah (Utah)	775	827
McKay Dee (Utah)	66	71
Rocky Mountain University (Utah)	64	83
Touro University (Nevada)	20	60
Idaho State University (Idaho)	11	21
AT Still University	7	13
Others*	160	183
TOTAL	1103	1258

*Includes: Arizona State University, Brigham Young University, Campbell University, Des Moines University, Drexel University, Franklin Pierce University, Frontier School of Family Nursing, Gonzaga University, Idaho State University, Intermountain Medical Center, Kansas City University of Medicine and Biosciences, Lake Erie College of Osteopathic Medicine, Lehigh Valley Hospital, Long Island University, Mary Imogene Bassett Hospital, Michigan State University, Midwestern AZCOM, Nova Southeastern University, Ohio University, Oklahoma State University, Oregon Health and Sciences University, Pacific University, Penn State College of Medicine, Quinnipiac University, Rocky Mountain University of Health Professions, Rocky Vista University, Roseman University, Saint Francis University, Salus University, Samuel Merritt University, St. Marks, Texas Tech, Towson, University of Arizona, University of Cincinnati, University of Hawaii, University of Missouri, University of New Mexico, University of Rochester, University of South Alabama, University of Southern Nevada, University of Wyoming, Utah Valley Residency, Wake Forest University, Washington University, West Virginia School of Osteopathic Medicine, Western University, and Westminster College.

Table 9 – Rotations by Provider Type and University, 2007-2020

University/School	Medical Resident	Dental Resident	Pharmacy Students	PA's	APRNs	Medical Students
<i>University of Utah</i>	197	99	352	125	17	37
<i>McKay Dee</i>	71	---	---	---	---	---
<i>Rocky Mountain University</i>	---	---	---	83	---	---
<i>Touro University</i>	---	---	---	58	---	2
<i>Idaho State University</i>	---	---	3	18	---	---
<i>AT STILL University</i>	---	---	---	5	---	8
<i>Others*</i>	55	---	16	45	43	24
TOTAL	323	99	371	334	60	71

*Includes: Arizona State University, Brigham Young University, Campbell University, Des Moines University, Drexel University, Franklin Pierce University, Frontier School of Family Nursing, Gonzaga University, Idaho State University, Intermountain Medical Center, Kansas City University of Medicine and Biosciences, Lake Erie College of Osteopathic Medicine, Lehigh Valley Hospital, Long Island University, Mary Imogene Bassett Hospital, Michigan State University, Midwestern AZCOM, Nova Southeastern University, Ohio University, Oklahoma State University, Oregon Health and Sciences University, Pacific University, Penn State College of Medicine, Quinnipiac University, Rocky Mountain University of Health Professions, Rocky Vista University, Roseman University, Saint Francis University, Salus University, Samuel Merritt University, St. Marks, Texas Tech, Towson, University of Arizona, University of Cincinnati, University of Hawaii, University of Missouri, University of New Mexico, University of Rochester, University of South Alabama, University of Southern Nevada, University of Wyoming, Utah Valley Residency, Wake Forest University, Washington University, West Virginia School of Osteopathic Medicine, Western University, and Westminster College.

3.2 PROFESSION SPECIFIC HIGHLIGHTS: 2007-2020

3.2a MEDICAL RESIDENTS

Medical residents are the third largest group sponsored by the UMEC *Rural Rotation Program* with 323 (25.7%) rotations completed by 306 residents (the number of physician assistant rotations overtook those completed by medical residents in 2016). The rotations for medical residents have encompassed numerous specialties, with Family Medicine comprising the majority (66.3%) followed by Obstetrics and Gynecology (23.5%). Family Medicine and OB/GYN residents are given a higher priority due to the demand for their services in rural communities.

Table 10 – Number of Medical Residents by Specialty, 2007- 2020

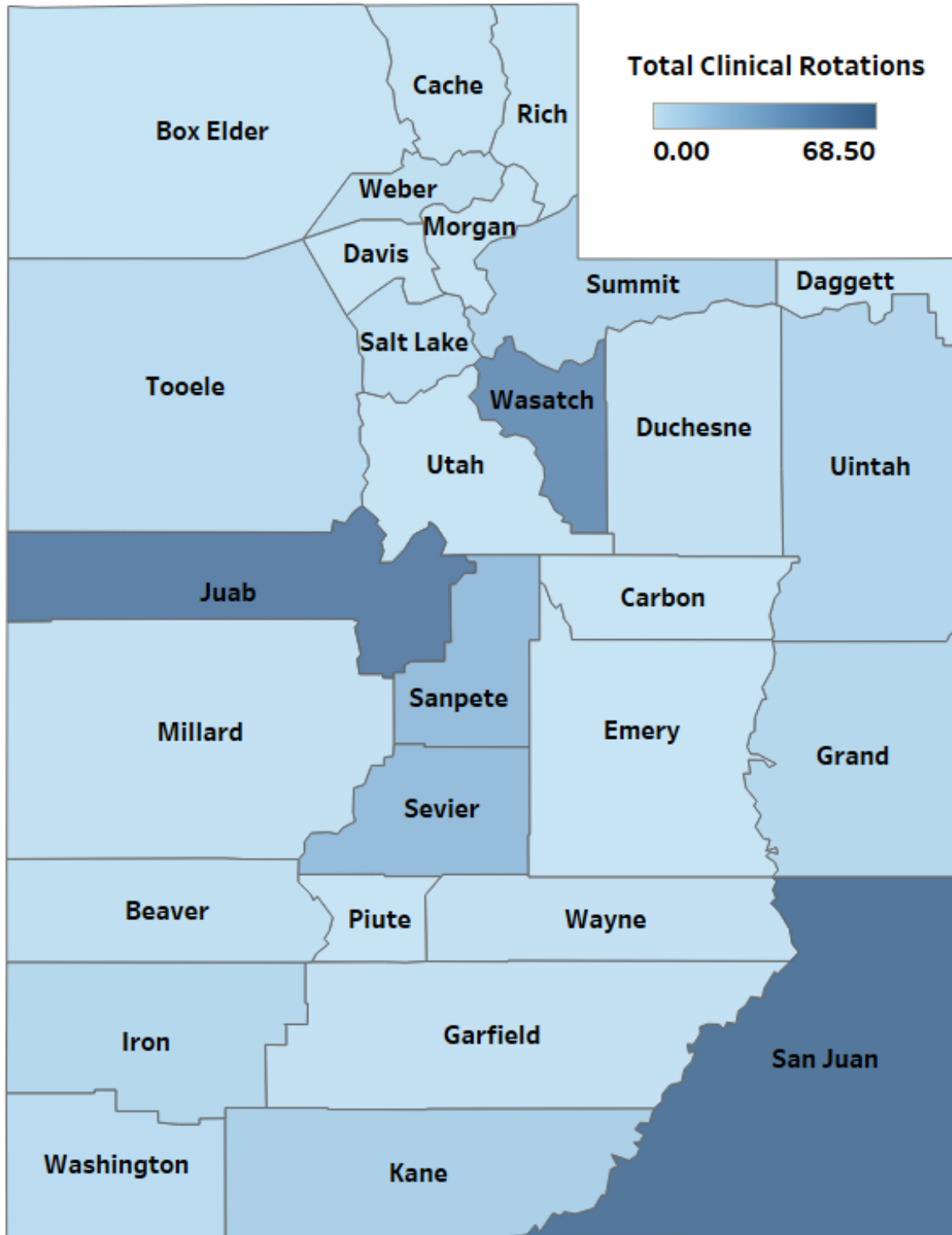
Specialty	Residents	Rotations
<i>Anesthesiology</i>	3 (1.0%)	3 (0.9%)
<i>Emergency</i>	2 (0.7%)	2 (0.6%)
<i>Family Medicine</i>	203 (66.3%)	216 (66.9%)
<i>Geriatric</i>	1 (0.3%)	1 (0.3%)
<i>Internal</i>	4 (1.3%)	5 (1.5%)
<i>OB/GYN</i>	72 (23.5%)	74 (22.9%)
<i>Oncology</i>	1 (0.3%)	1 (0.3%)
<i>Pathology</i>	1 (0.3%)	1 (0.3%)
<i>Pediatrics</i>	6 (2.0%)	6 (1.9%)
<i>Psychiatry</i>	11 (3.6%)	11 (3.4%)
<i>Radiology</i>	1 (0.3%)	1 (0.3%)
<i>Surgery</i>	1 (0.3%)	2 (0.6%)
TOTAL	306	323

Medical residents have rotated or had rotation assistance across 29 different underserved locations in Utah. The most common location for Family Medicine providers is Nephi (28.2%) and a little less than half of OB/GYN rotations take place in Heber City (43.2%).

Table 11 – Locations of Rotations by Profession, 2007-2020

Location	Family Medicine	OB/GYN	Other	Total
<i>Beaver</i>	4	---	---	4
<i>Bicknell</i>	4	---	---	4
<i>Blanding</i>	4	30	8.5	42.5
<i>Bountiful</i>	---	---	1	1
<i>Cedar City</i>	8	---	1	9
<i>Coalville</i>	9	---	1	10
<i>Delta</i>	2	---	---	2
<i>Fillmore</i>	1	---	---	1
<i>Gunnison</i>	1	---	---	1
<i>Heber City</i>	17	32	1	50
<i>Kanab</i>	13	---	1	14
<i>Logan</i>	---	1	1	2
<i>Manti</i>	14.5	---	---	14.5
<i>Moab</i>	4	---	4.5	8.5
<i>Montezuma Creek</i>	6	7	3	16
<i>Monticello</i>	9	---	---	9
<i>Mt. Pleasant</i>	8	1	---	9
<i>Nephi</i>	61	---	1	62
<i>Ogden</i>	3	---	1	4
<i>Panguitch</i>	3	---	---	3
<i>Price</i>	---	---	1	1
<i>Richfield</i>	19.5	---	---	19.5
<i>Roosevelt</i>	---	---	3	3
<i>Salina</i>	5	---	---	5
<i>Salt Lake City</i>	2	1	2	5
<i>St. George</i>	4	1	2	7
<i>Stansbury Park</i>	4	1	---	5
<i>Tooele</i>	1	---	---	1
<i>Vernal</i>	9	---	1	10
Total	216	74	33	323

Clinical Rotations, Medical Residents ONLY (2007-2020)



3.2b Dental Residents

The UMEC has sponsored 99 rural rotations for 99 general practice residencies for dentists from the University of Utah from 2008 to 2020. Of note, these residents have all served in the rural underserved area of Montezuma Creek, Utah. With an estimated 10 dentists practicing in all of San Juan County, these residents have provided an invaluable contribution to the oral health of this community.

3.2c Pharmacy Students

The UMEC has funded 341 pharmacy students to do 371 rotations from 2009 to 2020. Currently, 4 sites make up the majority (49.1%) of all pharmacy student rotations: St. George (n=37), Blanding (n=66), Cedar City (n=35), and Mt. Pleasant (n=44). Additionally, 94.9% of all pharmacy students have come from the University of Utah.

3.2d Physician Assistants

The UMEC has funded 240 physician assistants to participate in 334 rotations. Just over half (51.2%) of these rotations have been in Montezuma Creek, Green River, Cedar City and St. George. While the majority of other students and residents participating in the UMEC *Rural Rotation Program* come from the University of Utah, PAs differ with just a little less than two thirds of participants coming from other schools (62.6%).

SECTION 4: FUTURE IMPORTANCE OF RURAL ROTATION PROGRAM

4.1 PHYSICIANS

The UMEC *Rural Rotation Program* is structured to help train, familiarize, and provide incentive for individuals to pursue a career in rural communities in Utah. Family Medicine residents that completed a UMEC rotation chose to practice in a rural Utah setting after graduation 8.5% of the time. Less medical residents are participating in the rural rotation program as evidenced by becoming the third largest group sponsored. In 2016, medical residents were the largest group of participants but have since been surpassed by pharmacists and physician assistants. Physicians play a vital role in rural healthcare and additional action to obtain more medical resident participation may be needed.

4.2 RURAL WORKFORCE RETIREMENT OVER NEXT DECADE

The UMEC's data on different healthcare workforces can help illuminate retirement patterns of each workforce by county. This self-reported data is crucial for helping to project expected retirement and prepare for any adverse projections in these already underserved communities. Based on UMEC's 2016 workforce reports⁶, roughly 30% of healthcare providers from the 20 rural counties with UMEC-sponsored rural rotation sites expect to retire over the next decade.

4.3 AGING RURAL POPULATION IN UTAH

Older age cohorts typically have a higher demand for healthcare services on average, relative to their younger counterparts. Demand for health services can be expected to increase as the proportion of the rural community elderly cohort increases. An aging population can impose additional demand on the local health system, and by doing so, worsen any medical personnel shortages that may already exist. The population of those aged 60 and older in rural counties is projected to increase in the next ten years⁷, thereby possibly causing an increased demand on a smaller workforce.

4.4 MOVING FORWARD

In shaping the need for healthcare services in rural and underserved areas in Utah, the UMEC *Rural Rotation Program* will continue to provide necessary healthcare professionals to these areas. Moreover, the *Rural Rotation Program* can also influence some practitioners into selecting practice settings in rural and underserved areas in Utah after graduating. As the population continues to age, and individuals retire from the rural workforce, the need to replace and grow these workforces becomes a more challenging and crucial task.

⁶ The UMEC produces different workforce analyses for varying healthcare professionals and asks about retirement plans. These reports can be seen at <http://umec.gov/publications/>

⁷ Utah's Long-term Demographic and Economic Projections. *Kem C. Gardner Policy Institute*. University of Utah. 7 Dec. 2017. <http://gardner.utah.edu/wp-content/uploads/Kem-C.-Gardner-County-Detail-Document.pdf>.