Based on the above analysis, we have demonstrated the difference between market share. Then, we want to go further to see the major DRG where the monopolistic practices are more pronounced. In order to find a pair of high and low-end DRG, we run a program to generate a new variable HHI\_rank, which stands for the monopoly of hospitals in providing services for the specific diseases. According to HHI\_Rank, we get the lowest HHI value from DRG 689 (0.2036565), which is classified in Kidney & Urinary MDC. When Patients who suffer from kidney & urinary tract infection were analyzed in the Medicare group, they were evenly distributed in our 5 divided area, 34 patients from Burlington, 38 from Barre, 38 from Newport, 27 from Randolph, 38 from Rutland, and most of them received their treatment in their region, other than 2 of patients from Barre were transferred to Burlington, specifically Northwestern Medical Center, University of Vermont Medical Center, and Porter Medical Center. Additionally, one of patients from Barre were transferred to Newport Area, to one of North Country Hospital And Health center or Northeastern Vermont Reginal Hospital. With low- degree of monopolistic competition, the market share is almost evenly distributed, Barre, Newport and Rutland hold same amount of market share with 21.71%

**table 1-1** **Government\* DRG 689**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **RRName** | **RR1--Burlington** | | **RR2--Barre** | **RR3--Newport/St\_ Jns** | **RR4--Randolph** | **RR5--Rutland** | **Total Admissions** |
| RR1--Burlington | 32 | | 0 | 0 | 0 | 0 | 32 |
| RR2-- Barre | | 2 | 38 | 1 | 3 | 0 | 44 |
| RR3-- Newport/St. J | | 0 | 0 | 37 | 0 | 0 | 37 |
| RR4--Randolph | | 0 | 0 | 0 | 24 | 1 | 25 |
| RR5-- Rutland | | 0 | 0 | 0 | 0 | 37 | 37 |
| SubTotal | | 34 | 38 | 38 | 27 | 38 | 175 |

**table 1-2 Government\* DRG 689 percentage**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **RRName** | **RR1--Burlington** | **RR2--Barre** | **RR3--Newport/St\_ Jns** | **RR4--Randolph** | **RR5--Rutland** |
| RR1--Burlington | 100% | 0 | 0 | 0 | 0 |
| RR2-- Barre | 4.55% | 86.36% | 2.27% | 6.82% | 0 |
| RR3--Newport/St. J | 0 | 0 | 100% | 0 | 0 |
| RR4--Randolph | 0 | 0 | 0 | 96% | 4% |
| RR5--Rutland | 0 | 2% | 0 | 0 | 100% |
| SubTotal: | 19.43% | 21.71% | 21.71% | 15.43% | 21.71% |

Additionally, Although the patients with DRG689 in commercial group is much less than in Medicare group, the low-degree monopolistic is more obvious in commercial group. Majority of patients suffering from kidney & urinary tract infection were coming from Burlington, and they all received treatment in Burlington. It’s same is the case for one patient from Barre, two patients from Newport and one from Rutland, and they all stayed at their regional hospital to receive medical treatment. In this way, the percentage of the care that was rendered locally with no unnecessary need

for traveling out of the region is 100% for each region. Since Burlington has more patients in commercial group, it has larger market share with 66.67%. Barre and Rutland hold same market share with 8.33%.

**table 1-2** **Commercial \* DRG 689**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **RRName** | **RR1--Burlington** | **RR2--Barre** | **RR3--Newport/St\_ Jns** | **RR4--Randolph** | **RR5--Rutland** | **Total Admissions** |
| RR1--Burlington | 8 | 0 | 0 | 0 | 0 | 8 |
| RR2-- Barre | 0 | 1 | 0 | 0 | 0 | 1 |
| RR3--Newport/St. J | 0 | 0 | 2 | 0 | 0 | 2 |
| RR4--Randolph | 0 | 0 | 0 | 0 | 0 | 0 |
| RR5--Rutland | 0 | 0 | 0 | 0 | 1 | 1 |
| SubTotal: | 8 | 1 | 2 | 0 | 1 | 12 |

**table 1-2 Commercial \* DRG 689 percentage**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **RRName** | **RR1--Burlington** | **RR2--Barre** | **RR3--Newport/St\_ Jns** | **RR4--Randolph** | **RR5--Rutland** |
| RR1--Burlington | 100% | 0 | 0 | 0 | 0 |
| RR2-- Barre | 0 | 100% | 0 | 0 | 0 |
| RR3--Newport/St. J | 0 | 0 | 100% | 0 | 0 |
| RR4--Randolph | 0 | 0 | 0 | 0 | 0 |
| RR5--Rutland | 0 | 0 | 0 | 0 | 100% |
| SubTotal: | 66.67% | 8.33% | 16.67% | 0 | 8.33% |

According to HHI\_Rank, we get the highest HHI value from DRG 549 (0.9831945), which is classified in Heart $ Circulatory MDC. Among patients suffering from circulatory disorders except AMI, 59 of them incurred with government insurances, 39 patients with commercial insurances. For patients in Medicare group, majority of them were from Burlington and Barre, and 34 patients from Burlington stayed in Burlington, Northwestern Medical Center, University of Vermont Medical Center, or Porter Medical Center, to receive treatment. Other than one patient from Rutland, the rest of patients from other areas all transferred to Burlington hospitals. Because of the high monopoly competition of circulatory disorders, Burlington accounted for 98.31% market share, while Rutland only took up 1.69%.

**table 1-1 Government\* DRG 549**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **RRName** | **RR1--Burlington** | | **RR2--Barre** | **RR3--Newport/St\_ Jns** | **RR4--Randolph** | **RR5--Rutland** | **Total Admissions** |
| RR1--Burlington | 34 | | 0 | 0 | 0 | 0 | 34 |
| RR2-- Barre | | 19 | 0 | 0 | 0 | 0 | 19 |
| RR3-- Newport/St. J | | 1 | 0 | 0 | 0 | 0 | 1 |
| RR4--Randolph | | 0 | 0 | 0 | 0 | 0 | 0 |
| RR5-- Rutland | | 4 | 0 | 0 | 0 | 1 | 5 |
| SubTotal | | 58 | 0 | 0 | 0 | 1 | 59 |

**table 1-2 Government\* DRG 549 percentage**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **RRName** | **RR1--Burlington** | **RR2--Barre** | **RR3--Newport/St\_ Jns** | **RR4--Randolph** | **RR5--Rutland** |
| RR1--Burlington | 100% | 0 | 0 | 0 | 0 |
| RR2-- Barre | 100% | 0 | 0 | 0 | 0 |
| RR3--Newport/St. J | 100% | 0 | 0 | 0 | 0 |
| RR4--Randolph | 0 | 0 | 0 | 0 | 0 |
| RR5--Rutland | 80% | 0 | 0 | 0 | 20% |
| SubTotal: | 98.31% | 0 | 0 | 0 | 1.69% |

Moreover, monopolistic practices are more pronounced in commercial insurance group. 39 patients suffer from circulatory disorders, but no one receive treatment in their original region, and they all transferred to Burlington Medical Hospital. According to the table below, Burlington is 100% monopolistic for circulatory disorders, which took up 100% market share.

**table 1-2 Commercial \* DRG 549**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **RRName** | **RR1--Burlington** | **RR2--Barre** | **RR3--Newport/St\_ Jns** | **RR4--Randolph** | **RR5--Rutland** | **Total Admissions** |
| RR1--Burlington | 21 | 0 | 0 | 0 | 0 | 21 |
| RR2-- Barre | 13 | 0 | 0 | 0 | 0 | 13 |
| RR3--Newport/St. J | 1 | 0 | 0 | 0 | 0 | 1 |
| RR4--Randolph | 0 | 0 | 0 | 0 | 0 | 0 |
| RR5--Rutland | 4 | 0 | 0 | 0 | 0 | 4 |
| SubTotal: | 39 | 0 | 0 | 0 | 0 | 39 |

**table 1-2 Commercial \* DRG 549 percentage**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **RRName** | **RR1--Burlington** | **RR2--Barre** | **RR3--Newport/St\_ Jns** | **RR4--Randolph** | **RR5--Rutland** |
| RR1--Burlington | 100% | 0 | 0 | 0 | 0 |
| RR2-- Barre | 100% | 0 | 0 | 0 | 0 |
| RR3--Newport/St. J | 100% | 0 | 0 | 0 | 0 |
| RR4--Randolph | 0 | 0 | 0 | 0 | 0 |
| RR5--Rutland | 100% | 0 | 0 | 0 | 0 |
| SubTotal: | 100% | 0 | 0 | 0 | 0 |

Kidney infection is a type of urinary tract infection that generally begins in your urethra or bladder and travels to one of your kidneys. A kidney infection requires prompt medical attention. If treated properly, a kidney infection can recover in serval days or one week. Thus, it only requires low-end care, and sometimes it requires to be hospitalized in a period of time. Because of low-end care and stay in hospital, most people prefer to stay at their region to receive treatment with no to avoid unnecessary need for traveling out of the region. However, if the condition is life threatening and serious, patients and relative wouldn’t have much time to think and they probably need to come up with new decision when the old one did not work. The circulatory is your heart and blood vessels, it’s really vital to keep your body functioning. This finely tuned system carries oxygen, nutrients, electrolytes, and hormones throughout your body. Interruptions, blockage, or diseases that affect how your heart or blood vessels pump blood can cause complications such as heart disease or stroke. If there is something wrong with circulatory system, it may cause irreversible damage to your health. Additionally, when blockage or disease happen in circulatory system, it usually requires immediate treatment, this is the reason why all of patients decide to transfer to Burlington hospital to receive better treatments. Thus, for the small diseases, there may not be big difference between hospitals. However, when it comes to disease requires high- end care the monopoly of hospital will be more obvious.