**Appendix B.** Comparison of Low-Value Service Rates with Previously Published Studies

|  |  |
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|  | **Study** |
| **Low-Value Service** |  |  |  |  |  |  |  |  |
|  | OptumLabs2009 | OptumLabs2014 | Schwartz et al.2009 | Segal et al.2008 | Colla et al.2006–11 | Rosenberg et al.2011–13 | Reid et al. 2013 | Charlesworth et al. 2013 |
| ***Cervical Cancer Screening in Women > 65*** |  |  |
| Commercial 65+ | 18.1% | 9.9% |  |  |  |   |  |  |
| Medicare Advantage 65+ | 10.2% | 6.7% |  |  |  |  |  |  |
| Medicare FFS 65+ |  |  | 6.5% |  | 9.8% |  |  |  |
| ***CT/MRI for Headache*** |
| Commercial 18-64 |  |  |  |  |  | 14.9-13.4% (ages 18-50) | 1.0% | 11.0% |
| Commercial 65+ | 23.9% | 22.7% |  |  |  |  |  |  |
| Medicare Advantage 65+ | 26.0% | 29.6% |  |  |  |  |  |  |
| Medicare FFS 65+ |  |  | 2.4% |  |  |  |  |  |
| ***CT/MRI for Syncope*** |
| Commercial 18-64 |  |  |  |  |  |  | 0.1% | 9.0% |
| Commercial 65+ | 39.1% | 37.5% |  |  |  |  |  |  |
| Medicare Advantage 65+ | 44.7% | 44.3% |  |  |  |  |  |  |
| Medicare FFS 65+ |  |  | 1.0% |  |  |  |  |  |
| ***CT for Sinusitis***  |
| Commercial 18-64 |  |  |  |  |  |  | 0.3% | 3.0% |
| Commercial 65+ | 5.2% | 4.2% |  |  |  |  |  |  |
| Medicare Advantage 65+ | 4.7% | 4.0% |  |  |  |  |  |  |
| Medicare FFS 65+ |  |  | 0.3% | 1.4% |  |  |  |  |
| ***CT/MRI for Low Back Pain*** |
| Commercial 18-64 |  |  |  |  |  | 53.7% (18-50) | 1.3% | 15.7% |
| Commercial 65+ | 6.8% (MRI) | 6.7% (MRI) |  |  |  |  |  |  |
| Medicare Advantage 65+ | 6.3% (MRI) | 5.5% (MRI) |  |  |  |  |  |  |
| Medicare FFS 65+ |  |  | 4.5% | 39.5% (MRI) | 22.5% |  |  |  |
| ***Preoperative Chest X-Ray*** |
| Commercial 18-64 |  |  |  |  |  | 91.3**–**91.5% | 0.7% | 4.3% |
| Commercial 65+ | 13.1% | 10.3% |  |  |  |  |  |  |
| Medicare Advantage 65+ | 12.8% | 11.1% |  |  |  |  |  |  |
| Medicare FFS 65+ |  |  | 1.6% | 21.9% |  |  |  |  |
| ***Laminectomy*** |
| Commercial 65+ | 0.18% | 0.17% |  |  |   |   |  |  |
| Medicare Advantage 65+ | 0.15% | 0.18% |  |  |  |  |  |  |
| Medicare FFS 65+ |  |  |  | 0.2% |  |  |  |  |
| ***Vertebroplasty or Kyphoplasty*** |
| Commercial 18-64 |  |  |  |  |  |  | 0.0004% |  |
| Commercial 65+ | 14.3% | 13.5% |  |  |  |  |  |  |
| Medicare Advantage 65+ | 18.8% | 16.2% |  |  |  |  |  |  |
| Medicare FFS 65+ |  |  | 0.3% |  |  |  |  |  |
| ***Hysterectomy for Benign Disease*** |
| Commercial 65+ | 0.27% | 0.22% |  |  |   |   |  |  |
| Medicare Advantage 65+ | 0.16% | 0.16% |  |  |  |  |  |  |
| Medicare FFS 65+ |  |  |  | 0.3% |  |  |  |  |

CT = computed tomography; MRI = magnetic resonance imaging.