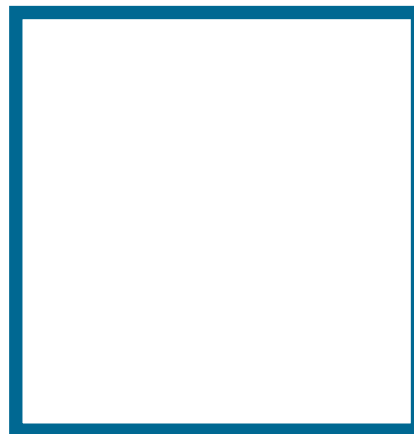
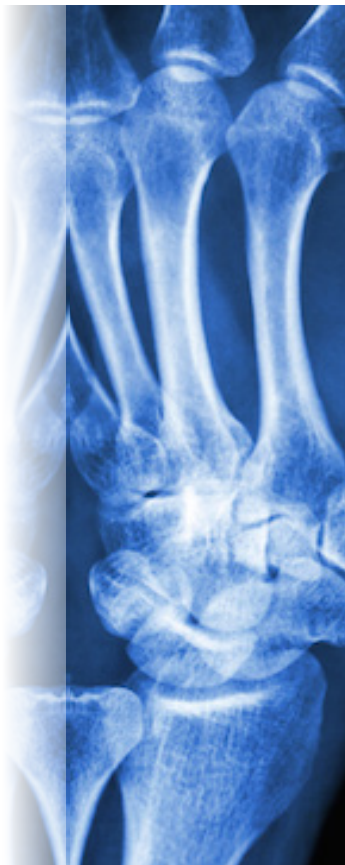


# Lab & Diagnostic Imaging Order Rates

(2018 Report)

An analysis of diagnostic imaging tests and laboratory tests ordered by local physicians for the period 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2017



# LAB & DIAGNOSTIC IMAGING ORDER RATES (2018 REPORT)

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## LAB AND DIAGNOSTIC IMAGING ORDER RATES

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Each year, the Bermuda Health Council (the Council) aggregates transaction-level data submitted to the Council by insurers for the prior fiscal year. From this data, order rates for both lab tests and diagnostic imaging are determined and distributed to the physician community first by specialty and then, individually<sup>1</sup>.

The intent and purpose of this initiative is to fulfill physicians' request for data, and facilitate information and discussion about lab and/or diagnostic order rates. The observations are only for organizations who had 10 or more visits for the time period and for providers that are not, holistically, the only ones in their specialty. Specialty was determined by the classification of a business or provider provided to individual insurers, the Office of the Chief Medical Officer, the Council, or the Registrar of Companies. **It is broadly agreed that abstract utilization figures do not provide sufficient information about the appropriateness of tests or the quality of care.** The following observations were made concerning identified specialties, on island, from claims dated between 01 April 2013 and 31 March 2017.

This is the first year the Council has been able to provide a full four year dataset comparison. The specialty assignments may also differ from prior year analyses as we continue to find ways to improve data quality and present analytics.

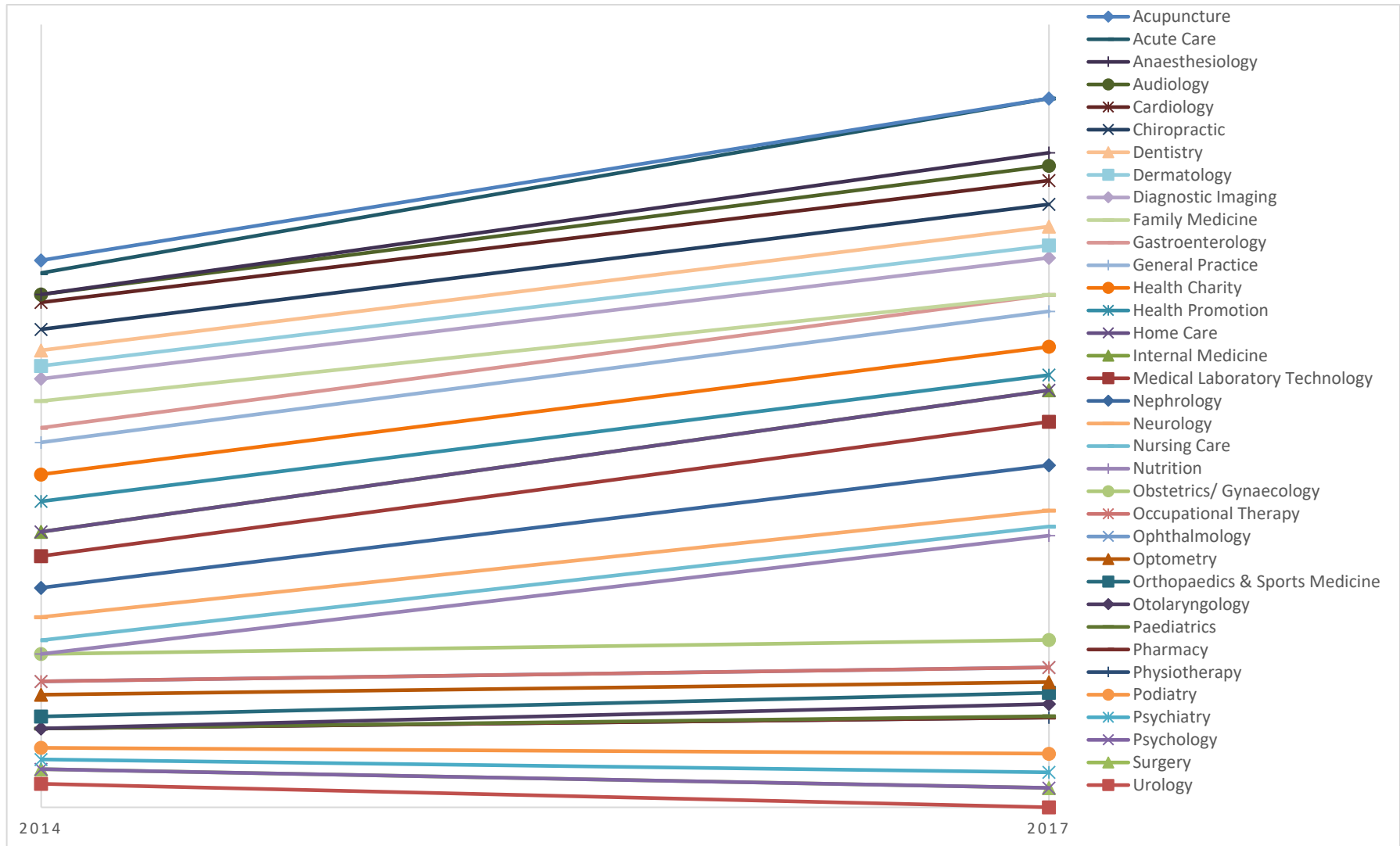
This project was developed in collaboration with BMDA as a learning opportunity. BMDA encourages that, where appropriate, physicians continue to seek clinical guidance from colleagues, BMDA, the Office of the Chief Medical Officer, and Bermuda Hospitals Board Chiefs of specific practice areas. In addition, evidence-based recommendations for diagnostic tests may also be obtained from medical societies' online resources such as: [www.choosingwisely.org/doctor-patient-lists/](http://www.choosingwisely.org/doctor-patient-lists/), [www.acr.org](http://www.acr.org) and [www.rcr.ac.uk](http://www.rcr.ac.uk)

June 2018

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<sup>1</sup> Order rates are determined by calculating the number of non-duplicative tests (laboratory or diagnostic) being completed within 30 days of an office visit by a unique patient. Similar study: *JAMA Intern Med.* 2015;175(1):101-107. doi:10.1001/jamainternmed.2014.6349

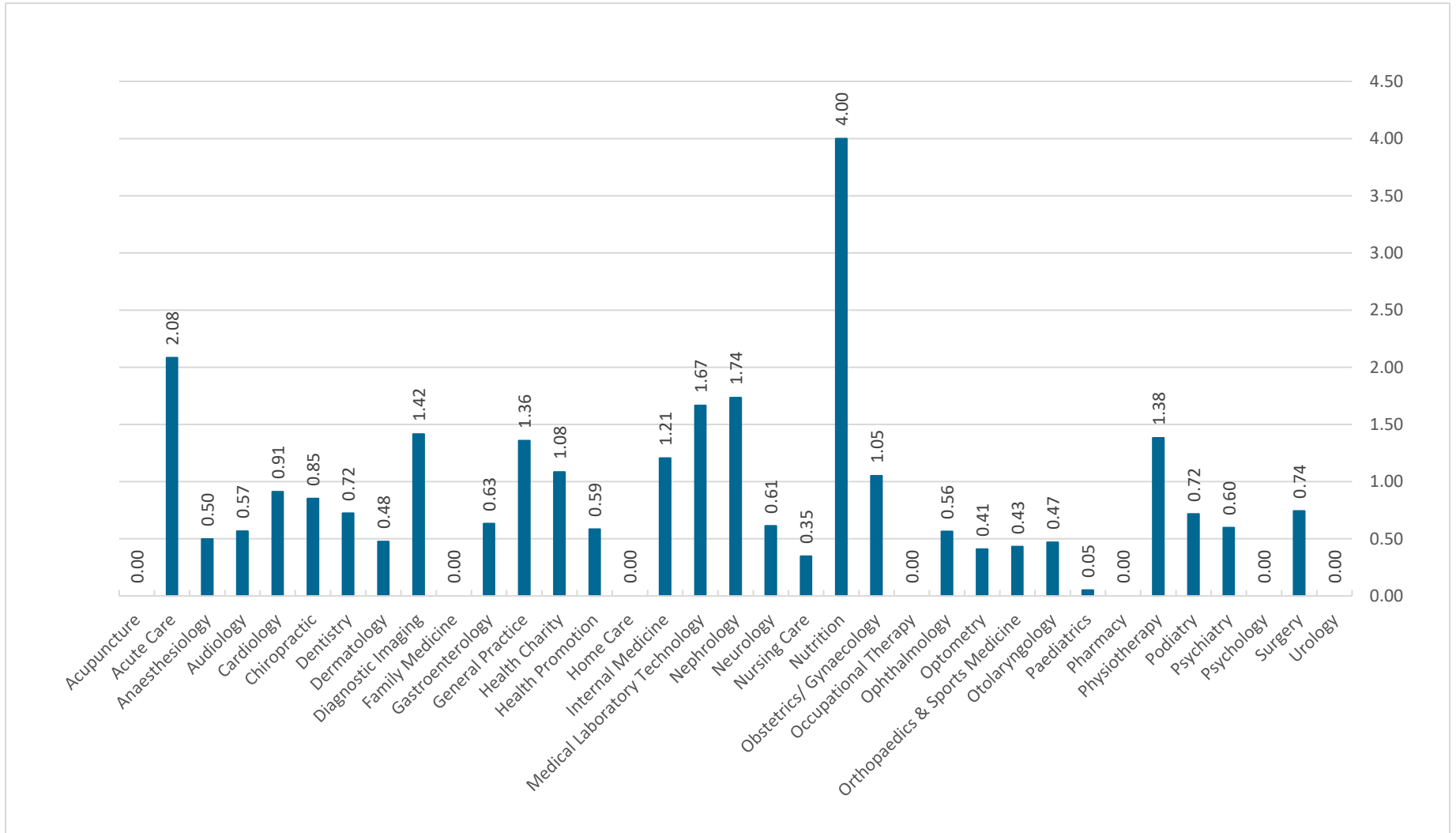
**Graph 1: Laboratory Order Rates for Fiscal Year Ending March 2014 – Fiscal Year Ending March 2017**



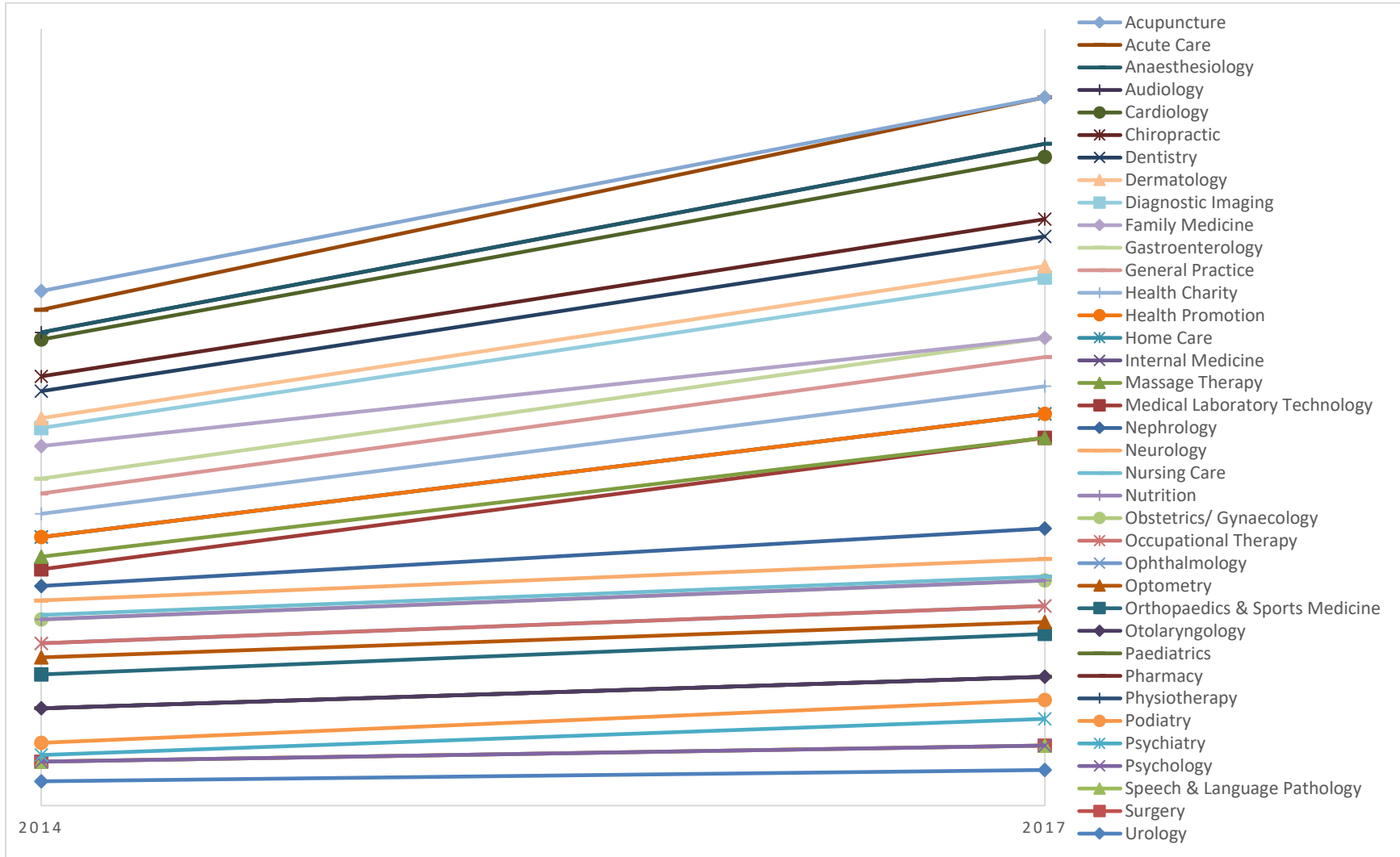
**Table 1: Laboratory Test Orders by Specialty Group**

<b>Specialty</b>	<b>4 Year Trend of Ordered Laboratory Tests Ordered from 2013 to 2017</b>	<b>2017 Order Rate</b>
<i>Acupuncture</i>	Decreased by 48.48%	0.00
<i>Acute Care</i>	Increased by 126.19%	2.08
<i>Anaesthesiology</i>	Increased by 49.76%	0.50
<i>Audiology</i>	Increased by 26.21%	0.57
<i>Cardiology</i>	Decreased by 12.20%	0.91
<i>Chiropractic</i>	Increased by 4.68%	0.85
<i>Dentistry</i>	Increased by 12.77%	0.72
<i>Dermatology</i>	Decreased by 1.79%	0.48
<i>Diagnostic Imaging</i>	Increased by 56.40%	1.42
<i>Family Medicine</i>	Decreased by 102.62%	0.00
<i>Gastroenterology</i>	Increased by 7.39%	0.63
<i>General Practice</i>	Increased by 13.13%	1.36
<i>Health Charity</i>	Increased by 5.03%	1.08
<i>Health Promotion</i>	Decreased by 58.16%	0.59
<i>Home Care</i>	No change at 0.00%	0.00
<i>Internal Medicine</i>	Increased by 27.54%	1.21
<i>Medical Lab Technology</i>	Increased by 45.24%	1.67
<i>Nephrology</i>	Increased by 61.25%	1.74
<i>Neurology</i>	Decreased by 27.72%	0.61
<i>Nursing Care</i>	Decreased by 17.71%	0.35
<i>Nutrition</i>	Increased by 400.00%	4.00
<i>Obstetrics/Gynaecology</i>	Increased by 0.21%	1.05
<i>Occupational Therapy</i>	No change at 0.00%	0.00
<i>Ophthalmology</i>	Increased by 5.12%	0.56
<i>Optometry</i>	Decreased by 42.53%	0.41
<i>Orthopaedics &amp; Sports Med</i>	Decreased by 2.91%	0.43
<i>Otolaryngology</i>	Increased by 7.57%	0.47
<i>Paediatrics</i>	Decreased by 1.78%	0.05
<i>Pharmacy</i>	No change at 0.00%	0.00
<i>Physiotherapy</i>	Increased by 64.22%	1.38
<i>Podiatry</i>	Increased by 27.24%	0.72
<i>Psychiatry</i>	Increased by 22.41%	0.60
<i>Psychology</i>	No change at 0.00%	0.00
<i>Surgery</i>	Increased by 18.27%	0.74
<i>Urology</i>	Decreased by 90.17%	0.00

**Graph 2: 2017 Laboratory Order Rates (Lab Orders per Office Visit by Discipline)**



**Graph 3: Diagnostic Imaging Order Rates for Fiscal Year Ending March 2014 – Fiscal Year Ending March 2017**

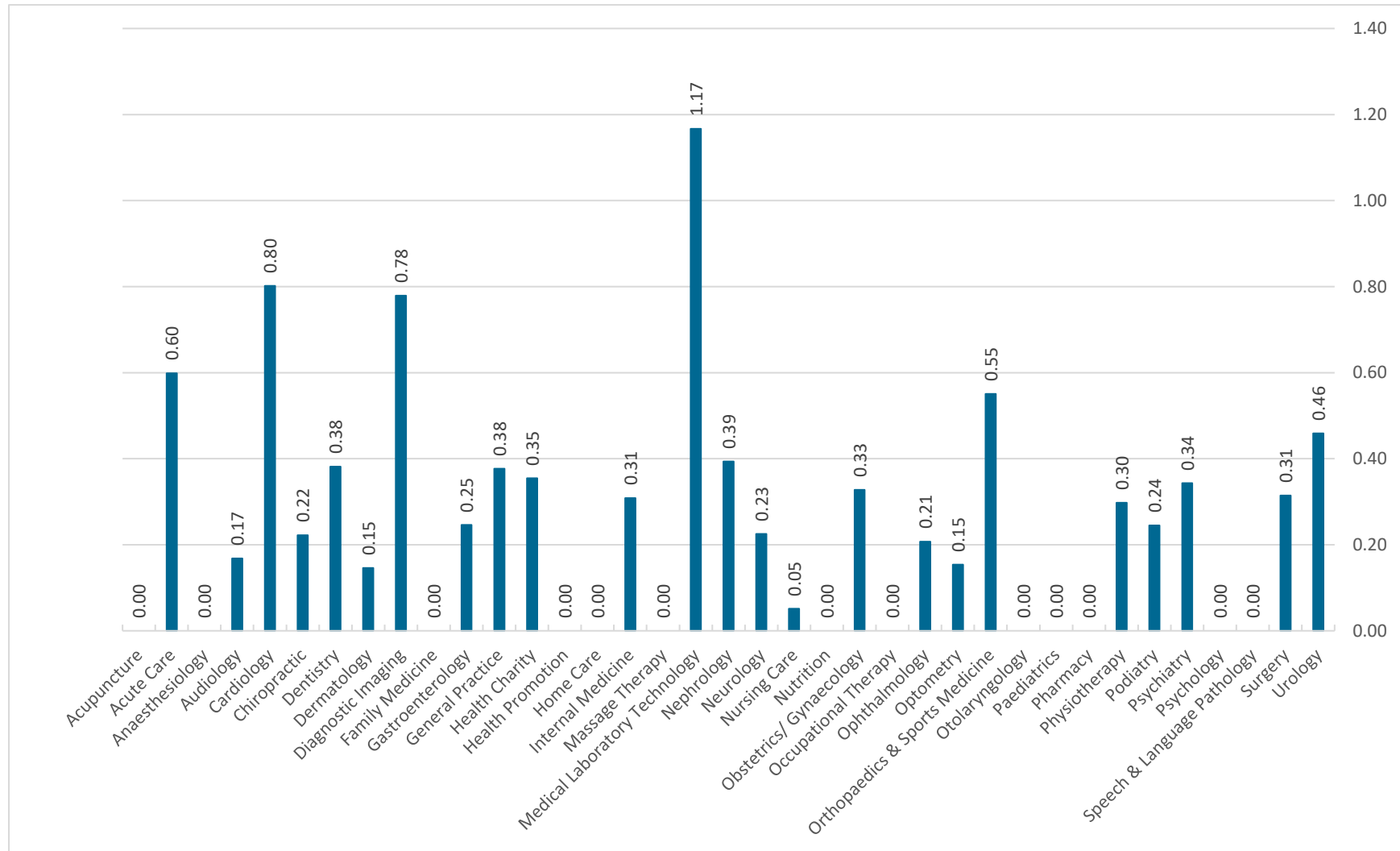


**Table 2: Diagnostic Imaging Test Order Rates by Specialty**

<b>Specialty</b>	<b>4 Year Trend of DI Tests Ordered from 2013 to 2017</b>	<b>2017 Order Rate</b>
<i>Acupuncture</i>	Decreased by 24.24%	0.00
<i>Acute Care</i>	Increased by 30.80%	0.60
<i>Anaesthesiology</i>	Increased by 14.39%	0.14
<i>Audiology</i>	Increased by 7.64%	0.17
<i>Cardiology</i>	Increased by 32.80%	0.80
<i>Chiropractic</i>	Increased by 3.14%	0.22
<i>Dentistry</i>	Increased by 3.48%	0.38
<i>Dermatology</i>	Increased by 1.92%	0.15
<i>Diagnostic Imaging</i>	Increased by 54.70%	0.78
<i>Family Medicine</i>	Decreased by 41.95%	0.00
<i>Gastroenterology</i>	Increased by 5.44%	0.25
<i>General Practice</i>	Increased by 11.53%	0.38
<i>Health Charity</i>	Increased by 5.45%	0.35
<i>Health Promotion</i>	No change at 0.00%	0.00
<i>Home Care</i>	No change at 0.00%	0.00
<i>Internal Medicine</i>	Increased by 5.64%	0.31
<i>Massage Therapy</i>	Decreased by 16.25%	0.00
<i>Medical Lab Technology</i>	Increased by 95.24%	1.17
<i>Nephrology</i>	Increased by 20.70%	0.39
<i>Neurology</i>	Increased by 3.79%	0.23
<i>Nursing Care</i>	Decreased by 0.54%	0.05
<i>Nutrition</i>	No change at 0.00%	0.00
<i>Obstetrics/Gynaecology</i>	Increased by 2.01%	0.33
<i>Occupational Therapy</i>	No change at 0.00%	0.00
<i>Ophthalmology</i>	Increased by 2.52%	0.21
<i>Optometry</i>	Decreased by 6.54%	0.15
<i>Orthopaedics &amp; Sports Med</i>	Increased by 11.44%	0.55
<i>Otolaryngology</i>	Increased by 1.62%	0.18
<i>Paediatrics</i>	Increased by 0.17%	0.03
<i>Pharmacy</i>	No change at 0.00%	0.00
<i>Physiotherapy</i>	Decreased by 14.66%	0.30
<i>Podiatry</i>	Increased by 8.79%	0.24
<i>Psychiatry</i>	Increased by 25.85%	0.34
<i>Psychology</i>	No change at 0.00%	0.00
<i>Speech &amp; Lang Pathology</i>	No change at 0.00%	0.00
<i>Surgery</i>	Increased by 6.07%	0.31
<i>Urology</i>	Increased by 14.61%	0.46



**Graph 4: 2017 Diagnostic Imaging Order Rates (Diagnostic Imaging Orders per Office Visit by Discipline)**



## Total Data Commentary

The data presented demonstrates a 3% increase in visits resulting in diagnostic imaging tests and a less than 1% decrease in visits leading to laboratory tests, over the course of the historical transaction-level data, for the health system. Visits are counted by select CPT codes and order counts are on orders made within 30 days of a visit.

The table below illustrates the total number of ordered diagnostic imaging tests and ordered laboratory tests, between 01 April 2013 and 31 March 2017.

	<b>FY2014</b>	<b>FY2015</b>	<b>FY2016</b>	<b>FY2017</b>
<b>Total Office Visits</b>	158,108	173,594	170,393 <sup>2</sup>	171,349
<b>Ordered Diagnostic Imaging Tests</b>	30,012	41,960	46,220 <sup>3</sup>	44,670
<b>Ordered Laboratory Tests</b>	121,867	122,468	156,209 <sup>4</sup>	137,873

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<sup>2</sup> FY2016 Utilization analysis of Office Visits is under review

<sup>3</sup> FY2016 Utilization analysis of Ordered Diagnostic Test is under review

<sup>4</sup> FY2016 Utilization analysis of Ordered Laboratory Tests is under review