# Oregon Hospital Payment Report: Diagnostic Imaging & Testing 2017

July 1st, 2019

Oregon Health Authority
Division of Health Policy & Analytics
Office of Health Analytics





# **Executive Summary**

# Oregon Hospital Payment Report: Diagnostic Imaging and Testing

The Oregon Hospital Payment Report is an annual report that contains median payment information from commercial insurers to hospitals for common inpatient and outpatient procedures. This fulfills the requirement set forth in Oregon Revised Statute (ORS) 442.466. This sub-report of the Oregon Hospital Payment Report contains payment information for diagnostic imaging and testing procedures only. Diagnostic imaging and testing are procedures to collect pictures, video, or heart signals in a non-invasive manner in order to diagnose disease. Payment information for outpatient procedures, inpatient procedures, procedures relating to pregnancy, and radiation and chemotherapy procedures are found in separate sub-reports.

Due to the U.S. Supreme Court's March 2016 ruling in Gobeille v. Liberty Mutual Insurance Company, the Oregon Health Authority may no longer require self-insured Employment Retirement Income Security Act (ERISA) covered health plans to submit claims. It is estimated that Oregon's All Payer All Claims (APAC) database has over 300,000 fewer covered lives reported from the commercial market since the Gobeille decision. As a result, the number of procedures reported has decreased, which in turn affects whether data can be reported.

Highlights of the diagnostic imaging and testing sub-report are:

- Most procedures show sizable variations in paid amounts. Variation is seen both within and between hospitals.
- Nuclear medicine examinations of the cardiovascular system had the highest median paid amounts in 2017 at \$2,446 per session.
- MRI with contrast of the abdomen and pelvic area had the largest increase in median paid amount, increasing by \$293 from 2016.
- Electrocardiograph (ECG) stress test had the largest percentage increase, increasing by 22% from 2016.
- The weighted average change in median paid amounts for diagnostic imaging and testing was an increase of \$17. The range of change in median amount paid was -\$1,006 to \$293.
- CT scan with contrast: Abdomen is an added procedure reported in the 2017 report that was not in the 2016 report.

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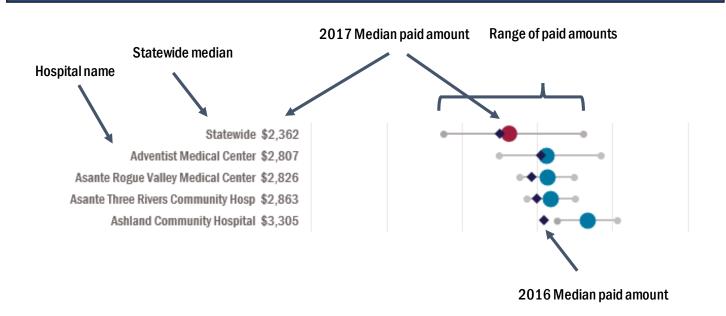
Procedures for 2017 are broken into several smaller reports. This report contains information for diagnostic imaging and testing. Other procedure types may be found in their own sub-report.

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# **How to Interpret This Report**

This report presents information on the amount paid for outpatient diagnostic imaging and testing at hospitals in Oregon. The data on these paid amounts come from submissions made to Oregon's All Payer All Claims database (APAC) from commercial reporting entities. The range of typical paid amounts for each procedure is included at the statewide and hospital levels, and a median amount paid is also displayed. The median is the middle value in the range of typical paid amounts.

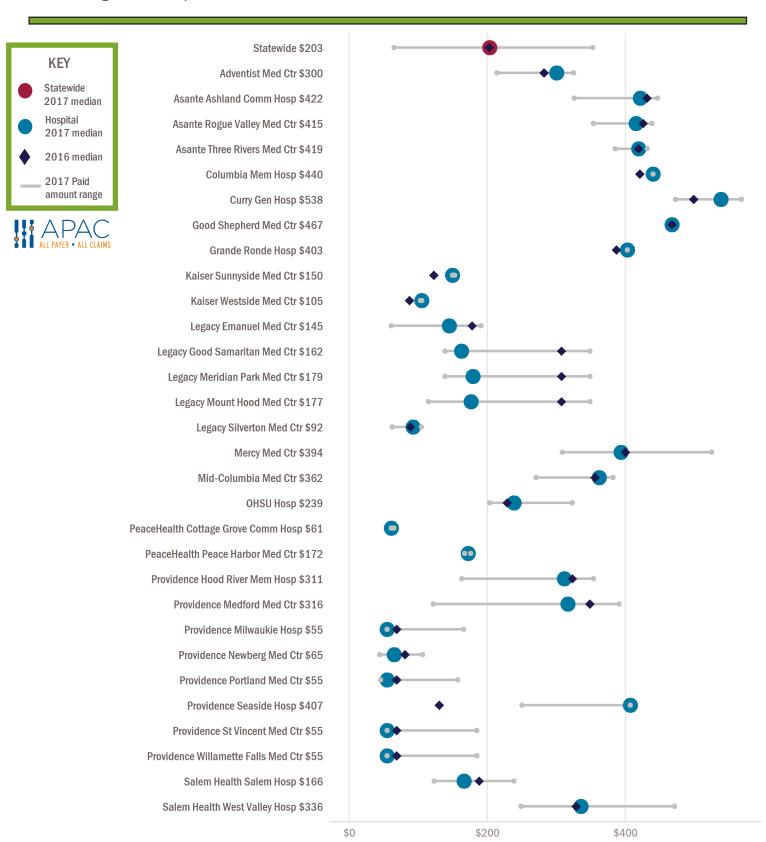


The graphs included in this report contain four main points of information: the hospital name, the 2016 and 2017 median paid amounts, and the range of paid amounts. The hospital name is the name of the hospital facility that performed the procedure. Only procedures that were performed at one of Oregon's sixty acute care hospitals are included in this report. The 2017 median paid amount is reported next to the hospital name, and is also represented on the graph as the large dot. The statewide median paid amounts is provided at the top of every graph. The median represents the point that divides the paid amounts in two parts, half above and half below the median amount. This is also known as the 50th percentile. The range of paid amounts is represented in the charts as the small gray dots and the gray line. This range excludes outliers in the data and is also known as the interquartile range. It is the range between the lower 25th percentile and the upper 75th percentile. By removing the lower 25% of the data and upper 25% of the data, we remove outliers that can skew the median values. This range represents the middle 50% of all paid amounts. The 2016 median paid amount is shown for reference as the dark diamond. Hospitals that do not have a 2016 median paid amount mean that procedures in that year did not qualify for reporting based on established methodology.

The median amount (large dot in the charts) is not necessarily the center point of the interquartile range (gray line and dots). This is because paid amounts are not evenly distributed across the range. It is common to see paid amounts clustered around certain dollar amounts resulting in the median being pulled off center. The variance in the paid amounts within a hospital come from the different co-payment and deductible amounts paid by patients, as well as different levels of severity in the patient's condition. The differences in paid amount between hospitals include the above reasons, as well as each hospital's negotiated payment rate with commercial insurance companies.

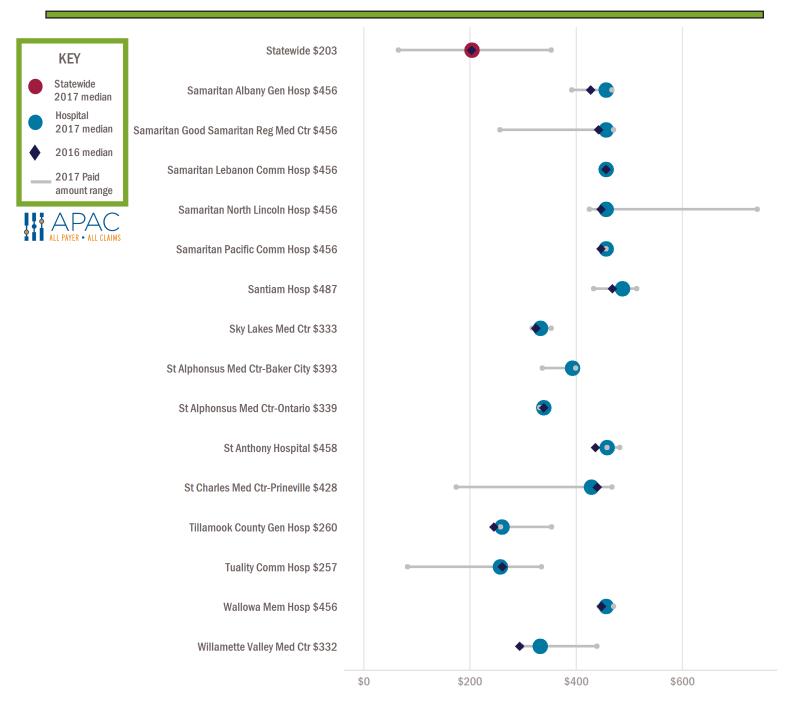
# **Bone Study**

A bone study is a specialized X-ray examination of the skeleton used to determine bone density, bone age, bone length, or other characteristics of the bone. The most common bone study procedure is the Dual Energy X-ray Absorptiometry or DEXA scan. The DEXA scan measures bone mineral density and is used to diagnose osteoporosis.



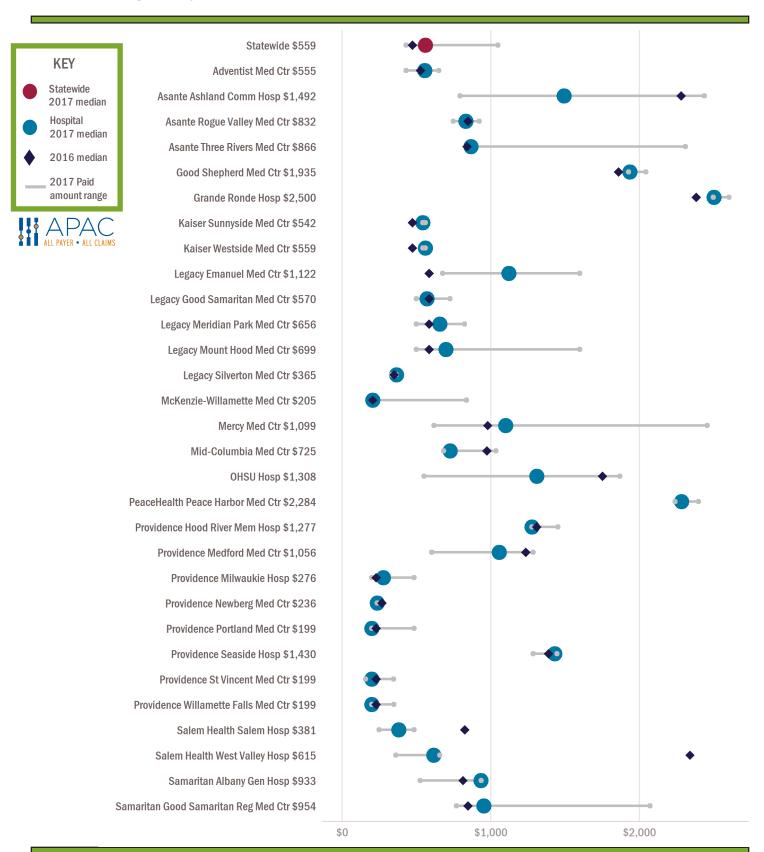
# **Bone Study Continued**

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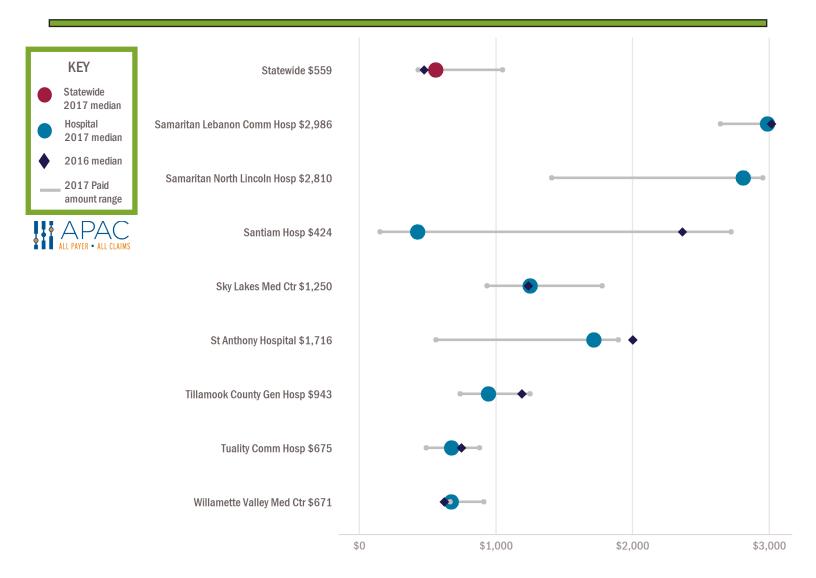
# CT Scan: Abdomen

A computerized tomography scan (CT scan) is a specialized way of creating images by taking multiple X-rays from many different angles around the body. A computer combines all the images together into cross-sectional views of the body. The paid amounts below are for CT scans of the abdominal and pelvic region and mostly include examinations of the digestive system. These scans do not include the use of a contrast material.



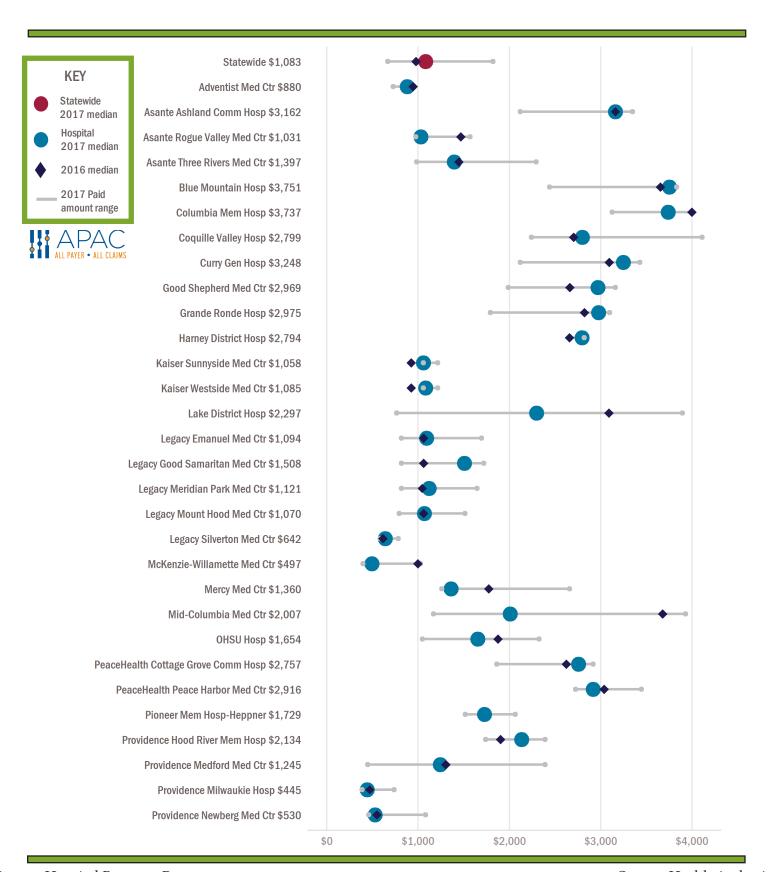
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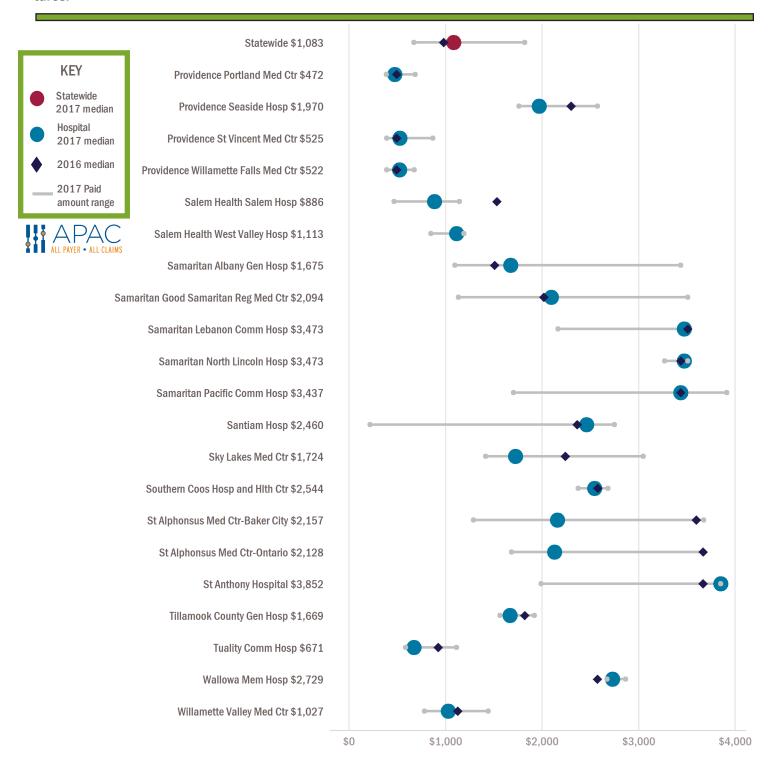
# **CT Scan with Contrast: Abdomen**

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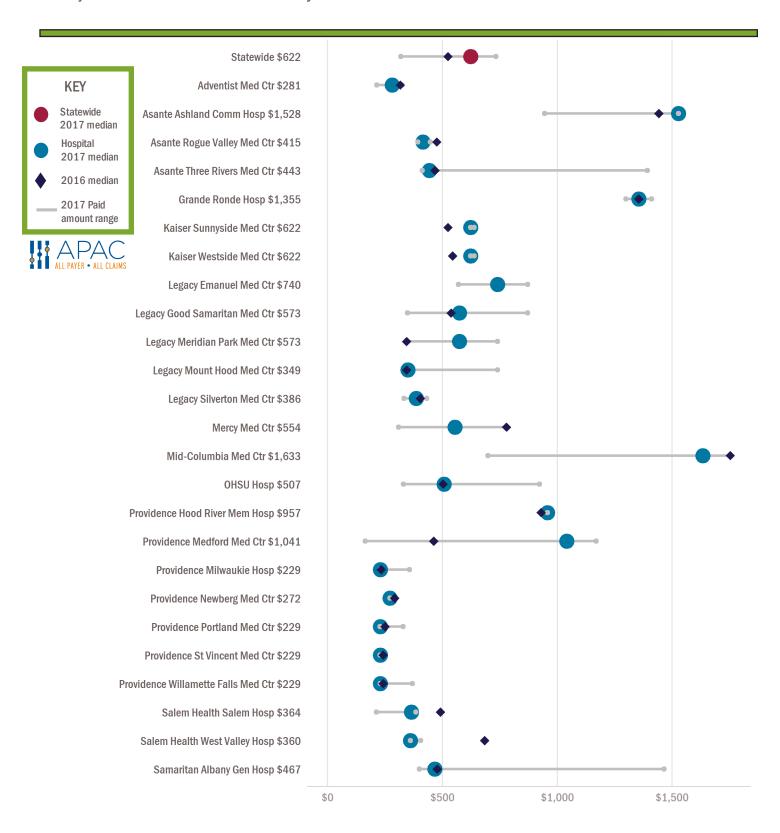
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#### **CT Scan: Chest**

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# **CT Scan: Chest Continued**

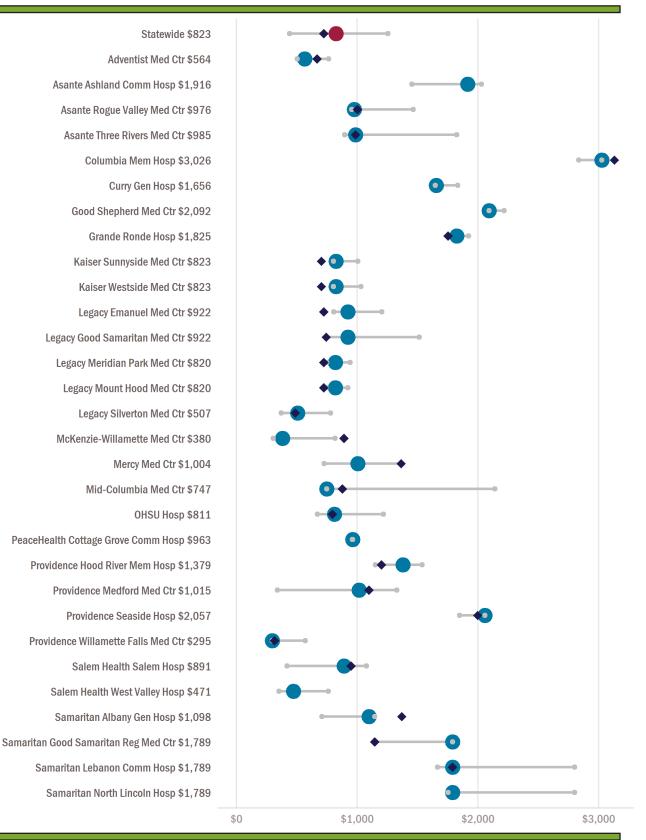
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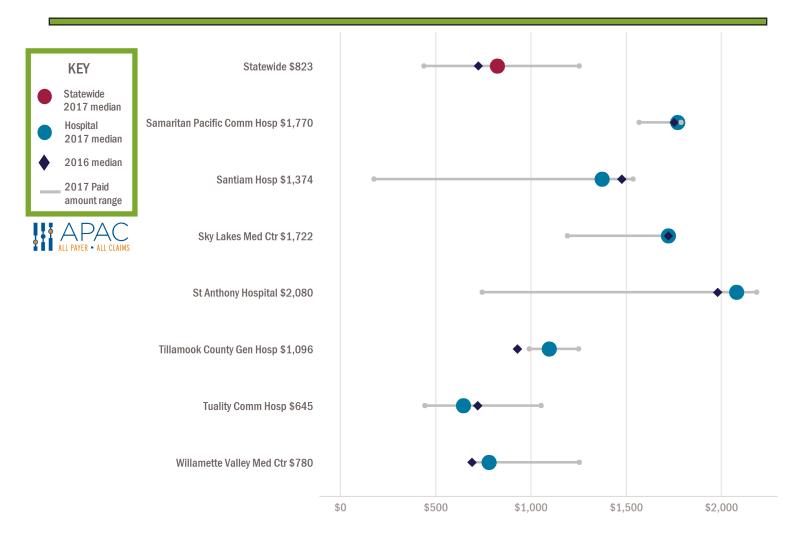
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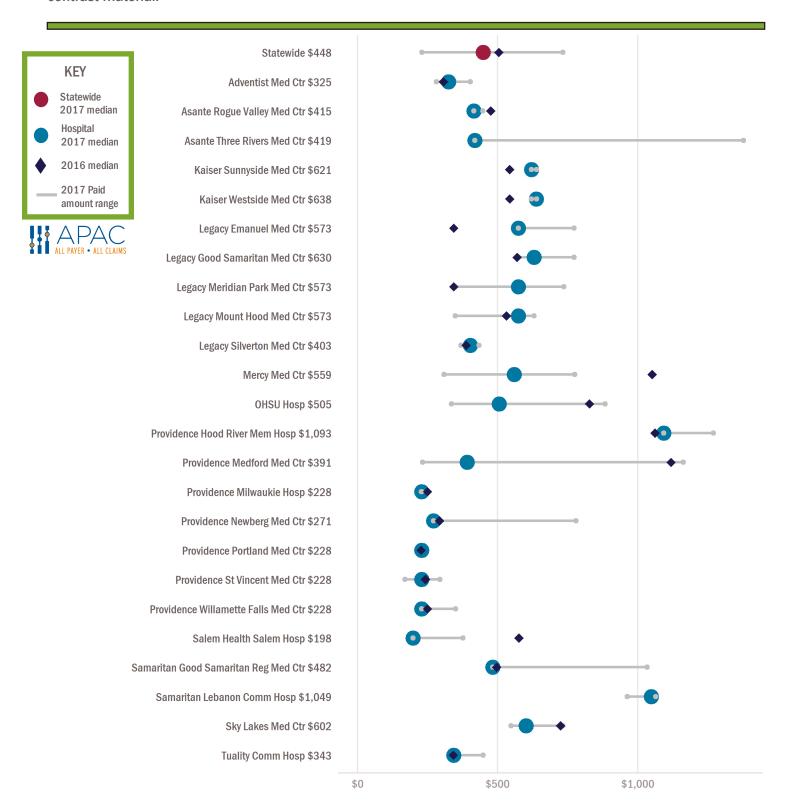
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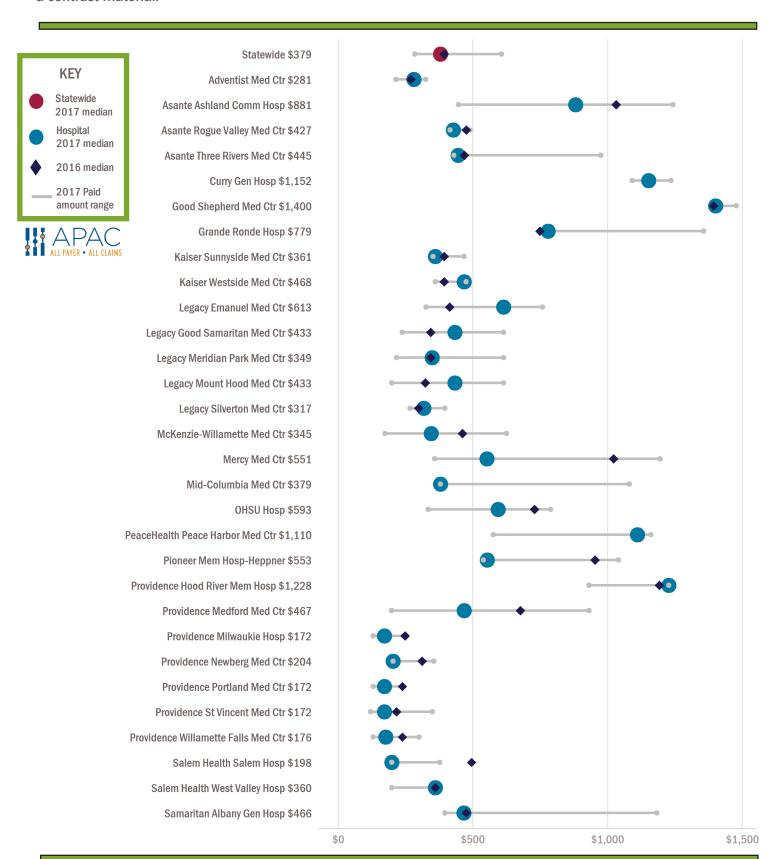
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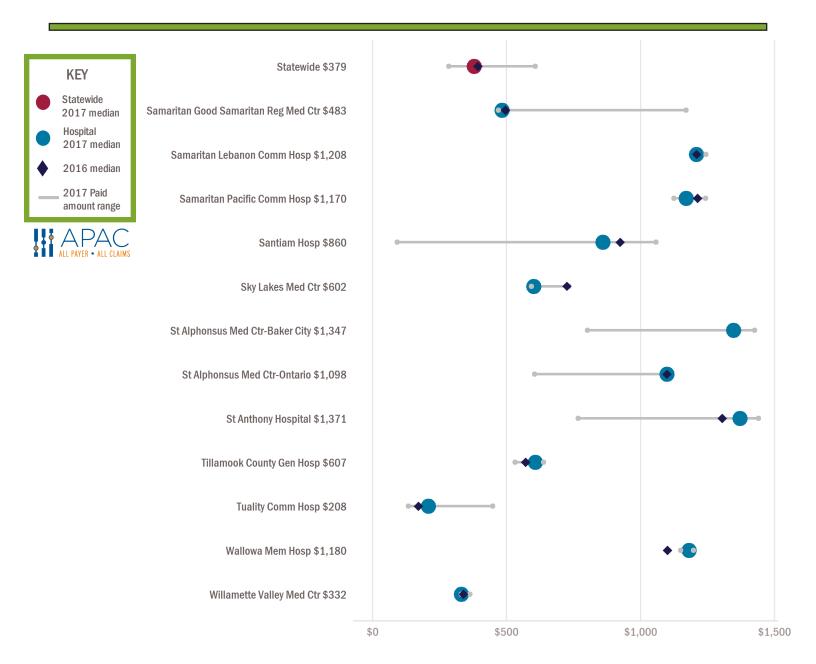
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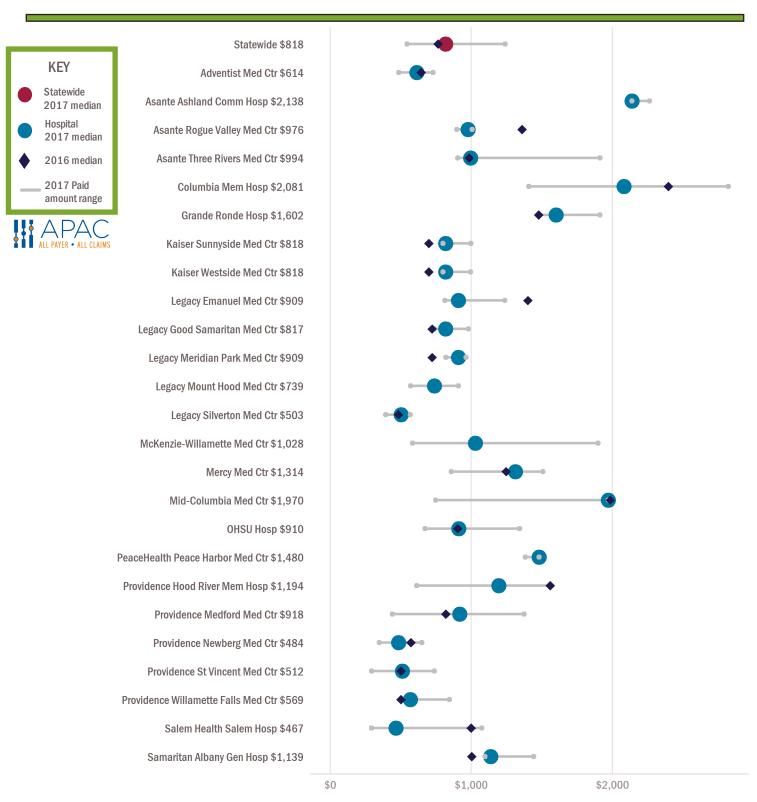
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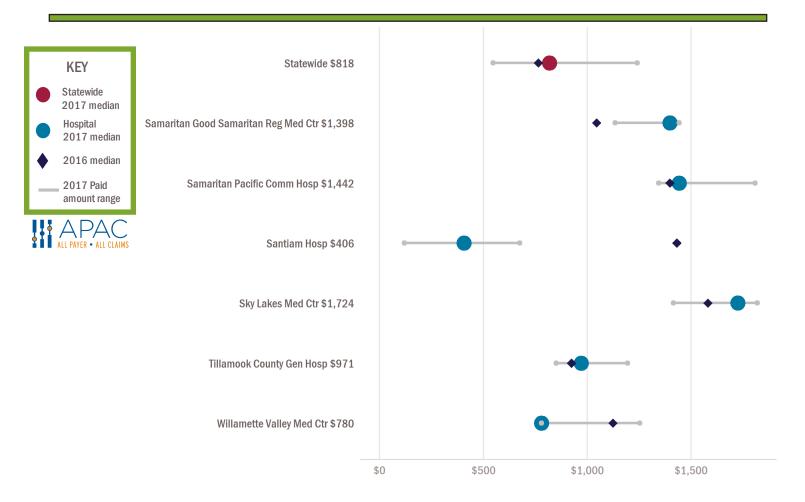
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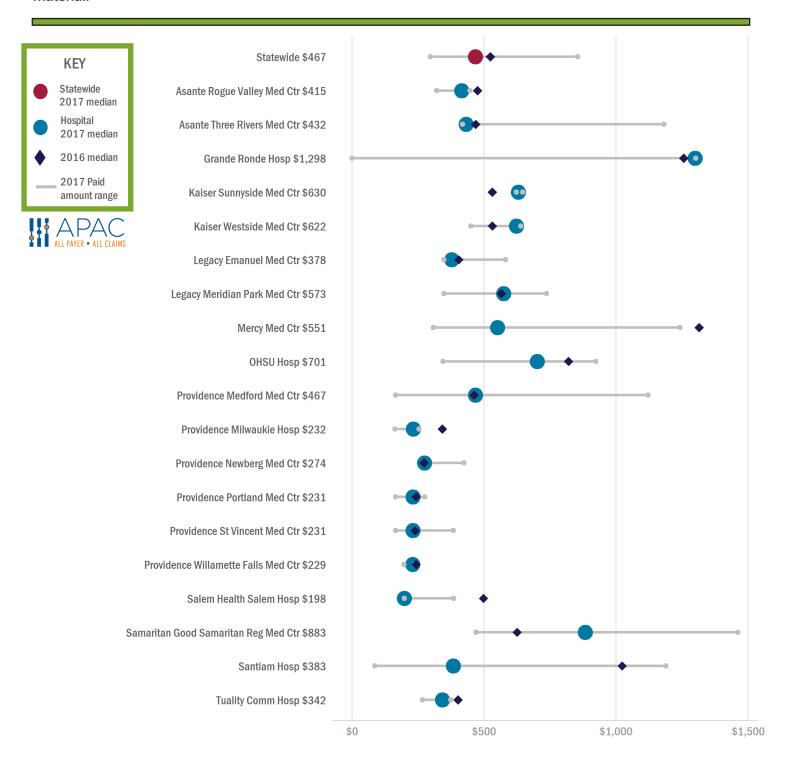
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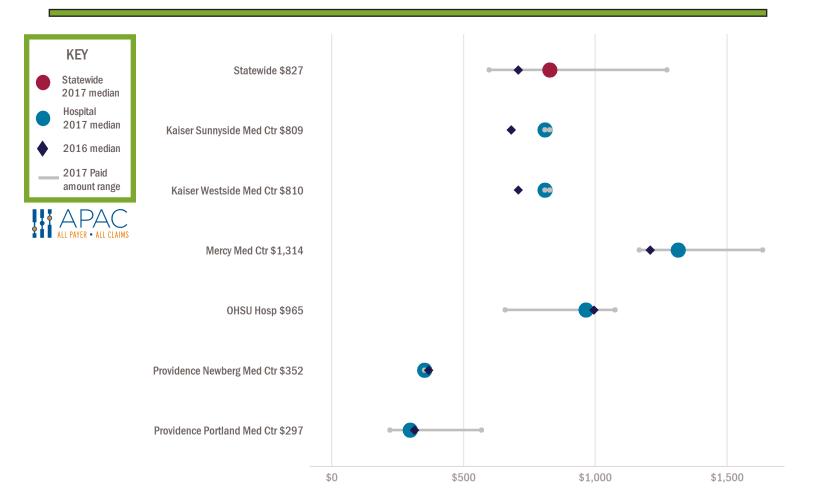
# CT Scan: Spine

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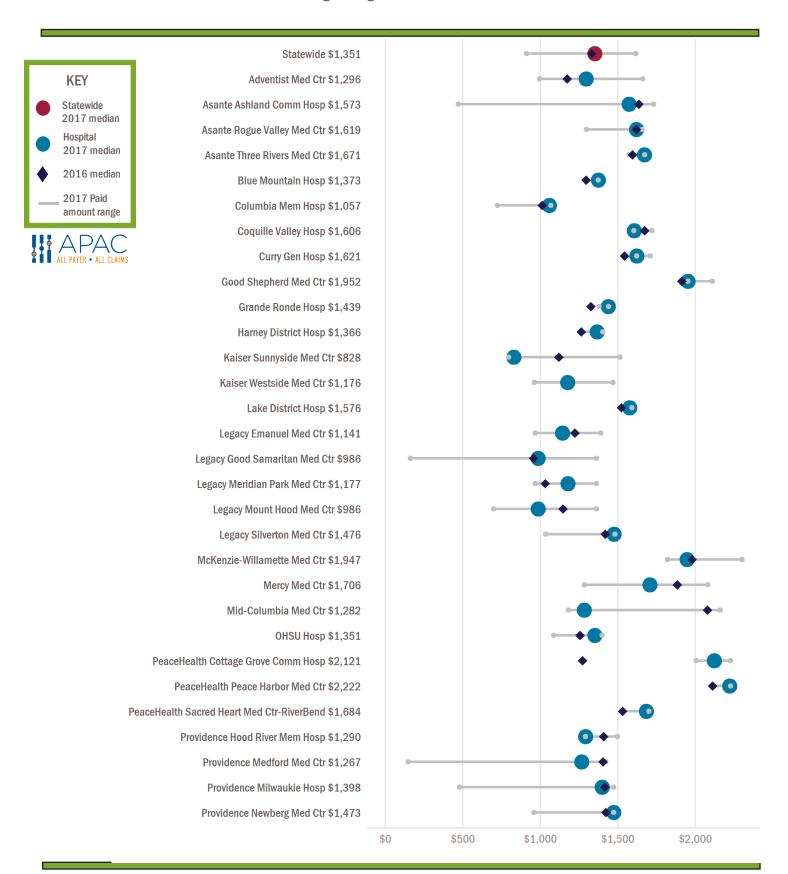
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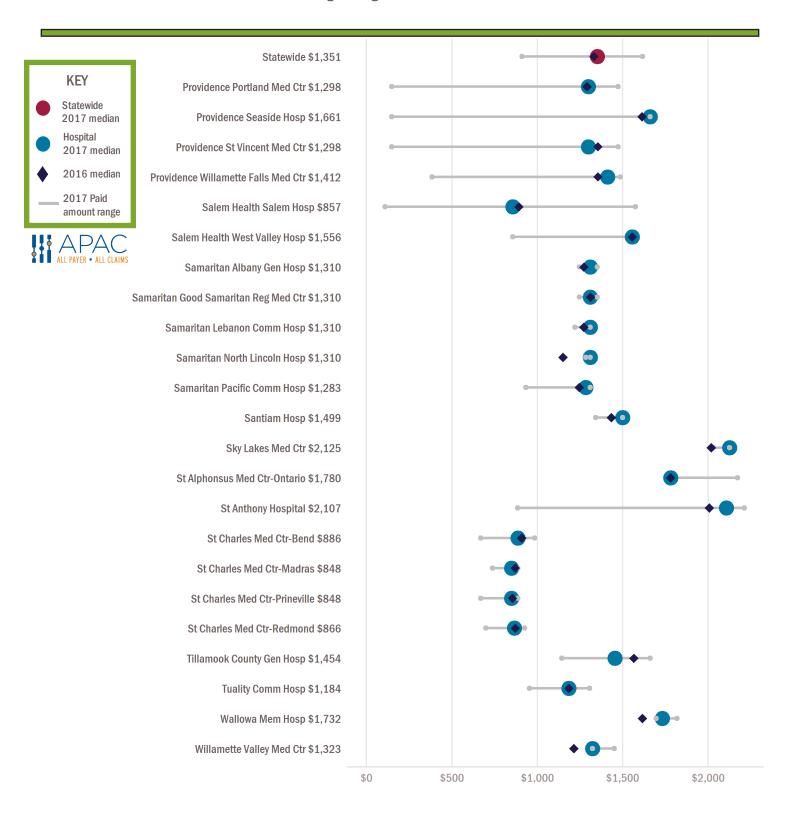
# **Echocardiography**

An echocardiograph, or echo, is a special type of ultrasound used to examine the heart. An echo uses sound waves to generate images of the heart to diagnose heart diseases and evaluate heart function. Echoes can also be used to measure the volume of blood that is moving through the heart and blood vessels.



# **Echocardiography Continued**

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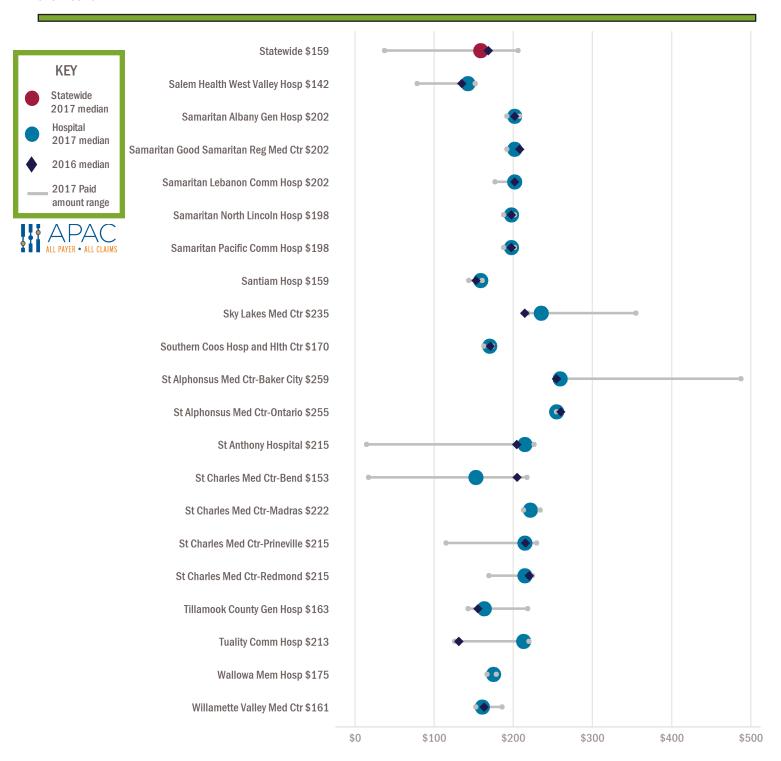
# Electrocardiography

Electrocardiography, or ECG, is the process of recording the electrical activity of the heart. In the standard ECG test, ten electrodes are placed on a patient's chest and limbs. The rhythm of the heart beat is recorded as a graph of the voltage the heart produces as it beats. Doctors use the graph to evaluate problems with normal rhythm of the heart.



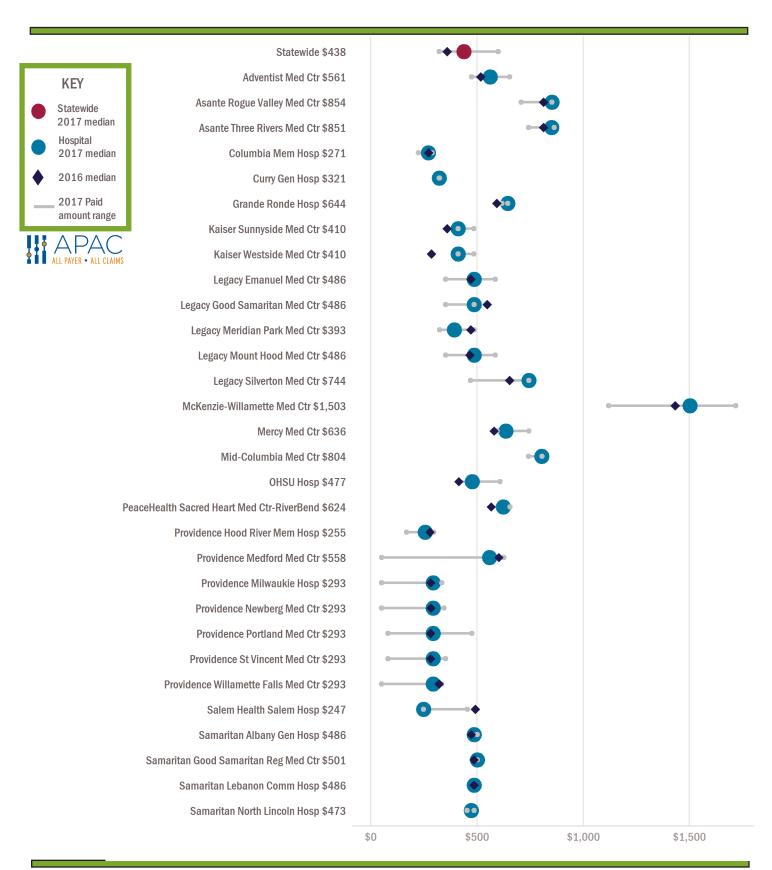
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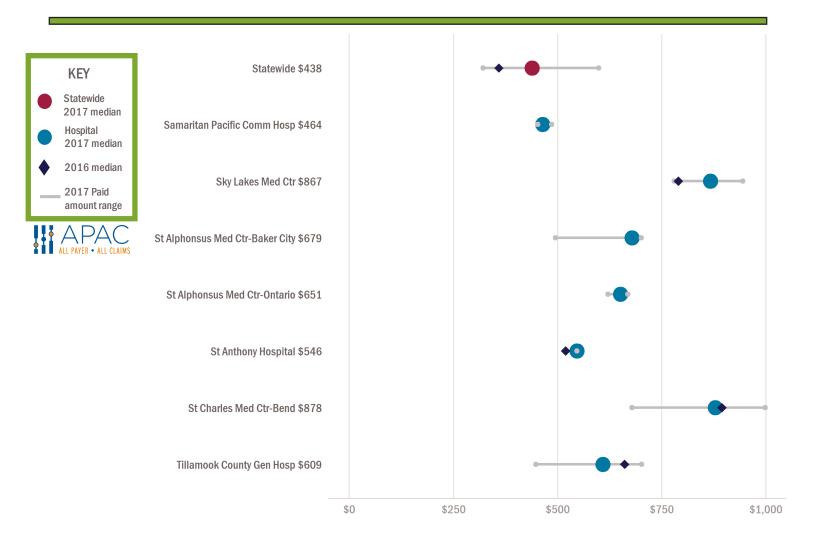
# **ECG Stress Test**

An ECG stress test is a method of collecting electrocardiograph data while intentionally stressing the heart. This is done by having the patient walk or jog on a treadmill, or by injecting drugs to speed the heart up. This test detects heart problems that only surface when the heart rate increases.



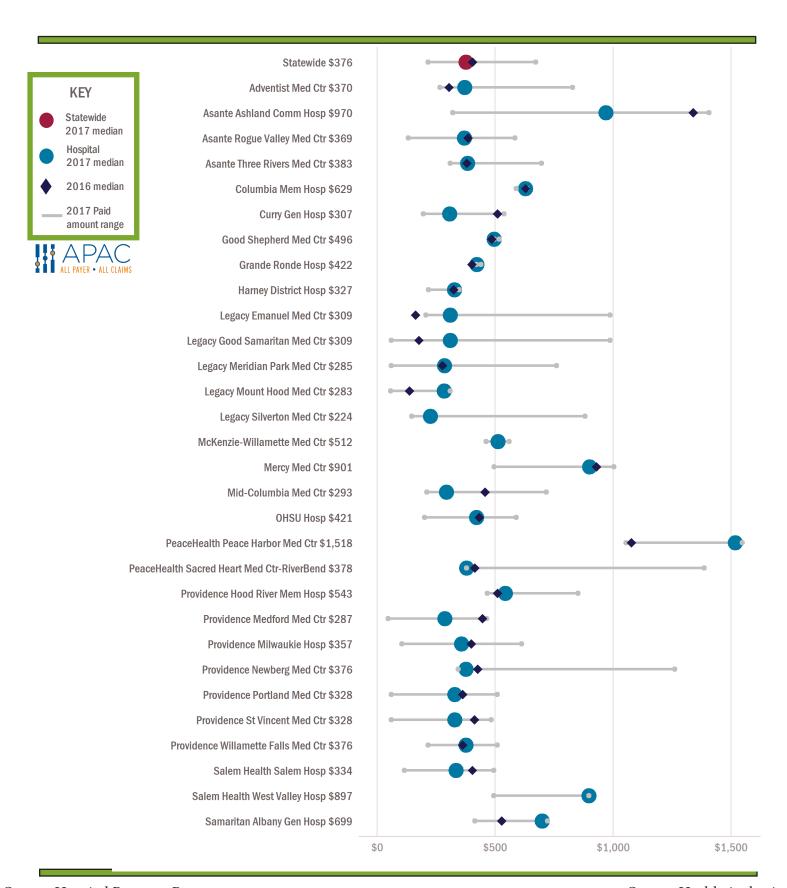
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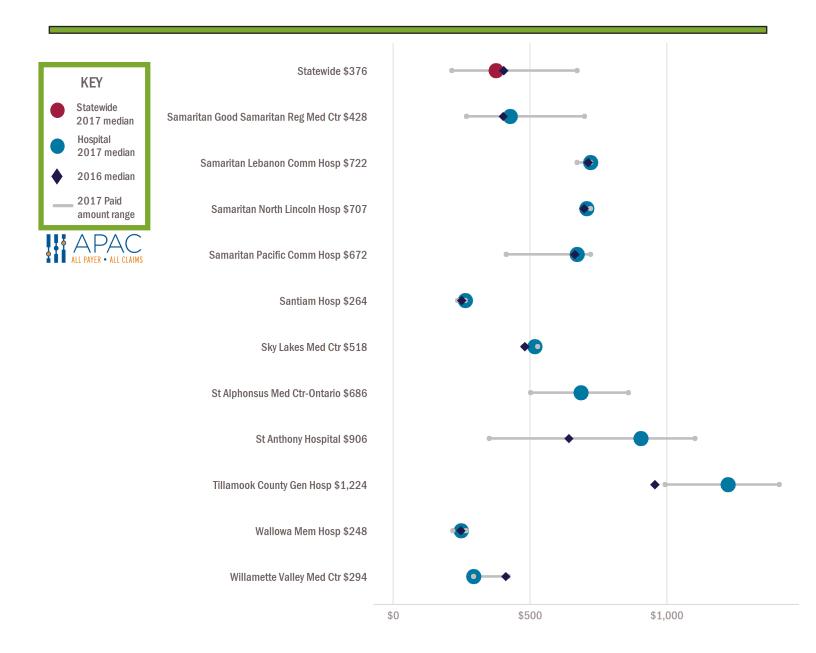
# **Mobile Cardiac Telemetry**

Mobile cardiac telemetry is attaching a wearable, continuously monitoring, electrocardiograph. Patients usually wear the mobile heart monitor for 24 or 48 hours. It detects heart issues that occur sporadically or randomly.



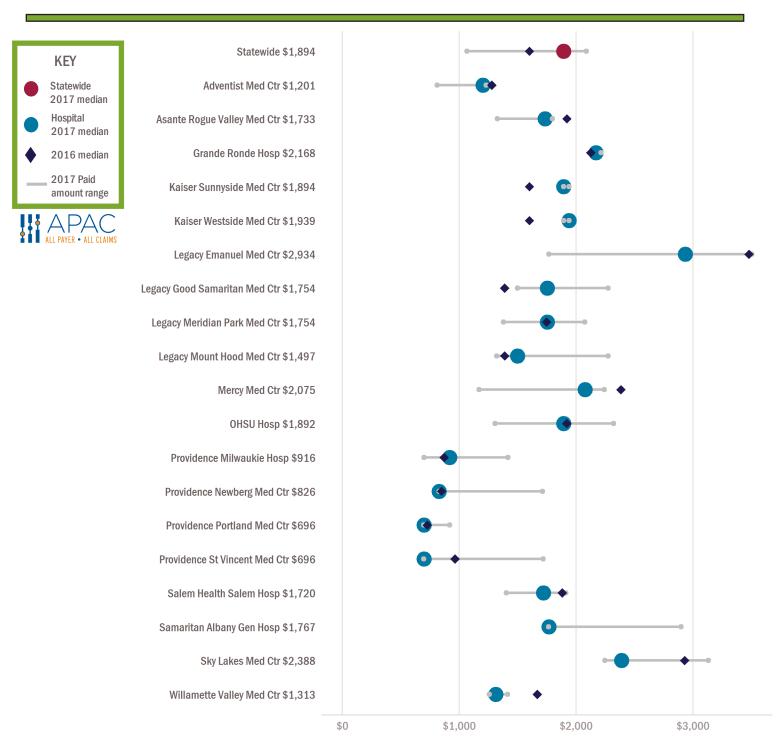
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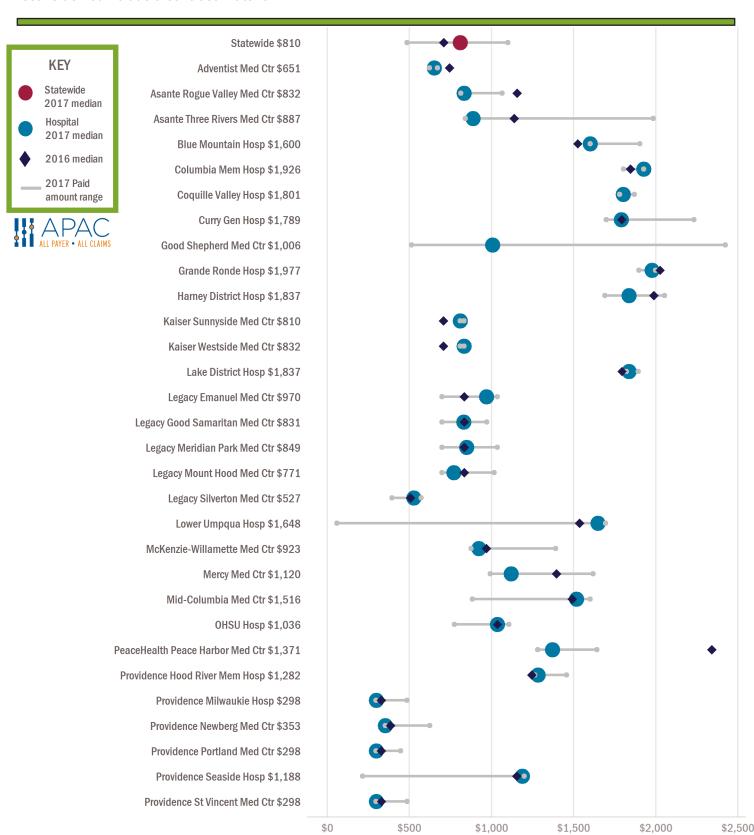
# **MRI** with Contrast: Abdomen

A Magnetic Resonance Imaging (MRI) scan is a method of imaging the body using magnetic fields and radio waves. While CT scans rely on X-rays to create images, MRIs record the radio frequencies emitted from body tissue when surrounded by a strong magnetic field. The paid amounts are for MRI scans for the abdomen and pelvic area and mostly include examinations of the digestive system. These scans include injection of a contrast material.



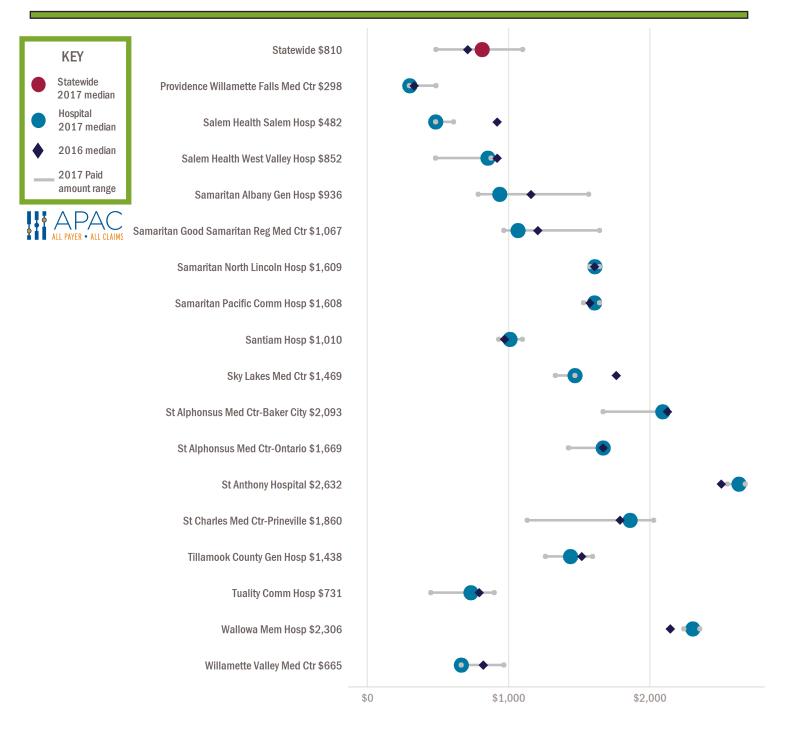
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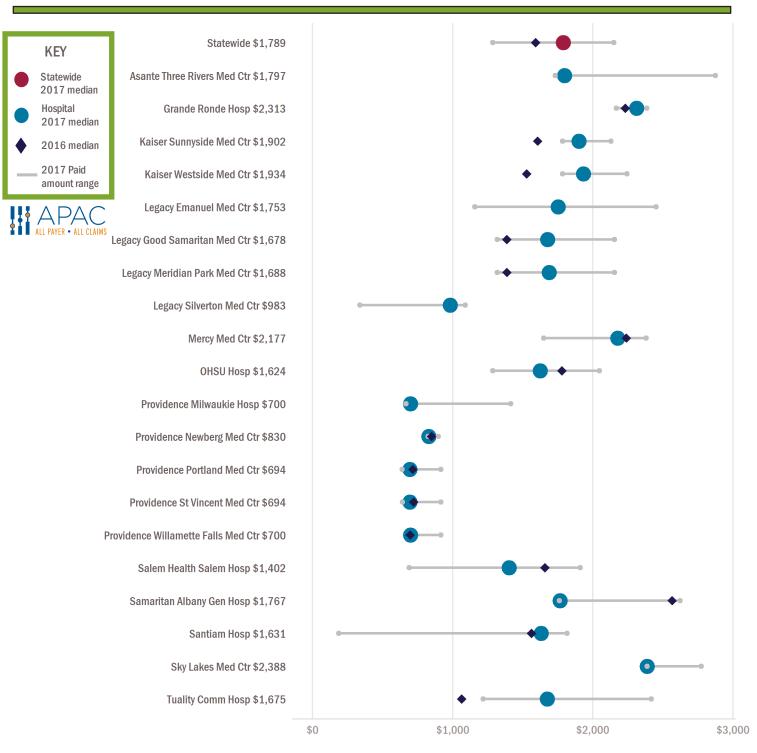
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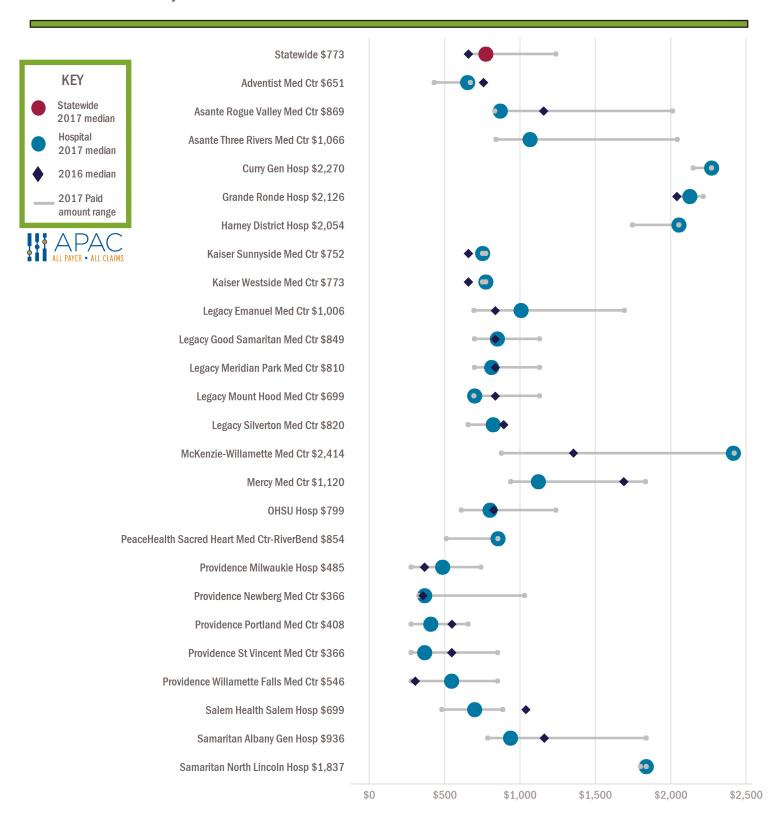
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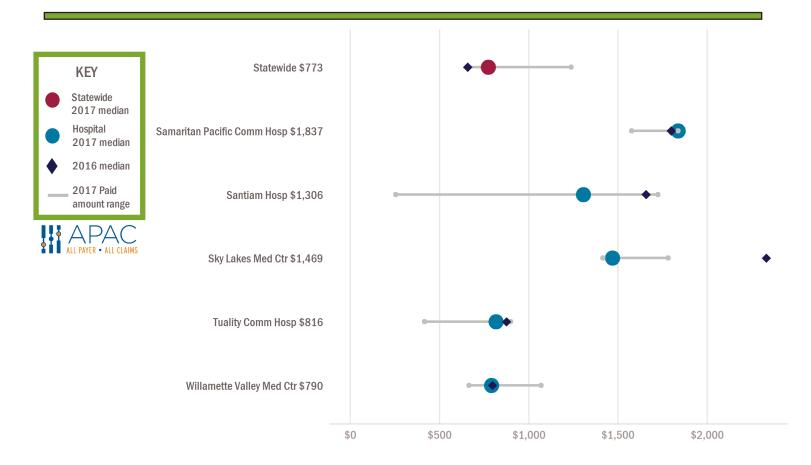
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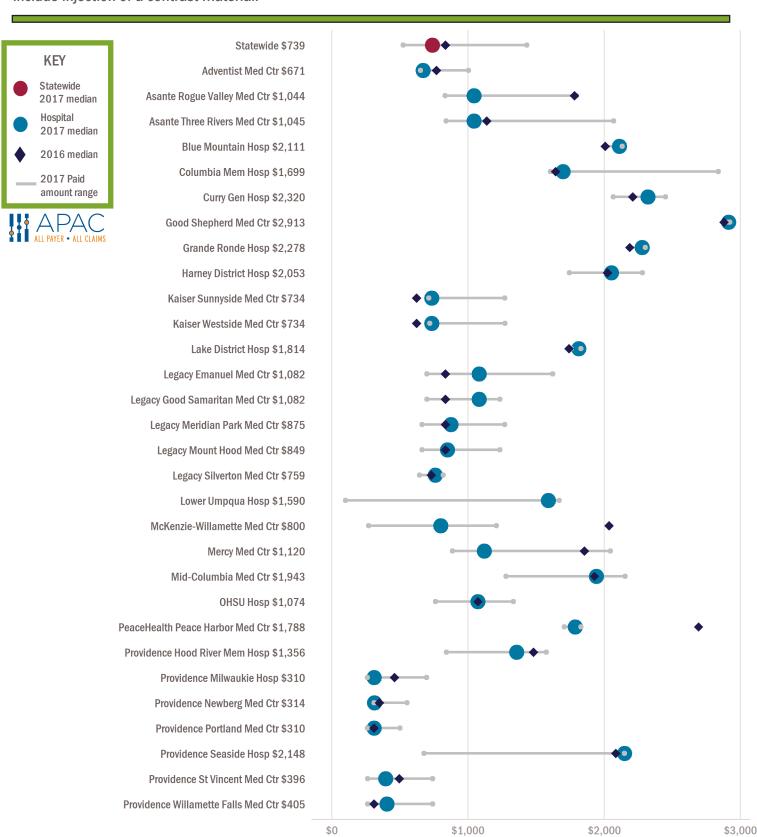
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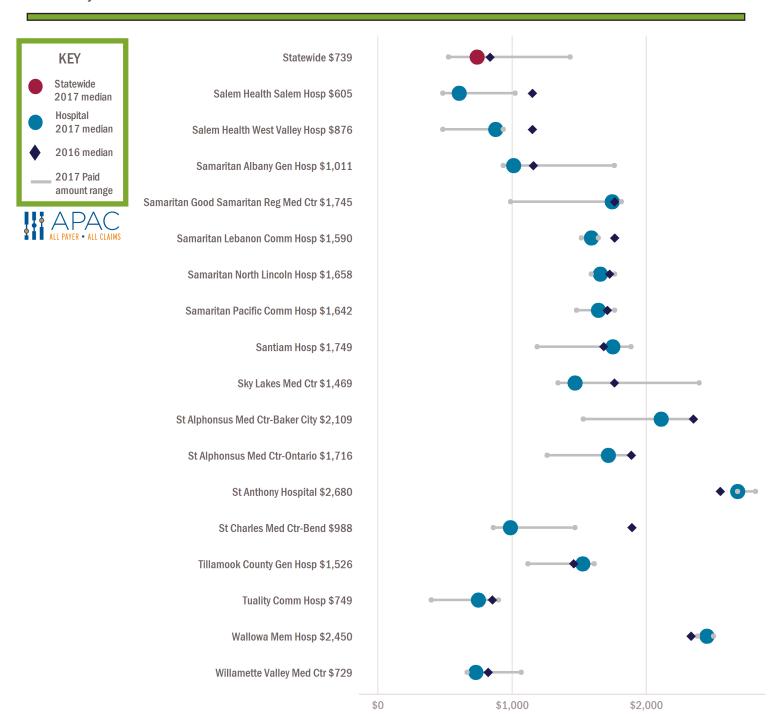
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# **MRI: Spine Continued**

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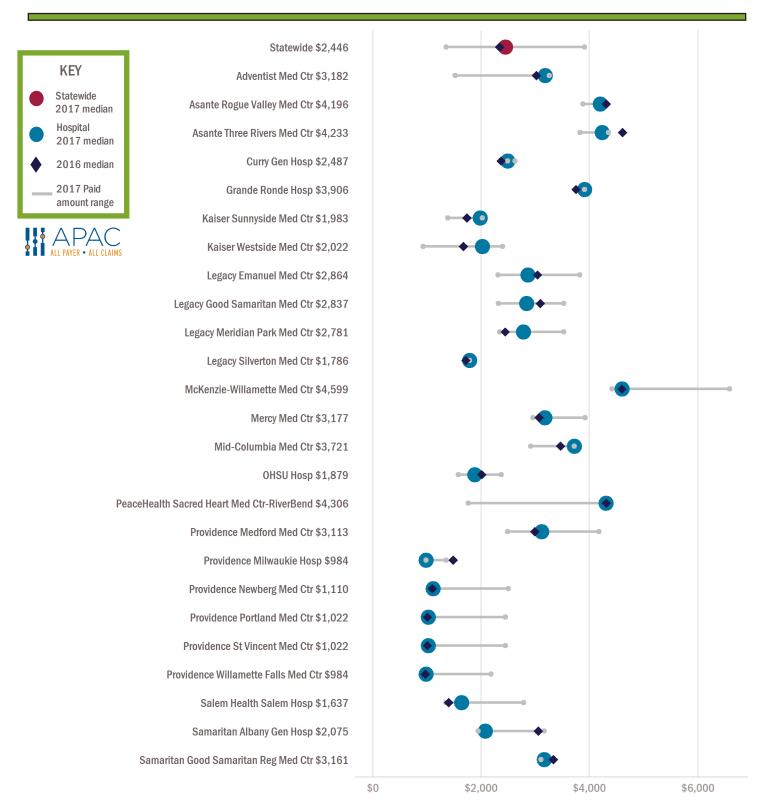
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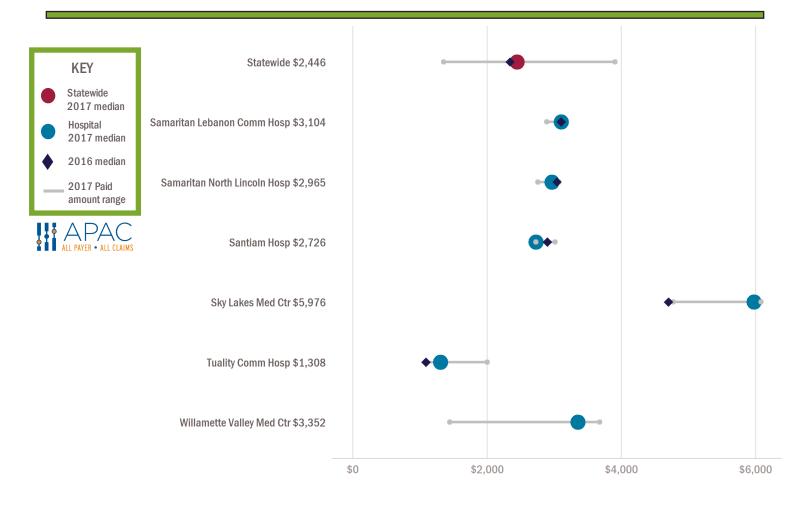
#### **Nuclear Medicine: Cardiovascular**

Nuclear Medicine is a method of imaging and diagnosing diseases by using radioactive substances. A very mild-ly radioactive substance is injected into the body part in question and special cameras track the progress of the substance through the body. The listed paid amounts are for nuclear medicine examinations of the cardiovascular system and heart. Nuclear medicine examination of the heart are used to diagnose coronary artery disease.



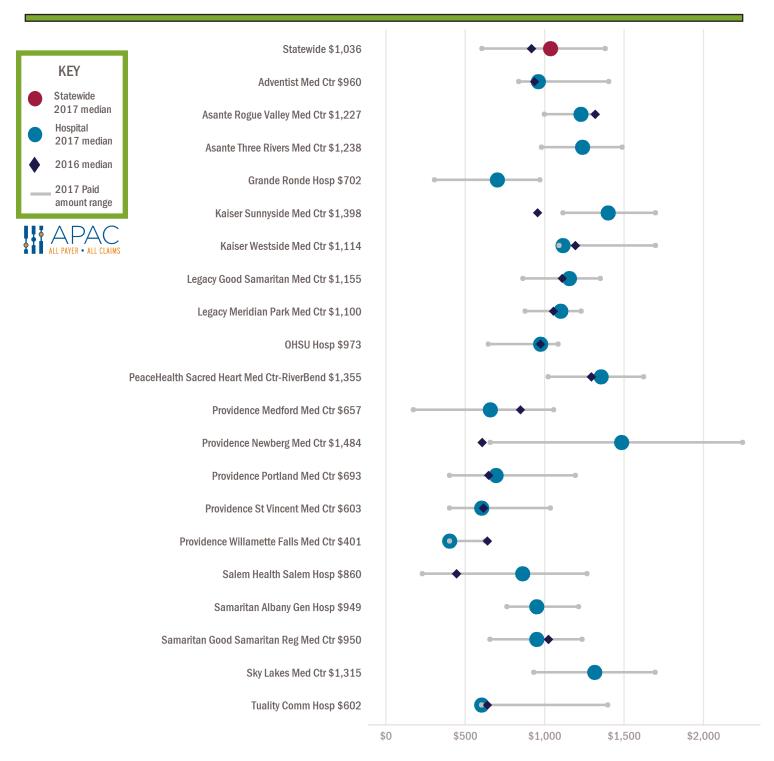
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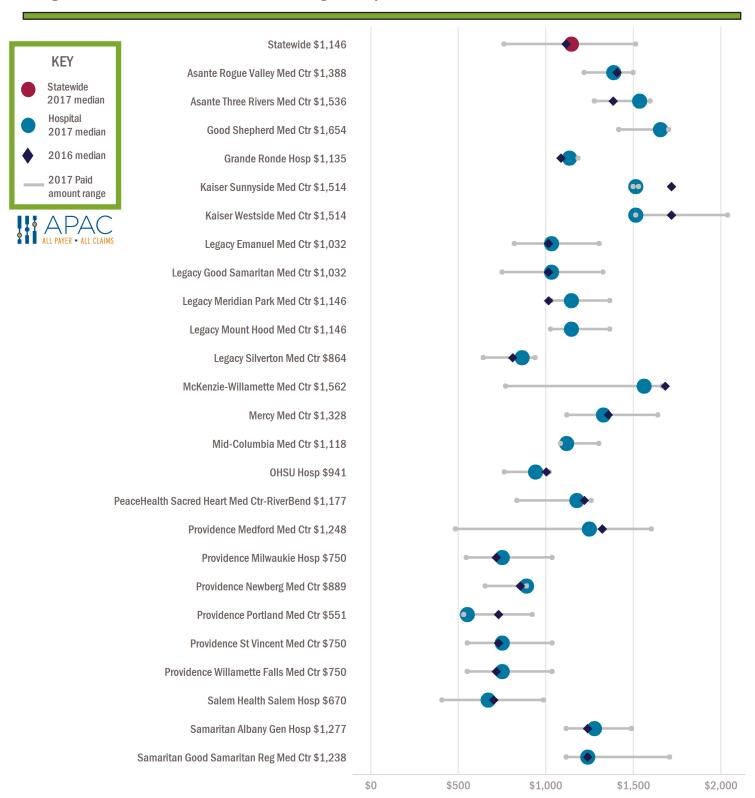
## **Nuclear Medicine: Endocrine System**

Nuclear Medicine is a method of imaging and diagnosing diseases by using radioactive substances. A very mildly radioactive substance is injected into the body part in question and special cameras track the progress of the substance through the body. The listed paid amounts are for nuclear medicine examinations of the endocrine system. Thyroid scans are the most common nuclear medicine examination of the endocrine system.



# **Nuclear Medicine: Digestive System**

Nuclear Medicine is a method of imaging and diagnosing diseases by using radioactive substances. A very mildly radioactive substance is injected into the body part in question and special cameras track the progress of the substance through the body. The listed paid amounts are for nuclear examinations of the digestive system. Liver scans and gallbladder scans are the most common digestive system nuclear medicine examinations.



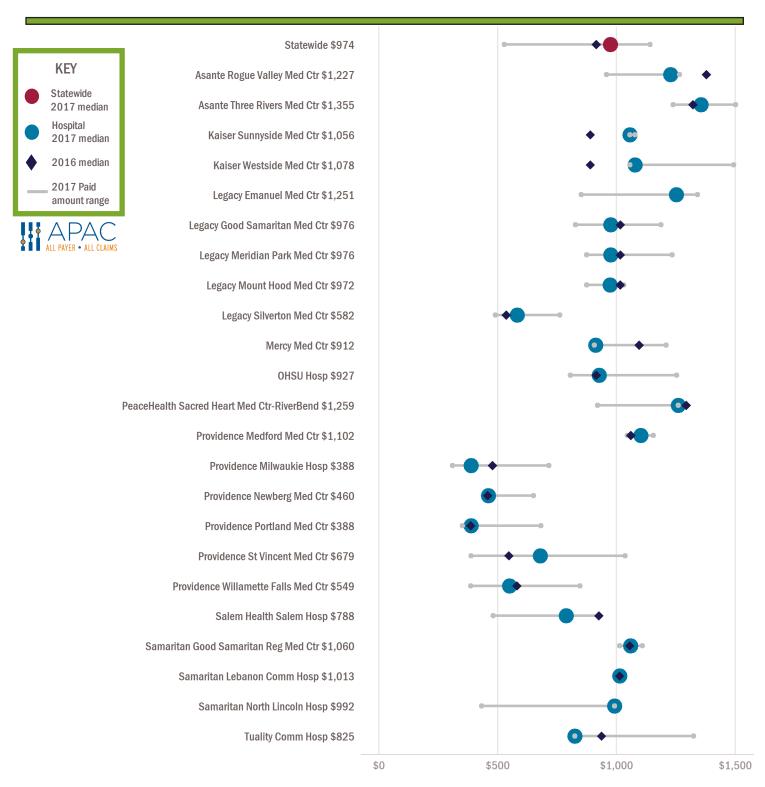
# **Nuclear Medicine: Digestive System Continued**

Nuclear Medicine is a method of imaging and diagnosing diseases by using radioactive substances. A very mildly radioactive substance is injected into the body part in question and special cameras track the progress of the substance through the body. The listed paid amounts are for nuclear examinations of the digestive system. Liver scans and gallbladder scans are the most common digestive system nuclear medicine examinations.



#### **Nuclear Medicine: Musculoskeletal**

Nuclear Medicine is a method of imaging and diagnosing diseases by using radioactive substances. A very mild-ly radioactive substance is injected into the body part in question and special cameras track the progress of the substance through the body. The listed paid amounts are for nuclear examinations of the musculoskeletal system. Bone scans, used to find very small fractures or tumors in the bones, are the most common nuclear medicine examination of the musculoskeletal system.

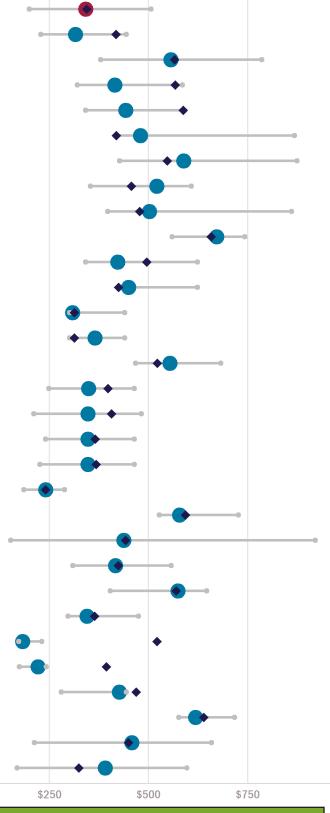


#### **Ultrasound**

An ultrasound, or sonography, is a method of creating images using sound waves. A device emits sound at an extremely high frequency and then records the sound waves as they reflect off structures in the body. A computer interprets those sound waves and creates an image. Ultrasounds listed here do not include fetus examinations as it relates to pregnancy, or specialized ultrasounds such as echocardiographs.







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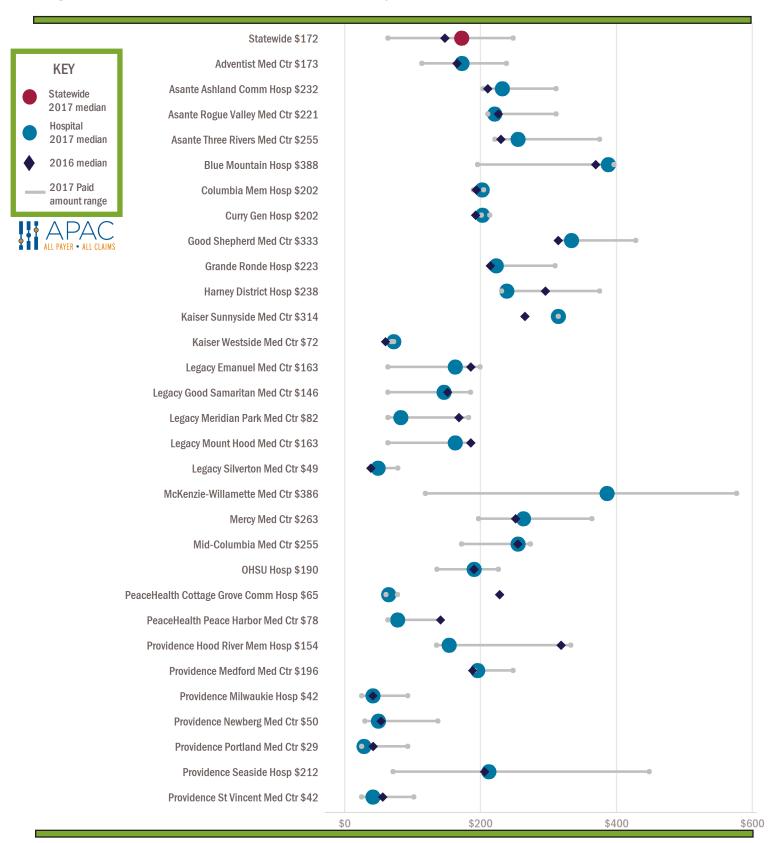
#### **Ultrasound Continued**

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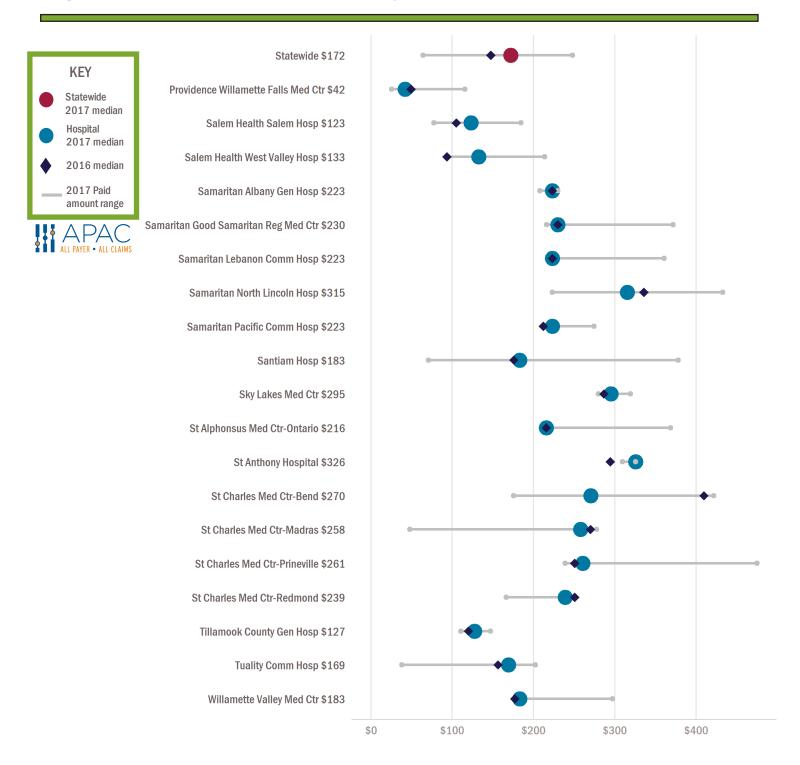
## X-ray: Abdomen

An X-ray is a method of imaging the body by exposing it to a small amount of electromagnetic radiation. Special undeveloped film is placed behind the body part that is to be imaged. The X-ray machine then emits radiation towards the body and film, causing the film to develop. More dense areas of the body - such as bones - absorb or block more of the radiation, causing those areas of the film to be more underdeveloped, thus creating a detailed image of the bones. The paid amounts listed are for X-rays of the abdominal and pelvic area.



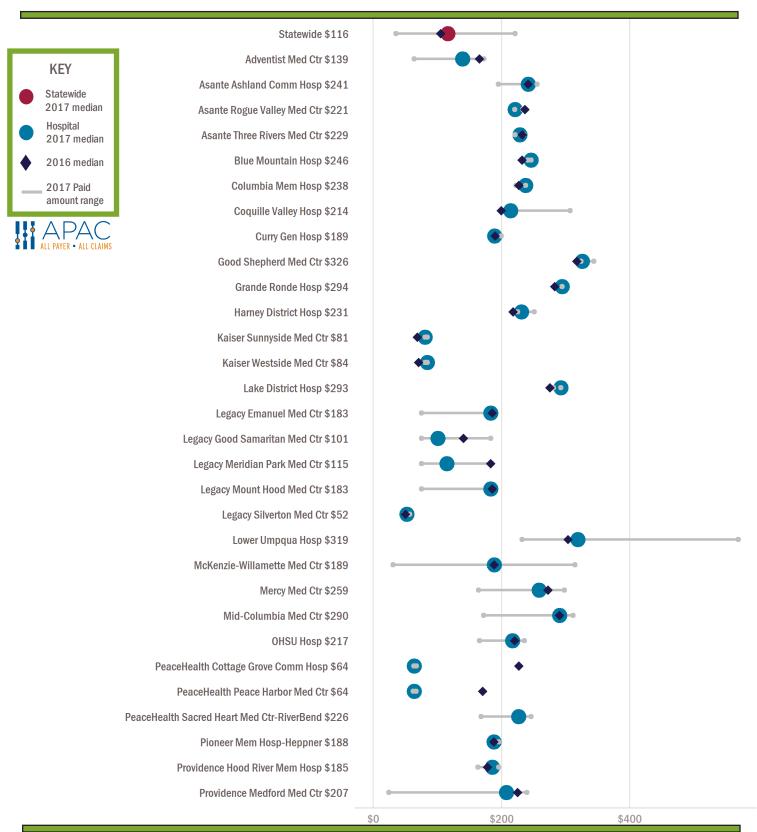
# X-ray: Abdomen Continued

An X-ray is a method of imaging the body by exposing it to a small amount of electromagnetic radiation. Special undeveloped film is placed behind the body part that is to be imaged. The X-ray machine then emits radiation towards the body and film, causing the film to develop. More dense areas of the body - such as bones - absorb or block more of the radiation, causing those areas of the film to be more underdeveloped, thus creating a detailed image of the bones. The paid amounts listed are for X-rays of the abdominal and pelvic area.



#### X-ray: Chest

An X-ray is a method of imaging the body by exposing it to a small amount of electromagnetic radiation. Special undeveloped film is placed behind the body part that is to be imaged. The X-ray machine then emits radiation towards the body and film, causing the film to develop. More dense areas of the body - such as bones - absorb or block more of the radiation, causing those areas of the film to be more underdeveloped, thus creating a detailed image of the bones. The paid amounts listed are for X-rays of the chest.



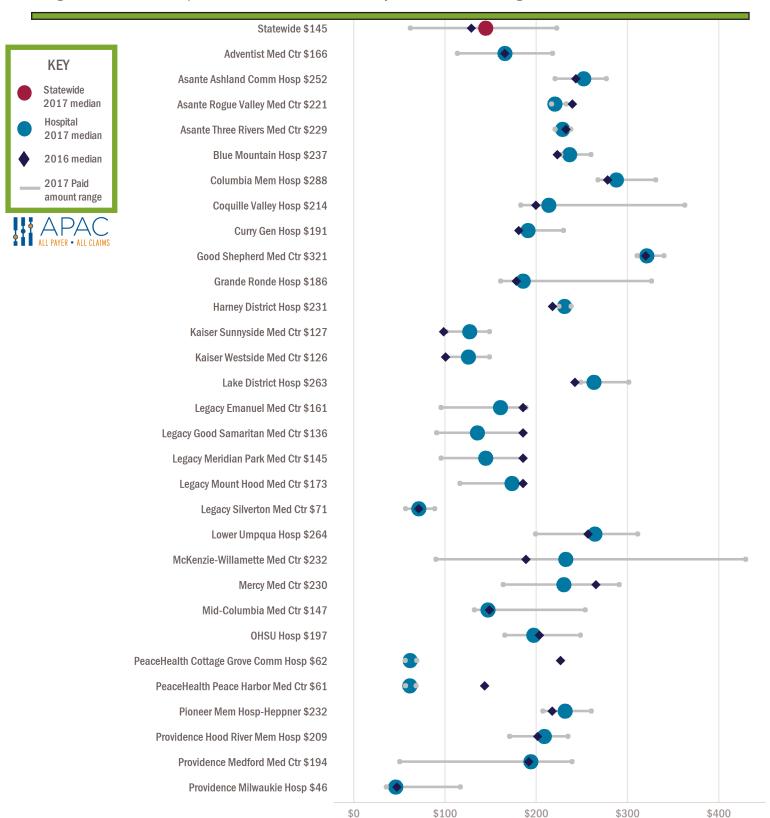
## X-ray: Chest Continued

An X-ray is a method of imaging the body by exposing it to a small amount of electromagnetic radiation. Special undeveloped film is placed behind the body part that is to be imaged. The X-ray machine then emits radiation towards the body and film, causing the film to develop. More dense areas of the body - such as bones - absorb or block more of the radiation, causing those areas of the film to be more underdeveloped, thus creating a detailed image of the bones. The paid amounts listed are for X-rays of the chest.



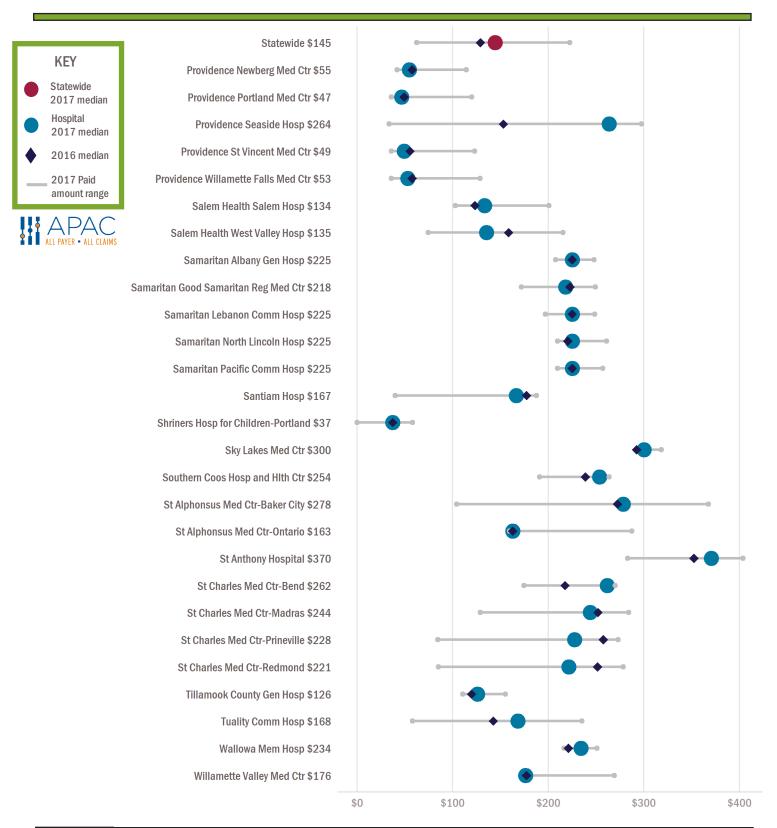
## X-ray: Extremities

An X-ray is a method of imaging the body by exposing it to a small amount of electromagnetic radiation. Special undeveloped film is placed behind the body part that is to be imaged. The X-ray machine then emits radiation towards the body and film, causing the film to develop. More dense areas of the body - such as bones - absorb or block more of the radiation, causing those areas of the film to be more underdeveloped, thus creating a detailed image of the bones. The paid amounts listed are for X-rays of the arms and legs.



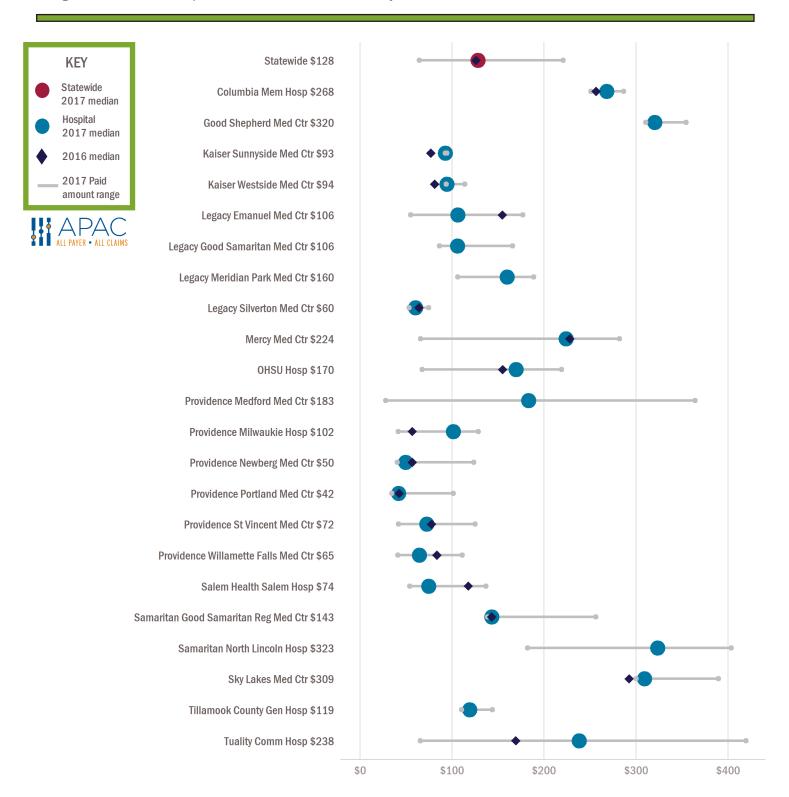
## X-ray: Extremities Continued

An X-ray is a method of imaging the body by exposing it to a small amount of electromagnetic radiation. Special undeveloped film is placed behind the body part that is to be imaged. The X-ray machine then emits radiation towards the body and film, causing the film to develop. More dense areas of the body - such as bones - absorb or block more of the radiation, causing those areas of the film to be more underdeveloped, thus creating a detailed image of the bones. The paid amounts listed are for X-rays of the arms and legs.



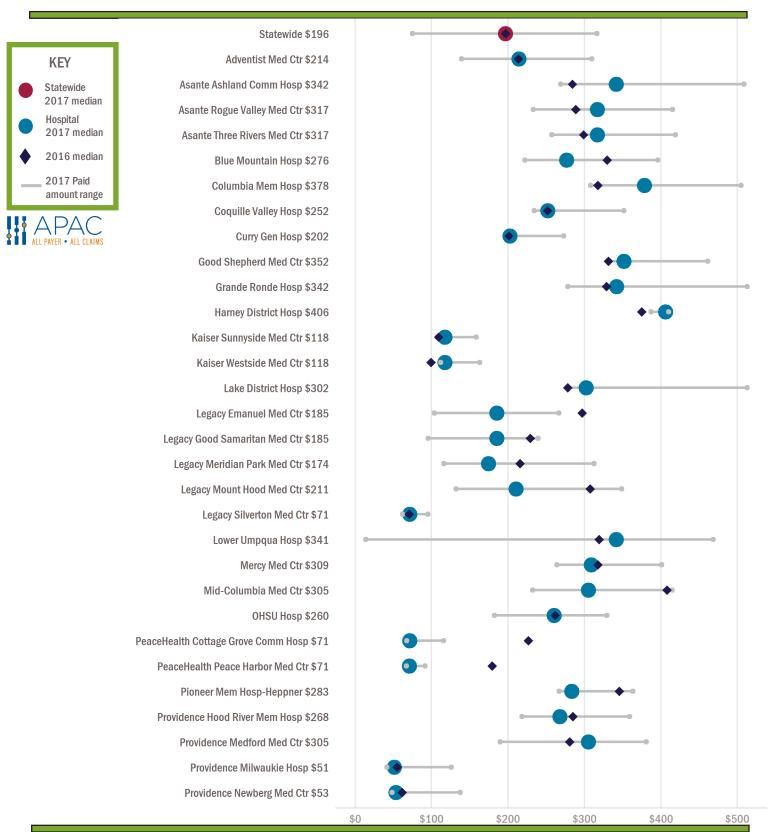
## X-ray: Head and Neck

An X-ray is a method of imaging the body by exposing it to a small amount of electromagnetic radiation. Special undeveloped film is placed behind the body part that is to be imaged. The X-ray machine then emits radiation towards the body and film, causing the film to develop. More dense areas of the body - such as bones - absorb or block more of the radiation, causing those areas of the film to be more underdeveloped, thus creating a detailed image of the bones. The paid amounts listed are for X-rays of the head and neck.



#### X-ray: Spine

An X-ray is a method of imaging the body by exposing it to a small amount of electromagnetic radiation. Special undeveloped film is placed behind the body part that is to be imaged. The X-ray machine then emits radiation towards the body and film, causing the film to develop. More dense areas of the body - such as bones - absorb or block more of the radiation, causing those areas of the film to be more underdeveloped, thus creating a detailed image of the bones. The paid amounts listed are for X-rays of the spine.



#### X-ray: Spine Continued

An X-ray is a method of imaging the body by exposing it to a small amount of electromagnetic radiation. Special undeveloped film is placed behind the body part that is to be imaged. The X-ray machine then emits radiation towards the body and film, causing the film to develop. More dense areas of the body - such as bones - absorb or block more of the radiation, causing those areas of the film to be more underdeveloped, thus creating a detailed image of the bones. The paid amounts listed are for X-rays of the spine.

