Summary

This is the second annual edition of FH Healthcare Indicators® and the FH Medical Price Index®, two resources developed by FAIR Health to provide clarity in a rapidly changing healthcare environment. Drawing on the independent nonprofit’s national database of billions of privately insured healthcare claims—the largest in the country—these two resources apply different approaches to illuminate different aspects of the national healthcare sector.

FH Healthcare Indicators analyze trends involving the place of service for healthcare in recent years. Focusing on alternative places of service—retail clinics, urgent care centers, telehealth and ambulatory surgery centers (ASCs)—as well as emergency rooms (ERs), FH Healthcare Indicators evaluate changes in utilization, geographic and demographic factors, diagnoses, procedures and costs. In the new edition, all time frames advance one year forward from the previous edition. For example, if a chart last year showed usage trends from 2011 to 2016, this year’s chart shows 2012 to 2017. These are some of the key findings:

- From 2016 to 2017, national utilization of telehealth grew 53 percent, more than any other place of service studied for that variable in this report. By comparison, utilization of urgent care centers increased 14 percent, retail clinics 7 percent and ASCs 6 percent, while that of ERs decreased 2 percent.
- From 2016 to 2017, retail clinic utilization decreased 28 percent in urban areas, while rural utilization grew 3 percent. But in the same period, urgent care center utilization increased 15 percent in urban areas while remaining flat in rural areas (0 percent).
- Nationally in 2017, the percentage of all medical claim lines attributed to retail clinics was less than 0.1 percent, that attributed to urgent care centers more than 1 percent and that attributed to ERs more than 2 percent.
- In 2017, as in 2016, claim lines were submitted for women more than men in all adult age groups in the places of service in which FAIR Health studied gender-related patterns—retail clinics, urgent care centers, telehealth, ASCs and ERs.
- The most common diagnostic category in 2017 in retail clinics and urgent care centers, and among individuals over 22 years of age in the ER, was acute respiratory infections. But for individuals 22 and younger in the ER, digestive system issues were the number one diagnostic category.
- Mental health reasons, which had been the number one diagnostic category for telehealth in 2016, were number five in 2017, at seven percent of the distribution of claim lines. Telehealth expanded in usage; for example, injury made up 13 percent of telehealth diagnoses in 2017.
- Pediatric and young adult age groups made up larger shares of the distribution of claim lines with telehealth usage in 2017 than in the previous year. For example, the age group 0-10 constituted 4 percent of the distribution in 2016 but 10 percent in 2017.
- In 2017, the median charge amount for a 30-minute new patient office visit (CPT® 99203) ranged from $213 in an urgent care center to $207 in an office to $129 in a retail clinic.

The FH Medical Price Index tracks the growth in median procedure charges and median imputed allowed amounts in six procedure categories. This report does not consider facility fees. The categories are:

- Professional evaluation and management (E&M; excluding E&Ms performed in a hospital setting);

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1 CPT © 2018 American Medical Association (AMA). All rights reserved.
2 Because payors’ contracted network rates are proprietary and cannot be shared, FAIR Health employs an imputation methodology to determine benchmarks for allowed amounts. First, FAIR Health calculates the ratios of actual allowed amounts to charges for groups of procedure codes on a regional basis. The resulting ratios are applied to the actual charges for each specific procedure at the local (geozip) level to develop an “imputed” allowed amount for each claim line.
• Hospital E&M (excluding E&Ms performed in a professional setting, such as typical office visits);
• Medicine (excluding E&Ms);
• Surgery (procedures for which the physician would bill);
• Pathology and laboratory (including both technical and professional components, e.g., both equipment and physician services); and
• Radiology (including both technical and professional components).

May 2012 is the base month, to which values in later periods are compared; therefore, the FH Medical Price Index establishes a consistent point of reference that makes it easy to identify and compare shifts.

In the first edition, the FH Medical Price Index presented an overview from May 2012 to May 2017. In the new edition, the indices are extended to November 2018. Findings include the following, all for the period November 2017 to November 2018:

• Of the six categories, hospital E&Ms had the greatest percent increase in charge amount index, seven percent. Hospital E&Ms and radiology had the greatest percent increase in allowed amount indices, both seven percent. The radiology charge amount index grew six percent.
• The professional E&M charge amount index increased four percent and allowed amount index three percent.
• The medicine charge amount index grew four percent and allowed amount index three percent.
• The surgery charge amount and allowed amount indices each grew six percent.
• The pathology and laboratory charge amount and allowed amount indices each increased three percent.

Background

In a white paper in March 2018, FAIR Health launched two new sources of healthcare information: FH Healthcare Indicators® and the FH Medical Price Index®. Designed to provide clarity in a rapidly changing healthcare environment, these two resources for deriving insights from data elicited a welcome public response; stakeholders expressed appreciation for being offered this “macro” view into the nation’s healthcare system. From the start, the resources were intended to be released annually to keep pace with change. This is the second annual edition.

Since the first edition, the healthcare sector has continued to change and grow more complex. Healthcare stakeholders continue to need information that will enable them to discern fundamental trends and patterns, and to make decisions on that basis. FH Healthcare Indicators and the FH Medical Price Index are intended to serve all such constituents, including insurers and companies that self-insure, third-party administrators, hospitals and health systems, physicians and other individual providers, pharmaceutical and device manufacturers, federal and state government officials, legislators, policy makers, economists and academic researchers.

In response to the ongoing growth of alternative places of service, FH Healthcare Indicators examine recent trends in such venues of care—including retail clinics, urgent care centers, telehealth and ambulatory surgery centers (ASCs)—as well as traditional emergency rooms (ERs). Areas of analysis include utilization, geographic and demographic factors, diagnoses, procedures and costs. In the new edition, all time frames advance one year forward from the previous edition. For example, if a chart last year showed usage trends from 2011 to 2016, this year’s chart shows 2012 to 2017. The new edition

includes new growth charts in which utilization of a place of service in rural, urban and national settings is shown as a percentage of all medical claim lines in that setting.

The FH Medical Price Index presents a multiyear overview of the weighted average growth in median charges and median allowed amounts for professional evaluation and management (E&M), hospital E&M, medicine, surgery, pathology and laboratory, and radiology categories. In the first edition, the FH Medical Price Index presented an overview from May 2012 to May 2017. In the new edition, the indices are extended to November 2018.

Both FH Healthcare Indicators and the FH Medical Price Index are powered by the same source: FAIR Health’s database of over 28 billion claim records contributed by payors and administrators who insure or process claims for private insurance plans covering more than 150 million individuals. A national, independent, nonprofit organization, FAIR Health uses this repository—the nation’s largest collection of private healthcare claims data—in furtherance of its mission of bringing transparency and integrity to healthcare costs and health insurance information.

Like the inaugural release, this year’s edition of FH Healthcare Indicators and the FH Medical Price Index is intended to assist healthcare stakeholders in a variety of ways. For example, investors can use the information in researching the healthcare sector; health systems in budgeting and considering affiliations or market expansion; insurers in designing plan benefits and setting premiums; government agencies and policy makers in trying to set courses to benefit the public good; and economists and researchers in seeking to track and evaluate important trends.

**Methodology**

**FH Healthcare Indicators Methodology**

To segregate FAIR Health claims data into venues of care, FAIR Health used standard Centers for Medicare & Medicaid Services (CMS) Place of Service codes to identify retail clinics (CMS Place of Service 17), urgent care centers (CMS Place of Service 20) and office (CMS Place of Service 11). Other methodologies were used to identify ERs (e.g., CMS Place of Service 23, Bill Type of 131 and/or an emergency department visit CPT code [CPT 99281, CPT 99282, CPT 99283, CPT 99284, CPT 99285]); telehealth (telehealth CPT codes such as CPT 99441 [telephone evaluation and management service provided by a physician to an established patient] or telehealth modifiers such as GQ); and ASCs (Bill Type of 83* or CMS Place of Service 24). The data were then aggregated by a variety of key fields, including state, urban/rural, diagnostic categories (e.g., urinary tract infection, ear infection, acute respiratory infections), year of service and patient demographics (age and gender), to identify trends and patterns in utilization and variation in cost. The data were evaluated with single and multiple variables to look for distinct trends and associations, which were then used to create graphical representations of the information.

In the graphical representations, the term “claim lines” refers to the individual procedures listed on insurance claims. A single claim for one patient may have multiple claim lines. To normalize the data and avoid fluctuations due to natural changes within plan data (e.g., the closing of a major retailer and the loss of those members, or the addition of a major employer to a plan from which FAIR Health receives data, which would create a net influx of data from those members), FAIR Health calculates each data point as a percentage of the total number of medical claim lines. When evaluating rural or urban data for a place of service, the denominator is all medical claim lines within that year and region. When evaluating total national data for a place of service, the entirety of medical claim lines for that year is the denominator. Once this claim line percentage is established, FAIR Health creates two separate types of trend charts.
“Percent of claim lines” (figures 1, 9, 19, 25, 28) is the percentage of all normalized claim line percentages as described above associated with a given grouping (e.g., a place of service) in a given time period in a particular chart. For example, in figure 1, which shows claim lines with retail clinic usage by rural, urban and national settings from 2012 to 2017, each year’s data point for national usage is the percentage of all the claim lines in the national usage grouping from 2012 to 2017. If one were to add up all the data points for national usage from all the years in this period, they would total 100 percent.

Other graphs present “percent of all medical claim lines” (figures 2, 10, 20, 26, 29). In this case, the number of claim lines for the place of service being evaluated in a particular location (state, rural, urban or national) in a particular year is presented as a percentage of all claim lines within the FAIR Health database that are designated as medical claim lines (not including dental or pharmacy claim lines) in that location in that year. For example, in figure 2, rural retail clinic claim lines in 2012 are shown as a percentage of all rural medical claim lines in that year.

FH Medical Price Index Methodology

FAIR Health used two of its benchmark modules, FH® Medical and FH® Allowed Medical, to calculate, respectively, charge amounts and allowed amounts for the FH Medical Price Index. For each procedure code, the benchmark products report a median value, which is the dollar value used for all codes included in the indices. Fourteen releases of the benchmark products were used to establish the indices: May and November of each year from 2012 to 2018. The total frequency for each procedure code within the selected categories (professional E&M, hospital E&M, medicine, surgery, pathology and laboratory, and radiology) was used to select codes for inclusion or exclusion. Each procedure code in a category that had a total combined frequency of one million or more occurrences in the 14 module releases was included in the indices. This allowed for natural inclusion of new codes and eventual exclusion of deleted codes in a gradual and controlled manner so as not to create erroneous fluctuations.

Once the list of codes to be included in the index was established, the median value for each release for each code (in dollars) was multiplied by the corresponding frequency for that code for the 14 releases, producing the release code median total. Then, all release code median totals in a category were summed to get a total dollar value for each release in that category (the release median total). That release median total was divided by the total frequency to generate a release average median. Each index was then created by using the following index formula: dividing each release average median for each month and year by the first release average median established (May 2012, the base):

\[
\text{Release Weighted Average of Median}_{\text{MONTH YEAR}} = \frac{\text{Index Value}_{\text{MONTH YEAR}}}{\text{Release Weighted Average of Median}_{\text{BASE}}}
\]
A sample calculation of how an FH Medical Price Index value is derived is given in the table below.

### Table. Calculation of FH Medical Price Index for professional E&M charge amounts over a sample of the period May 2012-November 2018

<table>
<thead>
<tr>
<th>Release</th>
<th>Release Median Total</th>
<th>Total Frequency</th>
<th>Release Median Total/Total Frequency = Release Average Median</th>
<th>Index Formula</th>
<th>FH Medical Price Index Value</th>
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</thead>
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<tr>
<td>May 2012</td>
<td>$280,020,108,863</td>
<td>2,013,522,941</td>
<td>$139.07 (base)</td>
<td>/$139.07</td>
<td>1.00</td>
</tr>
<tr>
<td>Nov 2018</td>
<td>$411,408,329,254</td>
<td>2,316,139,866</td>
<td>$177.63</td>
<td>/$139.07</td>
<td>1.28</td>
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</table>

### FH Healthcare Indicators

As in last year’s report, FAIR Health studied four alternative places of service—retail clinics, urgent care centers, telehealth and ASCs—and compared them to more traditional venues of care, offices and ERs. This year, the findings were brought up to date through 2017. Because venues of care are subject to varying state laws and regulations, changes in utilization may reflect greater liberalization or constraints associated with the relevant venue. For example, in Texas, a law passed in 2017, which enabled healthcare providers to establish a physician-patient relationship by telehealth without an initial face-to-face meeting, was expected to increase the potential of telehealth utilization in that state.4,5 In Massachusetts, regulations created in 2008 restricted the services retail clinics could provide, though those services were later expanded by a 2012 law.6,7

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Retail Clinic

Claim lines for retail clinics grew overall 674 percent from 2012 to 2017, a slower pace of growth than that documented in last year’s report (847 percent from 2011 to 2016; figure 1). Growth from 2012 to 2017 was similar in rural (655 percent) and urban areas (656 percent). From 2016 to 2017, total growth in retail clinic utilization was seven percent.

Retail clinic utilization in urban areas increased more than in rural areas from 2015 to 2016, but from 2016 to 2017 that trend was replaced by a decrease of 28 percent in urban areas, while rural utilization remained steady at 3 percent growth.

As noted in the Methodology section, actual claim lines in our database may have increased with respect to a particular venue even when a chart shows a comparative decrease year to year, because FAIR Health normalizes data by calculating each data point as a percentage of the total number of medical claim lines for a particular year. That is, while actual claim lines for a venue may increase in one year as compared to another, the percentage of claim lines associated with that particular venue may have decreased when juxtaposed against all claim lines used as the denominator for the analysis, which may increase or decrease from year to year.

Figure 1. Percent of claim lines with retail clinic usage by rural, urban and national settings, 2012-2017
For an added perspective to improve understanding of healthcare trends, this year’s edition of FH Healthcare Indicators includes a second view of place of service growth trends. In figure 1 above, rural and urban retail clinic usage in 2012 is shown as a percentage of all rural and urban retail clinic usage, respectively, from 2012 to 2017. But in figure 2 below, rural and urban retail clinic usage in 2012 is shown as a percentage of all rural and urban medical claim lines, respectively, in that year.

In rural, urban and national settings from 2012 to 2017, the percentage of all medical claim lines attributed to retail clinics was less than 0.1 percent. In rural areas, the percentage grew from 0.006 percent in 2012 to 0.045 percent in 2017. In urban areas, the percentage grew from 0.004 percent to 0.032 percent; in the nation as a whole, the increase was from 0.004 percent to 0.033 percent. In all years except 2016, rural retail clinic usage was a larger percentage of all medical claim lines in the rural setting than urban retail clinic usage was in the urban setting.

Figure 2. Claim lines with retail clinic usage as a percentage of all medical claim lines by rural, urban and national settings, 2012-2017
In the heat map below, states in which claim lines with retail clinic usage were a greater percentage of all medical claim lines than other states in 2017 are on the red end of the spectrum, while states with a lower percentage are on the green end (figure 3). Minnesota was the number one state for claim lines with a high percentage of retail clinic usage. Legislation and regulation can influence the spread of retail clinics. The site of the first retail clinic,\textsuperscript{8} Minnesota has been receptive to the growth of these places of service.

The other four states in the top five for retail clinic usage in 2017, in order from most to least, were New York, New Jersey, Nebraska and Alaska. The five states with the lowest usage, in order from least to most, were California, Utah, Nevada, Iowa and Colorado.


\textbf{Figure 3. Percent of claim lines with retail clinic usage compared to all medical claim lines by state, 2017}
As in 2016, the greatest number of claim lines with retail clinic usage in 2017 was submitted for individuals aged 51 to 60, who accounted for 23 percent of all such claim lines, nearly the same as the previous year’s 24 percent (figure 4). As in the previous year, the 61-70 age group had the second greatest percentage of claim lines, increasing from 17 percent in 2016 to 20 percent in 2017. There were also increases in the percentage of claim lines for individuals over 70 and decreases for individuals aged 23 to 40.

![Figure 4. Claim lines with retail clinic usage by age group, 2017](image-url)
In 2017, as in 2016, claim lines were submitted for women more than men in all adult age groups in the places of service in which FAIR Health studied gender-related patterns—retail clinics, urgent care centers, telehealth, ASCs and ERs. This is consistent with the findings of other researchers that women are more likely than men to visit physicians and make use of healthcare services. In 2017, from age 19 to 40, retail clinic claim lines for women outnumbered those for men by approximately 70 percent to 30 percent, respectively (figure 5). As in 2016, the one age group in which claim lines for males outnumbered those for females was that of children aged 0 to 10.

Figure 5. Claim lines with retail clinic usage by age and gender, 2017

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The most common diagnostic category in retail clinics was acute respiratory infections, which accounted for 34 percent of the distribution of claim lines with retail clinic usage in 2017 (figure 6). That was the most common diagnostic category in retail clinics in 2016 as well, though the percentage in 2017 was larger than the previous year (24 percent). The second most common diagnostic category in 2017, exposure to communicable diseases (12 percent), was in third place the year before, behind general symptoms.

Other common diagnostic categories in retail clinics in 2017 included ear infections (six percent), encounter for examination (six percent) and urinary tract infections (five percent).

Figure 6. Distribution of claim lines with retail clinic usage by diagnostic category, 2017
The type of procedure most commonly performed in retail clinics in 2017 was established patient office or other outpatient services (29 percent of retail clinic claim lines; figure 7). This was the top procedure in 2016 as well, at 26 percent. The rest of the top five procedures in 2017 were new patient office or other outpatient services (13 percent), infectious agent antigen detection (e.g., flu, streptococcus; 12 percent), vaccines and toxoids (e.g., flu vaccine; tetanus, diphtheria and pertussis vaccine [Tdap]; 7 percent) and immunization administration for vaccines/toxoids (6 percent).

Figure 7. Distribution of claim lines with retail clinic usage by procedures, 2017
The average charges and allowed amounts for the most common procedures performed in retail clinics in 2017, as identified by CPT code, are shown in figure 8. Office visits, such as CPT 99213, 99202, 99203 and 99214, which are established and new patient visits with varying times, had national average charges in a retail clinic ranging from $147 (for CPT 99203, a 30-minute new patient visit) to $105 (for CPT 99213, a 15-minute established patient visit). The average allowed amounts were $99 and $78, respectively, for those procedures.

Streptococcus tests (CPT 87880) were associated with an average charge of $33 and an average allowed amount of $16. Vaccinations were billed, on average, from $32 (CPT 90471, immunization administration) to $30 (CPT 90686, flu vaccine) with corresponding allowed amounts of $20 each.

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Description</th>
<th>CPT Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>99213</td>
<td>Office outpatient visit - 15 minutes</td>
<td>90471</td>
<td>Immunization administration</td>
</tr>
<tr>
<td>87880</td>
<td>Streptococcus test</td>
<td>99214</td>
<td>Office outpatient visit - 25 minutes</td>
</tr>
<tr>
<td>99202</td>
<td>Office outpatient - new - 20 minutes</td>
<td>87804</td>
<td>Influenza test</td>
</tr>
<tr>
<td>99203</td>
<td>Office outpatient - new - 30 minutes</td>
<td>90686</td>
<td>Influenza virus vaccine, quadrivalent</td>
</tr>
</tbody>
</table>

Figure 8. Average charges and average allowed amounts for the most common procedures performed in retail clinics, 2017
Urgent Care

As shown in figure 9, claim lines for urgent care centers grew overall 1,434 percent from 2008 to 2017. The increase was lower than from 2007 to 2016, as documented in last year’s report (1,725 percent). Growth in urgent care center usage from 2008 to 2017 was overall higher in rural (1,618 percent) than urban areas (1,419 percent). But from 2016 to 2017, growth was flat in rural areas (0 percent) compared to urban areas (15 percent); overall growth in that period was 14 percent.

Figure 9. Percent of claim lines with urgent care center usage by rural, urban and national settings, 2008-2017
Figure 10 presents claim lines with urgent care center usage as a percentage of all medical claim lines by rural, urban and national settings. Unlike figure 2, which showed that the percentage of all medical claim lines attributed to retail clinics in rural, urban and national settings throughout the period 2012-2017 was less than 0.1 percent, figure 10 shows that the percentage attributed to urgent care centers reached over 1 percent in all three settings by 2017. In rural areas, the percentage grew from 0.01 percent in 2008 to 1.3 percent in 2017. In urban areas, the percentage grew from 0.01 percent to 1.2 percent. In the nation as a whole, the increase was from 0.01 percent to 1.2 percent.

Although urgent care center claim lines were a greater percentage of all medical claim lines in rural than urban settings in 2017, the gap between the two closed partially since 2016. In 2016, the rural percentage was 1.3 percent compared to 1.0 percent for urban; in 2017, the rural percentage was 1.3 percent compared to 1.2 percent for urban.

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**Figure 10. Claim lines with urgent care center usage as a percentage of all medical claim lines by rural, urban and national settings, 2008-2017**
In 2017, the top five states for claim lines with urgent care center usage as a percentage of all medical claim lines in that state, in order from most to least, were Hawaii, Louisiana, New Mexico, Maryland and Virginia (figure 11). In 2016, all but Maryland and Virginia were in the top five, along with West Virginia and Rhode Island.

The bottom five jurisdictions for claim lines with urgent care center usage as a percentage of all medical claim lines in 2017, in order from least to most, were North Dakota; Washington, DC; Iowa; Massachusetts; and Alaska. All but Massachusetts were in the bottom five in 2016, along with South Dakota.

Figure 11. Percent of claim lines with urgent care center usage compared to all medical claim lines by state, 2017
As in 2016, the greatest number of claim lines with urgent care center usage in 2017 was submitted for individuals aged 31-40 (18 percent both years; figure 12). This differed from the peak age group for retail clinics, which was 51-60 both years (figure 4). Pediatric patients (individuals 18 years and younger) accounted for 22 percent of urgent care center claim lines in 2017, a larger share than in retail clinics (8 percent). This is likely due to legislative restrictions in certain states that do not allow some pediatric patients to see a retail clinic provider.

Figure 12. Claim lines with urgent care center usage by age group, 2017
In 2017, as in 2016, urgent care center claim lines for females exceeded those for males in every age group except 0-10 (figure 13). This was the same pattern observed in retail clinics in those years (figure 5). In urgent care centers, the greatest gender disparity was in the age group 19-22, in which claim lines for women outnumbered those for men by 63 percent to 37 percent.

![Figure 13. Claim lines with urgent care center usage by age and gender, 2017](image)
As in retail clinics (figure 6), and as in 2016, acute respiratory infections were the most common diagnostic category in urgent care centers, accounting for 31 percent of claim lines in that place of service in 2017 (figure 14). As in the previous year, general symptoms, such as headache, fever or general malaise, were the second most common diagnostic category, with 18 percent of the distribution. Sprains, strains, breaks and fractures accounted for nine percent of claim lines, and joint/soft tissue issues, including dorsopathies, arthropathies and various arthritis concerns, for seven percent. Claim lines for urinary tract infections, injuries (other than breaks and strains) and ear infections each constituted five percent of the distribution.

![Figure 14. Distribution of claim lines with urgent care center usage by diagnostic category, 2017](image)
As in retail clinics (figure 7), and as in 2016, established patient office or other outpatient services were the most common procedure in urgent care centers, accounting for 23 percent of the claim line distribution for that place of service in 2017 (figure 15). With urgent care visits (18 percent) and new patient office or other outpatient services (15 percent), these procedures accounted for 56 percent of all codes billed for an urgent care visit. Infectious agent antigen detection made up 10 percent of the distribution. Drugs administered other than oral (including anti-inflammatory injections and antibiotics) and urinalysis each constituted four percent.

![Pie chart showing distribution of claim lines with urgent care center usage by procedures, 2017.](image)

**Figure 15. Distribution of claim lines with urgent care center usage by procedures, 2017.** “Rad” is “radiology.”
As in 2016, the average charges and average allowed amounts for many of the most common procedures in urgent care centers in 2017 were higher than in retail clinics (figure 16). This may be because urgent care centers need the technological capacity to treat more serious conditions than retail clinics, such as fractures. It may also be because an urgent care center must pay all of its own facility costs, such as rent, whereas retail clinics often share space inside a larger facility, such as a drugstore or supermarket.

In urgent care centers, office visits had national average charges from $308 (for CPT 99204, a 45-minute new patient visit) to $166 (for CPT 99213, a 15-minute visit) and, respectively, average allowed amounts from $168 to $98 for those same visits. By comparison, the average charge in a retail clinic for CPT 99213 was $105 and the average allowed amount $78 (figure 8). The average charge for S9083, a global urgent care fee that covers all procedures within the urgent care setting, was $234; the average allowed amount was $152.

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<td>S9083</td>
<td>Global fee urgent care centers</td>
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<td>Office outpatient visit - 25 minutes</td>
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<td>$129</td>
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<td>Office outpatient visit - 15 minutes</td>
<td>$166</td>
<td>$98</td>
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<td>Streptococcus test</td>
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<td>S9088</td>
<td>Services provided in an urgent care center</td>
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**Figure 16.** Average charges and average allowed amounts for the most common procedures performed in urgent care centers, 2017

**Retail Clinic, Urgent Care Center and Office: A Price Comparison**

For a comparison of prices at retail clinics, urgent care centers and traditional offices, FAIR Health analyzed claims data for new patient E&M codes. A new patient E&M visit includes a detailed history for the patient, a detailed examination and medical decision making. Counseling and coordination of care with other providers also may occur. The visits are coded by length of time: CPT 99202 is 20 minutes, CPT 99203 is 30, CPT 99204 is 45 and CPT 99205 is 60.
Figure 17 shows how the median charge amounts varied by place of service in 2017. CPT 99202 ranged from $160 in an urgent care center to $138 in an office to $104 in a retail clinic. CPT 99203 ranged from $213 in an urgent care center to $207 in an office to $129 in a retail clinic. CPT 99204 and CPT 99205 were not billed frequently enough in retail clinics to have established values. But in offices, the median charge amount for CPT 99204 was higher ($312) than in urgent care centers ($294). For CPT 99205, the median charge amount was the same ($400) for those two places of service.

<table>
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<tr>
<td>99203</td>
<td>Office outpatient – new – 30 minutes</td>
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<tr>
<td>99204</td>
<td>Office outpatient – new – 45 minutes</td>
</tr>
<tr>
<td>99205</td>
<td>Office outpatient – new – 60 minutes</td>
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</table>

* Retail clinics did not have enough volume to establish any values for CPT 99204 or CPT 99205.

Figure 17. Median charge amounts for offices, urgent care centers and retail clinics for new patient E&M codes, 2017
When the same comparisons among retail clinics, urgent care centers and offices were made on the basis of median allowed amounts, the results differed somewhat (figure 18). For CPT 99202, the office had a lower median allowed amount ($66) than either urgent care center ($93) or retail clinic ($73), even though the office median charge was higher than that of the retail clinic (figure 17). There was a greater difference between office ($92) and urgent care center ($114) allowed amounts for CPT 99203 than between their corresponding charges for that code. Whereas office median charges were higher than urgent care center median charges for CPT 99204, office median allowed amounts ($140) were slightly lower than urgent care center median allowed amounts ($143) for that code.

<table>
<thead>
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<tr>
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<td>Office outpatient – new – 45 minutes</td>
</tr>
<tr>
<td>99205</td>
<td>Office outpatient – new – 60 minutes</td>
</tr>
</tbody>
</table>

* Retail clinics did not have enough volume to establish any values for CPT 99204 or CPT 99205.

Figure 18. Median allowed amounts for offices, urgent care centers and retail clinics for new patient E&M codes, 2017
Telehealth

Telehealth usage has continued to rise as more states and regions implement laws facilitating it. National growth of claim lines for telehealth was greater in the period 2012-2017 (1,202 percent) than in the period 2011-2016 reported last year (643 percent; figure 19). The rural increase in telehealth claim lines from 2012 to 2017 was 482 percent and the urban increase 1,289 percent. In the single year from 2016 to 2017, rural growth was 29 percent and urban growth 55 percent, with overall national growth 53 percent. That national growth rate was higher than that of any other place of service studied for that variable in this report. By comparison, from 2016 to 2017, national utilization of urgent care centers increased 14 percent, of retail clinics 7 percent and of ASCs 6 percent, while that of ERs decreased 2 percent.

Figure 19. Percent of claim lines with telehealth usage by rural, urban and national settings, 2012-2017
Figure 20 shows claim lines with telehealth usage as a percentage of all medical claim lines by rural, urban and national settings. In 2016 and 2017, urban telehealth claim lines were a larger percentage of all medical claim lines in that setting than rural telehealth claim lines were in their setting. From 2016 to 2017, urban telehealth claim lines grew from 0.08 percent to 0.12 percent of all urban medical claim lines, while rural telehealth claim lines grew from 0.04 percent to 0.05 percent. Nationally, from 2016 to 2017, telehealth claim lines grew from 0.07 percent to 0.11 percent of all national medical claim lines.

Figure 20. Claim lines with telehealth usage as a percentage of all medical claim lines by rural, urban and national settings, 2012-2017
In 2017, the top five states for telehealth claim lines as a percentage of all medical claim lines in that state, in order from most to least, were Oklahoma, Wyoming, Ohio, Hawaii and West Virginia (figure 21). None were among the top five states in 2016. The bottom five states in 2017 for telehealth claim lines as a percentage of all medical claim lines, in order from least to most, were New Jersey, Rhode Island, Nebraska, Connecticut and South Dakota. One of these, South Dakota, was among the top five in 2016.

Figure 21. Percent of claim lines with telehealth usage compared to all medical claim lines by state, 2017
As in 2016, telehealth was most associated with individuals aged 31-60, who accounted for 44 percent of the distribution of claim lines with telehealth usage in 2017 (figure 22). Their share was smaller, however, than the previous year’s 56 percent. Pediatric and young adult age groups made up larger shares than in the previous year. For example, the age group 0-10 constituted 4 percent of the distribution in 2016 but 10 percent in 2017. The age group 23-30 made up 10 percent of the distribution in 2016 but 12 percent in 2017.

Figure 22. Claim lines with telehealth usage by age group, 2017
In 2017, as with retail clinics and urgent care centers, claim lines with telehealth usage were submitted more for females than males in every age group except children aged 0-10 (figure 23). The average differential across all age groups was 56 percent female to 44 percent male, which was slightly less than the typical 60 percent/40 percent female/male distribution seen in all medical claim lines.

Figure 23. Claim lines with telehealth usage by age and gender, 2017
The top diagnostic categories associated with telehealth in 2017 were injury (e.g., contusions, open wounds), acute respiratory infections and digestive system issues (e.g., gastroesophageal reflux disease, abdominal and pelvic pain, nausea and vomiting), each of which constituted 13 percent of the distribution of claim lines (figure 24). Neither injury nor digestive system issues had been among the top diagnostic categories in 2016.

General signs and symptoms (e.g., fever, headache, general malaise) were the fourth most common diagnostic category in 2017, accounting for nine percent of the distribution. Mental health reasons (e.g., anxiety disorders, stress reactions, obsessive-compulsive disorder), which had been the top telehealth diagnostic category in 2016, were number five in 2017, at seven percent of the distribution.

Figure 24. Distribution of claim lines with telehealth usage by diagnostic category, 2017
Ambulatory Surgery Center

Claim lines for ASCs grew 97 percent overall from 2008 to 2017, the same rate documented in last year's report (97 percent from 2007 to 2016; figure 25). Growth was greater in urban (99 percent) than rural areas (76 percent). From 2016 to 2017, claim lines with ASC usage decreased eight percent in rural areas, increased seven percent in urban areas and increased six percent nationally.

Figure 25. Percent of claim lines with ASC usage by rural, urban and national settings, 2008-2017
In each year in the period 2008 to 2017, ASCs accounted for less than one percent of all medical claim lines by rural, urban and national settings (figure 26). But nationally, by the end of that period, ASCs had nearly doubled as a percentage of all medical claim lines, from 0.46 percent in 2008 to 0.91 percent in 2017. In the rural setting, the growth in that period was from 0.48 percent to 0.84 percent of all medical claim lines for that setting; in the urban setting, the increase was from 0.46 percent to 0.92 percent.

Figure 26. Claim lines with ASC usage as a percentage of all medical claim lines by rural, urban and national settings, 2008-2017
As with the other places of services studied for gender, more ASC claim lines were submitted for females than males in almost every age group in 2017 (figure 27). But while retail clinics, urgent care centers and telehealth had only one exceptional age group (0-10) in which males accounted for more of the claim line distribution than females, ASCs had a second age group, 11-18. This pattern was also found for 2016 in last year’s report.

Figure 27. Claim lines with ASC usage by age and gender, 2017
Emergency Room

Claim lines for ERs grew nationally 194 percent from 2008 to 2017, less than the increase documented in last year’s report (229 percent from 2007 to 2016; figure 28). Urban growth from 2008 to 2017 (196 percent) continued to be greater than rural growth (122 percent), as it had been from 2007 to 2016.

Despite the overall growth from 2008 to 2017, utilization decreased in the last year of that period, particularly in rural areas. From 2016 to 2017, ER usage fell 10 percent in the rural setting, 1 percent in the urban setting and 2 percent nationally.

Figure 28. Percent of claim lines with ER usage by rural, urban and national settings, 2008-2017
In 2017, ERs accounted for a larger percentage of all medical claim lines than any of the other places of service studied for that variable in this report (figure 29). Nationally, the ER percentage of all medical claim lines grew from 0.9 percent in 2008 to 2.6 percent in 2017. By comparison, urgent care centers’ percentage of all medical claim lines nationally in 2017 was 1.2 percent. But growth in urgent care center usage from 2008 to 2017 was much greater than that for ERs: 1,434 percent for urgent care centers, more than seven times that of ERs (194 percent). This was a continuation of the trend from 2007 to 2016, when urgent care center usage growth also had been more than seven times greater than ER growth.

In the rural setting, the ER percentage of all medical claim lines for that setting grew from 1.4 percent in 2008 to 3.1 percent in 2017. In the urban setting, the percentage grew from 0.9 percent to 2.5 percent.

Figure 29. Claim lines with ER usage as a percentage of all medical claim lines by rural, urban and national settings, 2008-2017
The greatest number of claim lines with ER usage in 2017 was submitted for individuals in the four age groups in the age range from 31 to 70, who accounted for 55 percent of all such claim lines (figure 30). Within that age range in 2017, the highest percentage of claim lines was attributed to individuals aged 51-60 (16 percent). As in 2016, pediatric patients (0-18) constituted a relatively small share of the age distribution, 12 percent in 2017 compared to 15 percent in 2016.

Figure 30. Claim lines with ER usage by age group, 2017
As with all of the other places of service studied for gender, more claim lines with ER usage were submitted for females than males in most age groups in 2017 (figure 31). The sole exception, as with retail clinics, urgent care centers and telehealth, was the age group 0-10, in which claim lines for boys (56 percent) outnumbered those for girls (44 percent). In the age group 11-18, the disparity between females (52 percent) and males (48 percent) was relatively small, but the gap widened over the age of 18.

Figure 31. Claim lines with ER usage by age and gender, 2017
Figure 32 shows the 2017 distribution of claim lines with ER usage by diagnostic category for individuals over the age of 22, the age range that most commonly uses the ER. Acute respiratory infections were the number one diagnostic category, with 16 percent of the distribution, followed by digestive system issues (14 percent), general signs and symptoms (11 percent), joint/soft tissue issues (8 percent) and injury to body (7 percent).

![Bar chart showing distribution of claim lines with ER usage by diagnostic category for individuals over 22 years of age, 2017.](image)

**Figure 32. Distribution of claim lines with ER usage by diagnostic category for individuals over 22 years of age, 2017.** Phrase with ellipse is “Injury, Poisoning and Certain Other Consequences of External Causes.”

According to FAIR Health data, the diagnostic distribution differed somewhat for pediatric patients (aged 0-18) and college-age patients (aged 19-22). For both of those age groups, digestive system issues were the number one diagnostic category, with acute respiratory infections in second place. In third place for pediatric patients was head injury, and for college-age patients injury to body. General signs and symptoms were in fourth place for both. In fifth place for pediatric patients was injury to body, and for college-age patients, joint/soft tissue issues.

One diagnostic category common to all three age groups was “Injury, Poisoning and Certain Consequences of External Causes,” ranking at number 8 for pediatric patients, number 12 for college-age patients and number 15 for adults over 22. The top diagnoses in the category, however, varied by age.
group. In pediatric patients, the diagnoses mostly consisted of foreign bodies in the alimentary tract, respiratory tract and ear, and in college-age individuals of poisoning by or adverse effects of drugs such as narcotics and psychodysleptics (hallucinogens). In adults over 22, foreign body in the alimentary tract was the most common diagnosis in the category “Injury, Poisoning and Certain Consequences of External Causes,” but complications of genitourinary prosthetic devices, implants and grafts were the second most common diagnosis in that category.

For individuals in all age groups in 2017, the most common ER procedure, not including E&Ms, was diagnostic radiology of the chest (e.g., chest X-rays), with 18 percent of the distribution of claim lines (figure 33). Cardiography procedures (e.g., electrocardiograms) were second, with 15 percent of the distribution. Diagnostic radiology of the head and neck (e.g., computed tomography [CT] scan of the head or brain without contrast) and diagnostic radiology of the abdomen followed, each with eight percent. Diagnostic radiology of the lower extremities was in fifth place with five percent.

Figure 33. Distribution of claim lines with ER usage by procedures for individuals in all age groups, not including E&Ms, 2017
Figure 34 shows average charges and allowed amounts for the most common ER procedure codes in 2017. The charges shown ranged from a high of $565 for CPT 99285, emergency department visit—high severity—life threatening, to a low of $23 for CPT 93010, an electrocardiogram. The corresponding allowed amounts were $303 and $11, respectively. (Electrocardiograms tend to have a low cost because the technology has become easy to acquire at a low price.) Whereas several of the most common procedures in the ER had average charges over $300, none of the most common ones in retail clinics did (figure 8), and in urgent care centers, only one did: CPT 99204, office outpatient—new—45 minutes, with an average charge of $308 (figure 16).
FH Medical Price Index

Professional E&M

The professional E&M indices include CPT codes in the AMA CPT code category Evaluation and Management Services for procedures typically performed in a professional setting as opposed to a hospital setting. This includes office visits such as CPT 99213 and consultations such as CPT 99241.

From November 2017 to November 2018, the professional E&M charge amount index continued the upward trend seen since the base period of May 2012 (figure 35). The index increased from 1.23 in November 2017 to 1.28 in November 2018, a four percent increase.

Figure 35. Professional E&M charge amount index
Similar growth occurred in the professional E&M allowed amount index, which changed from 1.23 in November 2017 to 1.27 in November 2018, a three percent increase (figure 36).

Figure 36. Professional E&M allowed amount index
Hospital E&M

The hospital E&M indices, which correspond to professional charges and allowed amounts, include CPT codes in the AMA CPT code category Evaluation and Management Services for procedures typically performed in a hospital setting, such as CPT 99223, initial hospital care per day, 70 minutes, or CPT 99283, emergency department visit of moderate severity. They exclude E&Ms typically performed in a professional setting, such as common office visits. Facility fees are not included.

The growth trend since May 2012 continued in the hospital E&M indices from November 2017 to November 2018. The hospital E&M charge amount index increased from 1.31 in November 2017 to 1.40 in November 2018, a seven percent increase (figure 37).

Figure 37. Hospital E&M charge amount index
The hospital E&M allowed amount index also increased seven percent, from 1.28 in November 2017 to 1.37 in November 2018 (figure 38).

Of the six categories, hospital E&Ms had the greatest percent increase in charge amount index from November 2017 to November 2018. Hospital E&Ms and radiology had the greatest percent increase in allowed amount index, both seven percent. As reported in the first edition, hospital E&Ms were the category with the greatest percent increase in charges and allowed amounts from May 2012 to May 2017.

Figure 38. Hospital E&M allowed amount index
**Medicine**

The medicine indices include all procedures that are not E&Ms, meet the frequency criterion of one million or more and are found in the CPT code ranges from CPT 90281 to CPT 99199 and CPT 99500 to CPT 99607. They include services such as immunizations, psychiatry services, dialysis procedures and allergy and immunology procedures.

Steady growth continued in the medicine indices from November 2017 to November 2018. The medicine charge amount index grew from 1.14 in November 2017 to 1.18 in November 2018, a four percent increase (figure 39).

![Figure 39. Medicine charge amount index](image)

Figure 39. Medicine charge amount index
The medicine allowed amount index changed from 1.20 in November 2017 to 1.24 in November 2018, a three percent increase (figure 40).

Figure 40. Medicine allowed amount index
Surgery

The surgery indices include codes typically found in the surgical portion of the CPT code book, such as CPT 17003, which is a destruction of a premalignant lesion, and CPT 43239, which is a biopsy during an endoscopy. These are procedures for which the physician would bill; facility fees, if any, are not reflected in the surgery indices.

During 2017, there was a one percent decline in the surgery charge amount index, from 1.03 in May to 1.02 in November (figure 41). From November 2017 to November 2018, the index grew six percent from 1.02 to 1.08.

Figure 41. Surgery charge amount index
The surgery allowed amount index also increased six percent, from 1.03 in November 2017 to 1.09 in November 2018 (figure 42).

Figure 42. Surgery allowed amount index
Pathology and Laboratory

The pathology and laboratory indices include the CPT code range 80047 through 89398, which identifies such procedures as organ- or disease-oriented panels, drug testing, therapeutic transfusion medicine, microbiology, anatomic pathology (postmortem), cytopathology and in vivo laboratory procedures. Technical (e.g., equipment) and professional costs are included, but not facility fees.

Growth continued in the pathology and laboratory indices. The charge amount index increased three percent from 1.11 in November 2017 to 1.14 in November 2018 (figure 43).

Figure 43. Pathology and laboratory charge amount index
The pathology and laboratory allowed amount index also increased three percent, from 1.10 in November 2017 to 1.13 in November 2018 (figure 44).

Figure 44. Pathology and laboratory allowed amount index
Radiology

The radiology indices include CPT codes from 70010 to 79999, representing a variety of imaging techniques to diagnose or treat diseases. X-rays, radiographs, ultrasounds, positron emission tomography (PET), CT and nuclear medicine are included in this category. Both technical and professional components are included, but not facility fees.

The AMA introduced new codes to the radiology suite of CPT codes in 2018, and the trajectory of the radiology indices changed to a sharper rate of increase than the gradual growth pattern they had shown during most of the period since May 2012. The new codes include the replacement of CPT 71010, radiologic examination, chest; single view, frontal, with CPT 71045, radiologic examination, chest; single view, as well as the replacement of CPT 71020, radiologic examination, chest; 2 views, frontal and lateral, with CPT 71046, radiologic examination, chest; 2 views. Despite technical similarity, the two replacement codes are priced differently from their predecessors.

The radiology charge amount index decreased three percent from 1.07 in May 2017 to 1.04 in November 2017 (figure 45). It then increased six percent from 1.04 in November 2017 to 1.10 in November 2018.

Figure 45. Radiology charge amount index
The radiology allowed amount index decreased one percent from 1.07 in May 2017 to 1.06 in November 2017 (figure 46). It then increased seven percent from 1.06 in November 2017 to 1.13 in November 2018.

Figure 46. Radiology allowed amount index

Conclusion

This year’s edition of FH Healthcare Indicators shows that national utilization of alternative places of service continued to grow from 2016 to 2017, but at different paces. Telehealth had the most dramatic national growth in claim lines, at 53 percent, followed by urgent care centers at 14 percent, retail clinics at 7 percent and ASCs at 6 percent. By contrast, a more traditional place of service, ERs, decreased in claim lines by 2 percent.

As measured, however, by the percentage of all medical claim lines attributed to use of each place of service nationally in 2017, ERs continued to hold the highest place, with 2.6 percent of all medical claim lines nationally. The comparable percentages for the other places of service were 1.2 percent for urgent care centers, 0.91 percent for ASCs, 0.11 percent for telehealth and 0.033 percent for retail clinics.

As in last year’s report, patterns of utilization studied in this year’s edition typically differed across states and in urban and rural areas, and age distribution differed among places of service. Claim lines were more likely to be submitted for women than men in every adult age group in every place of service studied. Places of service varied in their most common diagnoses and procedures, and in their charge amounts and allowed amounts for their most common procedure codes. There also were differences from one year to another. For example, mental health reasons, which had been the number one diagnostic category for telehealth in 2016, were number five in 2017. But there were some similarities from year to year, as well. In both 2016 and 2017, Hawaii, Louisiana and New Mexico were among the top five states for claim lines with urgent care center usage as a percentage of all medical claim lines in those states.
This year’s edition of the FH Medical Price Index shows continued growth of charge amounts and allowed amounts from November 2017 to November 2018 in every professional procedure category (professional E&M, hospital E&M, medicine, surgery, pathology and laboratory, and radiology). Of the six categories, hospital E&Ms had the greatest percent increase in charge amount index, seven percent. Hospital E&Ms and radiology had the greatest percent increase in allowed amount indices, both seven percent. The lowest percent increase in charge amount index was three percent for pathology and laboratory. The lowest percent increase in allowed amount index was three percent for pathology and laboratory, professional E&Ms (outside hospitals) and medicine.

Given the continuing importance of the healthcare sector to the US economy and the lives of Americans, identifying and understanding the trends and shifts within that sector remain vital. To be useful, information about those trends and shifts must be timely, independent and robust. By issuing this new edition of FH Healthcare Indicators and the FH Medical Price Index, FAIR Health intends to provide current intelligence that can inform decision making by stakeholders throughout the healthcare sector, including payors, providers, government officials, policy makers and others. As part of its mission, FAIR Health will continue to issue these reports annually. In addition, FAIR Health makes available customized indicators and indices that offer specific data subsets (e.g., based on clinical category, geographic region, time period) of particular interest to stakeholders. Contact FAIR Health at info@fairhealth.org or 855-301-3247 to learn more about such opportunities.
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