

# 2016 Virginia Low Value Services Report

Prepared for the Virginia Center for Health Innovation by Virginia Health Information using data from the Virginia All Payer Claims Database

February 2017

#### **Report Caveats:**

- Standardized Proxy Reimbursement Amount: Virginia Code prohibits disclosing or reporting provider-specific, facility-specific or carrier-specific reimbursement information. Information capable of being reverse-engineered, combined or otherwise used to calculate or derive such reimbursement information from the APCD is also prohibited. To comply with the legal prohibition of disclosing reimbursement information, a standardized proxy reimbursement amount was utilized for these reports generated from the Virginia APCD. All dollar amounts referenced in these reports are proxy dollars based on Milliman's Global RVU methodology.
- All geographic reports are based on the Health Planning Region assigned to a patient's zip code of residence
- The output of the Health Waste Calculator is subject to the quality of the necessary inputs within Virginia APCD claims
  data. Lack of accurate Procedure and Diagnosis codes on the individual claims analyzed may cause some services that
  were potentially or definitively wasteful to be classified as necessary and vice versa.
- For privacy reasons, no calculations that resulted in less than 11 observations are displayed within each report.

#### **About the Virginia APCD:**

The Virginia All Payer Claims Database (APCD) was established to facilitate data-driven, evidence-based improvements in the access, quality and cost of health care and to promote and improve public health through the understanding of health care expenditure patterns and the operation and performance of the health care system. Virginia's APCD is a voluntary program with specific requirements of participating data submitters and certain restrictions on how the de-identified data may be used. Virginia's APCD was created under the authority of the Virginia Department of Health. The program is operated by VHI as a collaborative effort with health care stakeholders who provide input through the Virginia APCD Advisory Committee.

The Virginia APCD consists of medical and pharmacy claims submitted by commercial and public insurance carriers and currently includes paid claims data for approximately 4.5 million Virginia Residents. Health insurance carriers submit paid claims data for services provided to privately-insured individuals and individuals covered under self-funded group health plans in the Commonwealth.

These records include paid claims from institutional encounters (hospital, surgery centers, etc.), medical professional services (such as doctor visits and imaging), pharmacy and other services. Data submitted to the Virginia APCD by medical insurance carriers includes claims from administrators of "carved-out" services such as pharmacy and mental health/chemical dependency. The database also contains records about individual plan members (e.g., demographics and enrollment), providers and insurance products (e.g., product type and coverage type).

The Virginia APCD includes data on coverage and services for the majority of commercially-insured Virginia residents as well as those with public or private Medicaid and Medicare insurance. It also includes data from both health insurance carriers and third-party administrators. The following kinds of coverage are excluded at this time:

- Workers' Compensation
- TRICARE and the Veterans Health Administration and
- Federal Employees Health Benefit Plan

#### **MedInsight Health Waste Calculator:**

#### Overview:

The MedInsight Health Waste Calculator is an analytical tool that provides actionable data to support healthcare quality, efficiency and effectiveness reporting. The calculator brings together clinical expertise and powerful data analytics, allowing health care managers to target and reduce wasteful spending.

Comprehensive measures are developed and constantly refined to provide the most innovative and up-to-date healthcare analytics by Milliman healthcare experts and partners at VBID Health, Mike Chernew and Mark Fendrick, MD.

The sources leveraged for measures include:

- Choosing Wisely (from the ABIM Foundation)
- US Preventive Services Task Force Grade D Recommendations (recommendations against the service), for which there is moderate to high certainty that the service has no net benefit or that the harms outweigh the benefits
- The American Medical Association's Physician Consortium for Performance Improvement

- The United Kingdom's National Institute for Health and Care Excellence (NICE) Recommendations on High Quality Care
- Numerous research endeavors, such as these recent publications:
  - Mayo Clinic Proceedings publication on "A Decade of Reversal: An Analysis of 146 Contradicted Medical Practices"
  - o Johns Hopkins Medicine research report on imaging for severe dizziness in the ER
  - o Pediatrics. "CT Scan Utilization Patterns in Pediatric Patients with Recurrent Headache"

#### Health Waste Calculator Value:

Eliminating inefficient and unnecessary medical services improves overall healthcare efficiency while reducing costs. The Health Waste Calculator is effective at identifying potentially unnecessary care and potential cost savings. The Congressional Budget Office has estimated that 30% of medical care in the U.S. is unnecessary care. In 2009, the Institute of Medicine (IOM) identified \$750 billion of wasted spending, with unnecessary services accounting for \$210 billion (iom.edu/bestcare).

The MedInsight Health Waste Calculator:

- Adds value to existing publicly available cost and quality reporting efforts;
- Denotes whether services were appropriate or potentially wasteful;
- Indicates which services should be reviewed and flags potentially wasteful spending;
- Improves reporting for efficiency and effectiveness measurement.

In addition, Milliman and VBID health have established a research pipeline to continually investigate new wasteful services and look to rapidly expand the range of wasteful services included in this product offering.

#### Rationale for Developing the Measures:

Milliman and VBID Health continue to research and add to the growing list of over 450 measures in their research pipeline. Each are striving to identify at least 2 measures per medical society. In general the prioritization of measures are based on the criteria listed below:

- High prevalence rate or incidence of the wasteful events as reported in different publications;
- High cost impact due to the wasteful events;
- Representation of different specialties or clinical conditions;
- Representation of different types of services (e.g., preventive screening tests and diagnostic tests and prescription of drugs); and
- Representation of relevant measures for different age groups (children, adults, elderly, or all population), as well as gender-specific measures.

#### Health Waste Calculator Research Team Background:

The Waste Calculator Research team has incorporated health care data into related measure development for over five years. The scope of their work in measure development includes:

- Validation of the industry based literature on measure criteria;
- Identification of topics for new measures;
- Production of measures for not only the WC product but also for HEDIS like measures of compliance and noncompliance to healthcare industry best practices; And
- Production of normative measures and benchmarks.

The research team created the Waste Calculator methodology to include the algorithms for handling multiple ICD-9 Diagnosis and Procedure codes, HCPCS and Revenue codes.

#### **Report Definitions:**

**Low Value Measure Rule-** The type of service evaluated by the Health Waste Calculator with results defined as either Necessary or Low Value. Low Value Measure Rules also briefly outline the criteria for a potentially unnecessary service

Total Services Measured- The total number of services that were evaluated for a specific Low Value Measure

**Percent of all Services Measured-** The total number of services measured for each Low Value Measure divided by the overall total number of services measured within each report

**Number of Individuals who Received Services-** The distinct number of individuals who received a service that corresponded with a low value measure rule, regardless of whether or not the service was categorized as low value

**Number of Low Value Services-** The total number of services that meet the necessary criteria outlined in the Waste Calculator methodology to be classified as low value

**Number of Individuals who received a Low Value Service-** The distinct number of individuals who received a service that corresponded with a low value measure rule and was categorized as low value

% Distinct Members with Low Value- the distinct members with low value divided by the distinct members with services

Total Proxy Cost of Low Value Services- The total number of proxy allowed dollars associated with claims classified as low value

**Average Proxy Cost per Service-** The total number of proxy allowed dollars associated with claims classified as low value divided by the total number of services classified as low value

**Per Member Per Month (PMPM)-** The total low value proxy allowed dollars divided by the total number of member months for the corresponding type of insurance coverage and geographic region. Note the member months used within this calculation is for the entire population represented within the APCD, not just those who experienced a particular service

% of Overall Low Value Spending- The total low value proxy allowed dollars for each Low Value Measure divided by the overall total low value proxy dollars measured within each report

Quality Index- The number of services classified as Necessary divided by the total number of services measured

Low Value Index- The number of services classified as either Likely Low Value or Low Value divided by the total number of services measured



# 2016 Statewide Low Value Services Report- Overall

					Total I	Low Value (Likely	Low & Low Value C	ombined)				
Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service	Per Member Per Month	% of Overall Low Value Spending	Quality Index	Low Value Index
Totals	5,554,688	100%	3,843,745	2,045,967	1,573,514	41%	\$706,504,304.38	\$345.32	\$11.13	100%	63%	37%
Common Treatments  Don't order antibiotics for adenoviral conjunctivitis (pink eye).	<b>359,160</b> 540	<b>6%</b> 0%	<b>279,744</b> 538	<b>356,799</b> 480	<b>277,701</b> 478	<b>99%</b> 89%	<b>\$6,162,926.08</b> \$5,922.32	<b>\$17.27</b> \$12.34	<b>\$0.10</b> \$0.00	<b>1%</b> 0%	<b>1%</b> 11%	<b>99%</b> 89%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	298	0%	281	106	101	36%	\$2,955.33	\$27.88	\$0.00	0%	64%	36%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	40,546	1%	20,544	40,546	20,544	100%	\$268,622.92	\$6.63	\$0.00	0%	0%	100%
Don't prescribe oral antibiotics for members with upper URI or ear infection (acute sinusitis, URI, viral respiratory illness or acute otitis externa)	317,776	6%	258,381	315,667	256,578	99%	\$5,885,425.51	\$18.64	\$0.09	1%	1%	99%
Diagnostic Testing	896,175	16%	660,846	533,766	351,889	53%	\$273,515,373.11	\$512.43	\$4.31	39%	40%	60%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	41,304	1%	41,234	31,670	31,606	77%	\$8,202,688.93	\$259.01	\$0.13	1%	23%	77%
Don't do imaging for uncomplicated headache.	26,173	0%	24,793	9,886	9,451	38%	\$11,439,690.03	\$1,157.16	\$0.18	2%	62%	38%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	2,977	0%	2,936	2,121	2,084	71%	\$3,414,086.31	\$1,609.66	\$0.05	0%	29%	71%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	14,027	0%	13,444	8,390	8,017	60%	\$1,913,514.47	\$228.07	\$0.03	0%	40%	60%
Don't routinely do diagnostic testing in patients with chronic urticaria.	428	0%	428	332	332	78%	\$188,522.95	\$567.84	\$0.00	0%	22%	78%
Don't perform electroencephalography (EEG) for headaches.	3,789	0%	3,671	2,183	2,127	58%	\$2,802,109.56	\$1,283.60	\$0.04	0%	42%	58%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	5,997	0%	5,828	2,239	2,171	37%	\$3,915,017.14	\$1,748.56	\$0.06	1%	63%	37%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing	2,923	0%	2,777	1,348	1,312	47%	\$7,205,972.67	\$5,345.68	\$0.11	1%	54%	46%
loss.  Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	10,784	0%	10,567	6,252	6,149	58%	\$17,002,263.94	\$2,719.49	\$0.27	2%	42%	58%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	74	0%	74	74	74	100%	\$14,145.24	\$191.15	\$0.00	0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	21,675	0%	20,925	14,680	14,234	68%	\$25,429,370.27	\$1,732.25	\$0.40	4%	32%	68%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	30	0%	25	30	25	100%	\$3,718.01	\$123.93	\$0.00	0%	0%	100%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	12	0%	12	12	12	100%	\$690.97	\$57.58	\$0.00	0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	2,857	0%	2,393	2,101	1,681	70%	\$2,748,229.60	\$1,308.06	\$0.04	0%	26%	74%
Don't routinely order imaging tests for patients without symptoms or signs of significant eye disease.	650,667	12%	424,332	429,523	250,466	59%	\$171,182,133.15	\$398.54	\$2.70	24%	34%	66%
Don't order computed tomography (CT) head imaging in children 1 month to 17 years of age unless indicated.	8,012	0%	7,789	6,983	6,787	87%	\$6,869,221.14	\$983.71	\$0.11	1%	13%	87%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	104,359	2%	99,531	15,941	15,360	15%	\$11,183,768.06	\$701.57	\$0.18	2%	85%	15%
Disease Approach	98,303	2%	71,938	56,442	44,904	62%	\$92,151,075.46	\$1,632.67	\$1.45	13%	43%	57%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDS) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	53,878	1%	41,068	43,580	33,571	82%	\$1,879,096.32	\$43.12	\$0.03	0%	19%	81%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	16,722	0%	13,950	0	0	0%	\$0.00	\$0.00	\$0.00	0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	372	0%	369	372	369	100%	\$851,619.97	\$2,289.30	\$0.01	0%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	15,164	0%	8,560	2,563	1,817	21%	\$138,600.53	\$54.08	\$0.00	0%	83%	17%
Don't perform Computed tomography (CT) scans in the routine evaluation of abdominal pain.  Don't perform revascularization without prior medical management for renal artery	4,949	0%	4,791	3,642	3,522	74%	\$6,759,704.01	\$1,856.04	\$0.11	1%	26%	74%
stenosis.	2,114	0%	1,822	2,102	1,812	99%	\$14,260,476.05	\$6,784.24	\$0.22	2%	1%	99%
Don't perform vertebrolplasty for osteoporotic vertebral fractures.  Don't place peripherally inserted central catheters (PICC) in stage III–V CKD patients	1,255	0%	1,089	1,206	1,043	96%	\$14,713,454.91	\$12,200.21	\$0.23	2%	4%	96%
without consulting nephrology.	3,530	0%	3,281	2,866	2,659	81%	\$53,102,305.08	\$18,528.37	\$0.84	8%	19%	81%

					Total	Low Value (Likely	Low & Low Value C	ombined)				
Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service	Per Member Per Month	% of Overall Low Value Spending	Quality Index	Low Value Index
Don't recommend more than a single fraction of palliative radiation for an uncomplicated painful bone metastasis.	319	0%	316	111	111	35%	\$445,818.59	\$4,016.38	\$0.01	0%	65%	35%
Preoperative Evaluation	933,233	17%	549,541	451,050	297,864	54%	\$207,626,362.26	\$460.32	\$3.27	29%	52%	48%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal	504,827	9%	327,639	417,580	268,784	82%	\$198,796,967.68	\$476.07	\$3.13	28%	17%	83%
Don't obtain baseline diagnostic cardiac testing (trans-thoracic/esophageal echocardiography – TTE/TEE) or cardiac stress testing in asymptomatic stable patients with known cardiac disease (e.g., CAD, valvular disease) undergoing low or moderate risk non-cardiac surgery	1,570	0%	1,456	952	896	62%	\$509,373.16	\$535.06	\$0.01	0%	39%	61%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	426,836	8%	220,446	32,518	28,184	13%	\$8,320,021.42	\$255.86	\$0.13	1%	92%	8%
Routine FU/Monitoring	117	0%	116	117	116	100%	\$67,927.01	\$580.57	\$0.00	0%	0%	100%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	117	0%	116	117	116	100%	\$67,927.01	\$580.57	\$0.00	0%	0%	100%
Screening Tests	3,267,700	59%	2,281,560	647,793	601,040	26%	\$126,980,640.46	\$196.02	\$2.00	18%	80%	20%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	270,514	5%	223,593	203,230	182,507	82%	\$20,772,495.17	\$102.21	\$0.33	3%	25%	75%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	122,703	2%	118,042	34,047	31,895	27%	\$10,454,221.70	\$307.05	\$0.16	1%	72%	28%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	18,118	0%	17,702	3,995	3,942	22%	\$511,441.01	\$128.02	\$0.01	0%	78%	22%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	2,028,022	37%	1,200,714	169,357	153,955	13%	\$51,718,598.70	\$305.38	\$0.81	7%	92%	8%
Don't perform population based screening for 25-OH-Vitamin D deficiency	487,412	9%	398,148	123,950	117,380	29%	\$17,584,632.34	\$141.87	\$0.28	2%	75%	25%
Don't perform coronary angiography in patients without cardiac symptoms unless high risk markers present.	40,859	1%	31,536	3,704	3,487	11%	\$15,805,215.91	\$4,267.07	\$0.25	2%	91%	9%
Don't order unnecessary cervical cancer screening (Pap smear and HPV test) in all women who have had adequate prior screening and are not otherwise at high risk for cervical cancer	300,072	5%	291,825	109,510	107,874	37%	\$10,134,035.63	\$92.54	\$0.16	1%	64%	36%

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 12/31/17.

Services defined as low value or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data was analyzed.

Total Low Value services reported include a combination of services categorized as low value and likely low value.

<sup>\*</sup> Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.



# 2016 Central HPR Low Value Services Report- Overall

					Total I	Low Value (Likely	Low & Low Value C	ombined)				
Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service		% of Overall Low Value Spending	Quality Index	Low Value Index
Totals	1,028,607	100%	709,027	356,796	278,640	39%	\$127,056,676.46	\$356.10	\$11.11	100%	65%	35%
Common Treatments  Don't order antibiotics for adenoviral conjunctivitis (pink eye).	<b>73,343</b> 92	<b>7%</b> 0%	<b>56,706</b> 92	<b>72,835</b>	<b>56,265</b> 79	<b>99%</b> 86%	<b>\$1,317,033.39</b> \$1,649.67	<b>\$18.08</b> \$20.88	<b>\$0.12</b> \$0.00	<b>1%</b> 0%	<b>1%</b> 14%	<b>99%</b> 86%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	48	0%	45	14	13	29%	\$455.28	\$32.52	\$0.00	0%	71%	29%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in	7,777	1%	4,002	7,777	4,002	100%	\$53,638.30	\$6.90	\$0.00	0%	0%	100%
children under four years of age.  Don't prescribe oral antibiotics for members with upper URI or ear infection (acute	65,426	6%	52,567	64,965	52,171	99%	\$1,261,290.14	\$19.41	\$0.11	1%	1%	99%
sinusitis, URI, viral respiratory illness or acute otitis externa)  Diagnostic Testing	161,453	16%	124,091	92,421	64,057	52%	\$42,829,454.32	\$463.42	\$3.75	34%	43%	57%
Don't do imaging for low back pain within the first six weeks, unless red flags are	9,347	1%	9,328	7,789	7,770	83%	\$1,733,255.02	\$222.53	\$0.15	1%	17%	83%
present.  Don't do imaging for uncomplicated headache.	5,246	1%	4,974	2,214	2,119	43%	\$2,691,922.39	\$1,215.86	\$0.24	2%	58%	42%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	576	0%	569	420	414	73%	\$684,208.22	\$1,629.07	\$0.06	1%	27%	73%
Don't perform unproven diagnostic tests, such as immunoglobulin G (lgG) testing or an indiscriminate battery of immunoglobulin E (lgE) tests, in the evaluation of allergy.	2,166	0%	2,070	1,206	1,155	56%	\$251,761.81	\$208.76	\$0.02	0%	44%	56%
Don't routinely do diagnostic testing in patients with chronic urticaria.  Don't perform electroencephalography (EEG) for headaches.	71 604	0% 0%	71 587	54 332	54 325	76% 55%	\$50,990.48 \$468,179.50	\$944.27 \$1,410.18	\$0.00 \$0.04	0% 0%	24% 45%	76% 55%
Don't perform imaging of the carotid arteries for simple syncope without other	935	0%	909	319	309	34%	\$834,163.69	\$2,614.93	\$0.07	1%	66%	34%
neurologic symptoms.  Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	443	0%	421	211	207	49%	\$1,146,778.63	\$5,434.97	\$0.10	1%	52%	48%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,331	0%	2,281	1,442	1,411	62%	\$3,579,135.69	\$2,482.06	\$0.31	3%	38%	62%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	0%	*	*	*	*	\$447.71	\$55.96	\$0.00	0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	4,467	0%	4,315	3,260	3,159	73%	\$5,848,262.27	\$1,793.95	\$0.51	5%	27%	73%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	19	0%	15	19	15	100%	\$3,229.79	\$169.99	\$0.00	0%	0%	100%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	0%	*	*	*	*	\$382.65	\$95.66	\$0.00	0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	468	0%	419	332	288	69%	\$417,041.06	\$1,256.15	\$0.04	0%	29%	71%
Don't routinely order imaging tests for patients without symptoms or signs of significant eye disease.	113,340	11%	77,549	70,806	42,908	55%	\$21,823,430.34	\$308.21	\$1.91	17%	38%	62%
Don't perform voiding cystourethrogram (VCUG) routinely in first febrile urinary tract infection (UTI) in children aged 2–24 months	21	0%	21	*	*	*	\$230.67	\$230.67	\$0.00	0%	95%	5%
Don't order computed tomography (CT) head imaging in children 1 month to 17 years of age unless indicated.	1,731	0%	1,681	1,551	1,504	89%	\$1,668,956.27	\$1,076.05	\$0.15	1%	10%	90%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	19,676	2%	18,869	2,453	2,406	13%	\$1,627,078.13	\$663.30	\$0.14	1%	88%	12%
Disease Approach	19,084	2%	14,668	11,569	9,537	65%	\$20,862,593.07	\$1,803.32	\$1.82	16%	39%	61%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDS) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	11,124	1%	8,923	9,078	7,315	82%	\$387,599.20	\$42.70	\$0.03	0%	18%	82%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	2,923	0%	2,561	0	0	0%	\$0.00	\$0.00	\$0.00	0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	75	0%	75	75	75	100%	\$190,738.81	\$2,543.18	\$0.02	0%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	2,585	0%	1,540	425	306	20%	\$20,412.05	\$48.03	\$0.00	0%	84%	16%
Don't perform Computed tomography (CT) scans in the routine evaluation of abdominal pain.	898	0%	880	665	653	74%	\$1,213,470.54	\$1,824.77	\$0.11	1%	26%	74%
Don't perform revascularization without prior medical mangement for renal artery stenosis.	497	0%	416	495	415	100%	\$3,191,320.15	\$6,447.11	\$0.28	3%	0%	100%
Don't perform vertebrolplasty for osteoporotic vertebral fractures.	297	0%	271	283	257	95%	\$4,182,217.84	\$14,778.15	\$0.37	3%	5%	95%
Don't place peripherally inserted central catheters (PICC) in stage III–V CKD patients without consulting nephrology.	619	0%	583	521	489	84%	\$11,554,233.65	\$22,177.03	\$1.01	9%	16%	84%
Don't recommend more than a single fraction of palliative radiation for an uncomplicated painful bone metastasis.	66	0%	65	27	27	42%	\$122,600.83	\$4,540.77	\$0.01	0%	59%	41%

					Total	Low Value (Likely	Low & Low Value C	ombined)				
Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service		% of Overall Low Value Spending	Quality Index	Low Value Index
Preoperative Evaluation	171,274	17%	100,895	75,648	51,272	51%	\$39,388,972.75	\$520.69	\$3.44	31%	56%	44%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal	90,012	9%	59,346	71,436	47,458	80%	\$37,911,215.37	\$530.70	\$3.32	30%	21%	79%
Don't obtain baseline diagnostic cardiac testing (trans-thoracic/esophageal echocardiography – TTE/TEE) or cardiac stress testing in asymptomatic stable patients with known cardiac disease (e.g., CAD, valvular disease) undergoing low or moderate risk non-cardiac surgery	246	0%	234	117	114	49%	\$54,294.08	\$464.05	\$0.00	0%	52%	48%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without	81,016	8%	41,315	4,095	3,700	9%	\$1,423,463.30	\$347.61	\$0.12	1%	95%	5%
significant systemic disease (ASA I or II) undergoing low-risk surgery  Screening Tests	603,446	59%	412,660	104,316	97,502	24%	\$22,653,754.63	\$217.16	\$1.98	18%	83%	17%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	56,929	6%	46,478	40,574	36,305	78%	\$4,180,311.34	\$103.03	\$0.37	3%	29%	71%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	22,245	2%	21,404	5,445	5,153	24%	\$2,123,479.14	\$389.99	\$0.19	2%	76%	24%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	2,925	0%	2,850	557	545	19%	\$75,718.69	\$135.94	\$0.01	0%	81%	19%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low- risk patients without symptoms.	387,529	38%	223,180	20,342	18,937	8%	\$9,119,776.28	\$448.32	\$0.80	7%	95%	5%
Don't perform population based screening for 25-OH-Vitamin D deficiency	68,839	7%	57,243	14,426	13,908	24%	\$2,152,925.91	\$149.24	\$0.19	2%	79%	21%
Don't perform coronary angiography in patients without cardiac symptoms unless high- risk markers present.	9,072	1%	6,981	738	691	10%	\$3,075,074.21	\$4,166.77	\$0.27	2%	92%	8%
Don't order unnecessary cervical cancer screening (Pap smear and HPV test) in all women who have had adequate prior screening and are not otherwise at high risk for cervical cancer	55,907	5%	54,524	22,234	21,963	40%	\$1,926,469.06	\$86.65	\$0.17	2%	60%	40%

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 12/31/17.

Services defined as low value or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data was analyzed.

Total Low Value services reported include a combination of services categorized as low value and likely low value.

<sup>\*</sup> Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.



# 2016 Eastern HPR Low Value Services Report- Overall

					Total	Low Value (Likely	Low & Low Value Co	ombined)				
Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	Services	Total Proxy Cost of Low Value Services	Service	Per Month	% of Overall Low Value Spending	Quality Index	Low Value Index
Totals	1,195,176	100%	815,765	424,776	314,250	39%	\$156,622,534.12	\$368.72	\$11.62	100%	64%	36%
Common Treatments	64,223	5%	51,375	63,644	50,867	99%	\$1,201,277.64	\$18.87	\$0.09	1%	1%	99%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	156	0%	156	134	134	86%	\$1,894.13	\$14.14	\$0.00	0%	14%	86%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	73	0%	68	23	23	34%	\$563.42	\$24.50	\$0.00	0%	68%	32%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	8,083	1%	4,101	8,083	4,101	100%	\$63,631.48	\$7.87	\$0.00	0%	0%	100%
Don't prescribe oral antibiotics for members with upper URI or ear infection (acute sinusitis, URI, viral respiratory illness or acute otitis externa)	55,911	5%	47,050	55,404	46,609	99%	\$1,135,188.61	\$20.49	\$0.08	1%	1%	99%
Diagnostic Testing	212,039	18%	151,668	132,189	83,114	55%	\$67,829,959.75	\$513.13	\$5.03	43%	38%	62%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	9,364	1%	9,341	7,126	7,104	76%	\$2,073,902.03	\$291.03	\$0.15	1%	24%	76%
Don't do imaging for uncomplicated headache.	6,279	1%	5,938	2,354	2,259	38%	\$3,031,211.45	\$1,287.69	\$0.22	2%	63%	37%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope	775	0%	764	541	531	70%	\$881,584.31	\$1,629.55	\$0.07	1%	30%	70%
and a normal neurological examination.  Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of	2,972	0%	2,846	1,976	1,885	66%	\$319,709.53	\$161.80	\$0.02	0%	34%	66%
allergy.			•	•	·							
Don't routinely do diagnostic testing in patients with chronic urticaria.  Don't perform electroencephalography (EEG) for headaches.	77 930	0% 0%	77 909	59 520	59 513	77% 56%	\$23,201.46 \$792,026.56	\$393.25 \$1,523.13	\$0.00 \$0.06	0% 1%	23% 44%	77% 56%
Don't perform imaging of the carotid arteries for simple syncope without other	1,521	0%	1,488	632	615	41%	\$1,064,131.17	\$1,683.75	\$0.08	1%	58%	42%
neurologic symptoms.  Don't order computed tomography (CT) scan of the head/brain for sudden hearing	760	0%	720	315	306	43%	\$1,548,796.85	\$4,916.82	\$0.11	1%	59%	41%
loss.  Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,437	0%	2,383	1,499	1,469	62%	\$3,528,673.23	\$2,354.02	\$0.26	2%	38%	62%
Don't use coronary artery calcium scoring for patients with known coronary artery	*	0%	*	*	*	*	\$217.49	\$36.25	\$0.00	0%	0%	100%
disease (including stents and bypass grafts).  Don't perform routine head CT scans for emergency room visits for severe	5,156	0%	4,955	3,483	3,357	68%	\$5,830,815.09	\$1,674.08	\$0.43	4%	32%	68%
dizziness. Don't perform advanced sperm function testing, such as sperm penetration or	*	0%	*	*	*	*	\$133.83	\$44.61	\$0.00	0%	0%	100%
hemizona assays, in the initial evaluation of the infertile couple.  Don't perform a postcoital test (PCT) for the evaluation of infertility.	0	0%	0	0	0	0%	\$0.00	\$0.00	\$0.00	0%	-	-
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal	627	0%	526	498	406	77%	\$720,420.56	\$1,446.63	\$0.05	0%	21%	79%
colic. Don't routinely order imaging tests for patients without symptoms or signs of significant eye disease.	158,519	13%	100,239	109,467	61,034	61%	\$44,753,798.01	\$408.83	\$3.32	29%	31%	69%
Don't perform voiding cystourethrogram (VCUG) routinely in first febrile urinary tract infection (UTI) in children aged 2–24 months	25	0%	25	0	0	0%	\$0.00	\$0.00	\$0.00	0%	100%	0%
Don't order computed tomography (CT) head imaging in children 1 month to 17 years of age unless indicated.	1,572	0%	1,515	1,309	1,261	83%	\$1,310,432.73	\$1,001.09	\$0.10	1%	17%	83%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are	21,016	2%	19,933	2,401	2,306	12%	\$1,950,905.45	\$812.54	\$0.14	1%	89%	11%
present.  Disease Approach	22,326	2%	16,518	13,907	11,032	67%	\$20,840,416.48	\$1,498.56	\$1.55	13%	38%	62%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDS) in individuals with	13,620	1%	10,463	11,197	8,617	82%	\$532,253.54	\$47.54	\$0.04	0%	18%	82%
hypertension or heart failure or CKD of all causes, including diabetes.  Don't schedule elective, non-medically indicated inductions of labor or Cesarean	3,690	0%	2,876	0	0	0%	\$0.00	\$0.00	\$0.00	0%	100%	0%
deliveries before 39 weeks, 0 days gestational age.  Don't perform an arthroscopic knee surgery for knee osteoarthritis.	84	0%	83	84	83	100%	\$190,692.29	\$2,270.15	\$0.01	0%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	2,242	0%	1,356	416	306	23%	\$24,497.82	\$58.89	\$0.00	0%	81%	19%
Don't perform Computed tomography (CT) scans in the routine evaluation of abdominal pain.	832	0%	808	587	570	71%	\$1,056,204.22	\$1,799.33	\$0.08	1%	29%	71%
Don't perform revascularization without prior medical mangement for renal artery	705	0%	617	705	617	100%	\$4,138,132.90	\$5,869.69	\$0.31	3%	0%	100%
stenosis.  Don't perform vertebrolplasty for osteoporotic vertebral fractures.	195	0%	173	183	163	94%	\$2,013,303.70	\$11,001.66	\$0.15	1%	6%	94%
Don't place peripherally inserted Eastern catheters (PICC) in stage III-V CKD	886	0%	819	715	656	80%	\$12,838,094.80	\$17,955.38	\$0.95	8%	19%	81%
patients without consulting nephrology.  Don't recommend more than a single fraction of palliative radiation for an uncomplicated painful bone metastasis.	72	0%	71	20	20	28%	\$47,237.21	\$2,361.86	\$0.00	0%	72%	28%

Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service	Per Member Per Month	% of Overall Low Value Spending	Quality Index	Low Value Index
Preoperative Evaluation	219,878	18%	128,655	106,799	67,881	53%	\$46,428,036.99	\$434.72	\$3.44	30%	51%	49%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal Don't obtain baseline diagnostic cardiac testing (trans-thoracic/esophageal	123,010	10%	77,849	101,576	63,280	81%	\$44,982,872.73	\$442.85	\$3.34	29%	17%	83%
echocardiography – TTE/TEE) or cardiac stress testing in asymptomatic stable patients with known cardiac disease (e.g., CAD, valvular disease) undergoing low	234	0%	223	127	122	55%	\$76,293.95	\$600.74	\$0.01	0%	46%	54%
or moderate risk non-cardiac surgery Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	96,634	8%	50,583	5,096	4,479	9%	\$1,368,870.31	\$268.62	\$0.10	1%	95%	5%
Routine FU/Monitoring	62	0%	61	62	61	100%	\$38,749.90	\$625.00	\$0.00	0%	0%	100%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	62	0%	61	62	61	100%	\$38,749.90	\$625.00	\$0.00	0%	0%	100%
Screening Tests	676,648	57%	467,488	108,175	101,295	22%	\$20,284,093.36	\$187.51	\$1.50	13%	84%	16%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	58,064	5%	47,954	42,760	38,613	81%	\$3,998,710.29	\$93.52	\$0.30	3%	26%	74%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	26,056	2%	24,979	7,290	6,810	27%	\$2,269,717.34	\$311.35	\$0.17	1%	72%	28%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	4,138	0%	4,019	676	663	16%	\$83,993.19	\$124.25	\$0.01	0%	84%	16%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	406,479	34%	236,175	17,173	16,077	7%	\$6,147,338.60	\$357.97	\$0.46	4%	96%	4%
Don't perform population based screening for 25-OH-Vitamin D deficiency	113,381	9%	89,789	17,334	16,590	18%	\$2,830,565.42	\$163.30	\$0.21	2%	85%	15%
Don't perform coronary angiography in patients without cardiac symptoms unless high-risk markers present.	8,551	1%	6,655	849	780	12%	\$3,080,827.64	\$3,628.77	\$0.23	2%	90%	10%
Don't order unnecessary cervical cancer screening (Pap smear and HPV test) in all women who have had adequate prior screening and are not otherwise at high risk for cervical cancer	59,979	5%	57,917	22,093	21,762	38%	\$1,872,940.88	\$84.78	\$0.14	1%	63%	37%

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 12/31/17.

Services defined as low value or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data was analyzed.

Total Low Value services reported include a combination of services categorized as low value and likely low value.

<sup>\*</sup> Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.



# 2016 Northern HPR Low Value Services Report- Overall

					Total I	Low Value (Likely	Low & Low Value C	ombined)				
Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service	Per Member Per Month	% of Overall Low Value Spending	Quality Index	Low Value Index
Totals	1,335,402	100%	978,960	559,892	452,125	46%	\$140,022,482.92	\$250.09	\$8.36	100%	58%	42%
Output of Table 1	70.055	F0/	00.007	70.000	F0 00F	4000/	\$4.077.F00.4F	A47.50	\$0.00	0%	-	-
Common Treatments  Don't order antibiotics for adenoviral conjunctivitis (pink eye).	<b>73,255</b> 128	<b>5%</b> 0%	<b>60,037</b> 127	<b>72,993</b> 113	<b>59,805</b> 112	100% 88%	<b>\$1,277,589.15</b> \$875.72	<b>\$17.50</b> \$7.75	<b>\$0.08</b> \$0.00	1% 0%	<b>0%</b> 12%	100% 88%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	5,589	0%	3,388	5,589	3,388	100%	\$37,524.44	\$6.71	\$0.00	0%	0%	100%
Don't prescribe oral antibiotics for members with upper URI or ear infection (acute sinusitis, URI, viral respiratory illness or acute otitis externa)	67,504	5%	56,489	67,286	56,300	100%	\$1,239,131.60	\$18.42	\$0.07	1%	0%	100%
Diagnostic Testing	202,724	15%	149,399	115,932	78,811	53%	\$49,373,080.62	\$425.88	\$2.95	35%	43%	57%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	8,349	1%	8,337	6,091	6,082	73%	\$1,686,105.84	\$276.82	\$0.10	1%	27%	73%
Don't do imaging for uncomplicated headache.	5,043	0%	4,792	1,786	1,716	36%	\$1,886,091.12	\$1,056.04	\$0.11	1%	65%	35%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	545	0%	538	396	390	72%	\$616,439.22	\$1,556.66	\$0.04	0%	27%	73%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	3,963	0%	3,831	2,208	2,130	56%	\$468,158.46	\$212.03	\$0.03	0%	44%	56%
Don't routinely do diagnostic testing in patients with chronic urticaria.  Don't perform electroencephalography (EEG) for headaches.	146 926	0% 0%	146 890	113 629	113 604	77% 68%	\$41,228.59 \$497,672.83	\$364.85 \$791.21	\$0.00 \$0.03	0% 0%	23% 32%	77% 68%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,171	0%	1,123	378	364	32%	\$581,018.67	\$1,537.09	\$0.03	0%	68%	32%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	502	0%	480	248	241	50%	\$1,335,654.56	\$5,385.70	\$0.08	1%	51%	49%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	1,951	0%	1,921	977	969	50%	\$2,978,943.75	\$3,049.07	\$0.18	2%	50%	50%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	42	0%	42	42	42	100%	\$8,022.29	\$191.01	\$0.00	0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	4,553	0%	4,401	2,885	2,814	64%	\$5,019,780.55	\$1,739.96	\$0.30	4%	37%	63%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	0%	*	*	*	100%	\$149.60	\$149.60	\$0.00	0%	0%	100%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	0%	*	*	*	100%	\$200.51	\$66.84	\$0.00	0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	431	0%	371	294	240	65%	\$438,952.26	\$1,493.03	\$0.03	0%	32%	68%
Don't routinely order imaging tests for patients without symptoms or signs of significant eye disease.	146,704	11%	95,689	92,067	55,658	58%	\$28,621,502.67	\$310.88	\$1.71	20%	37%	63%
Don't perform voiding cystourethrogram (VCUG) routinely in first febrile urinary tract infection (UTI) in children aged 2–24 months	20	0%	20	0	0	0%	\$0.00	\$0.00	\$0.00	0%	100%	0%
Don't order computed tomography (CT) head imaging in children 1 month to 17 years of age unless indicated.	1,677	0%	1,654	1,481	1,459	88%	\$1,393,566.54	\$940.96	\$0.08	1%	12%	88%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	26,697	2%	25,160	6,333	5,985	24%	\$3,799,593.16	\$599.97	\$0.23	3%	76%	24%
Disease Approach	14,778	1%	11,735	6,903	5,912	50%	\$15,143,040.21	\$2,193.69	\$0.90	11%	53%	47%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDS) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	6,039	0%	5,113	5,000	4,230	83%	\$245,588.61	\$49.12	\$0.01	0%	17%	83%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	4,517	0%	4,003	0	0	0%	\$0.00	\$0.00	\$0.00	0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	99	0%	98	99	98	100%	\$196,688.71	\$1,986.75	\$0.01	0%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	2,012	0%	1,126	260	180	16%	\$26,924.61	\$103.56	\$0.00	0%	87%	13%
Don't perform Computed tomography (CT) scans in the routine evaluation of abdominal pain.	905	0%	893	520	513	57%	\$1,122,024.78	\$2,157.74	\$0.07	1%	43%	57%
Don't perform revascularization without prior medical mangement for renal artery stenosis.	306	0%	264	303	261	99%	\$2,425,696.56	\$8,005.60	\$0.14	2%	1%	99%
Don't perform vertebrolplasty for osteoporotic vertebral fractures.	254	0%	200	250	196	98%	\$2,844,859.77	\$11,379.44	\$0.17	2%	2%	98%
Don't place peripherally inserted central catheters (PICC) in stage III–V CKD patients without consulting nephrology.	596	0%	552	453	416	75%	\$8,210,578.68	\$18,124.90	\$0.49	6%	24%	76%

Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service		% of Overall Low Value Spending	Quality Index	Low Value Index
Don't recommend more than a single fraction of palliative radiation for an uncomplicated painful bone metastasis.	50	0%	50	18	18	36%	\$70,678.49	\$3,926.58	\$0.00	0%	64%	36%
Preoperative Evaluation	192,827	14%	117,804	108,158	72,259	61%	\$30,683,958.89	\$283.70	\$1.83	22%	44%	56%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal	109,794	8%	71,504	94,030	60,464	85%	\$28,378,921.81	\$301.81	\$1.69	20%	14%	86%
Don't obtain baseline diagnostic cardiac testing (trans-thoracic/esophageal echocardiography – TTE/TEE) or cardiac stress testing in asymptomatic stable patients with known cardiac disease (e.g., CAD, valvular disease) undergoing low or moderate risk non-cardiac surgery	598	0%	541	411	378	70%	\$185,593.24	\$451.57	\$0.01	0%	31%	69%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	82,435	6%	45,759	13,717	11,417	25%	\$2,119,443.84	\$154.51	\$0.13	2%	83%	17%
Routine FU/Monitoring	21	0%	21	21	21	100%	\$9,431.93	\$449.14	\$0.00	0%	0%	100%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	21	0%	21	21	21	100%	\$9,431.93	\$449.14	\$0.00	0%	0%	100%
Screening Tests	851,797	64%	639,964	255,885	235,317	37%	\$43,535,382.12	\$170.14	\$2.60	31%	70%	30%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	65,836	5%	55,202	53,041	47,500	86%	\$5,589,151.85	\$105.37	\$0.33	4%	19%	81%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	36,789	3%	35,525	10,198	9,534	27%	\$2,006,211.11	\$196.73	\$0.12	1%	72%	28%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	6,156	0%	6,024	1,817	1,801	30%	\$191,616.29	\$105.46	\$0.01	0%	70%	30%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low risk patients without symptoms.	491,069	37%	315,832	95,812	85,741	27%	\$21,628,476.34	\$225.74	\$1.29	15%	80%	20%
Don't perform population based screening for 25-OH-Vitamin D deficiency	146,953	11%	125,599	60,242	56,438	45%	\$7,468,459.62	\$123.97	\$0.45	5%	59%	41%
Don't perform coronary angiography in patients without cardiac symptoms unless high-risk markers present.	5,879	0%	4,704	853	823	17%	\$3,521,221.86	\$4,128.04	\$0.21	3%	85%	15%
Don't order unnecessary cervical cancer screening (Pap smear and HPV test) in all women who have had adequate prior screening and are not otherwise at high risk for cervical cancer	99,115	7%	97,078	33,922	33,480	34%	\$3,130,245.05	\$92.28	\$0.19	2%	66%	34%

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 12/31/17.

Services defined as low value or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data was analyzed.

Total Low Value services reported include a combination of services categorized as low value and likely low value.

 $\label{prop:continuous} When there is only one row with supressed values, the entire row is removed.$ 

<sup>\*</sup> Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.



# 2016 Northwestern HPR Low Value Services Report- Overall

					Total I	Low Value (Likely	Low & Low Value C	ombined)				
Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service	Per Member Per Month		Quality Index	Low Value Index
Totals	876,119	100%	597,938	313,171	239,281	40%	\$132,123,213.48	\$421.89	\$13.37	100%	64%	36%
Common Treatments	55.416	6%	44.098	55.090	43.807	99%	\$934,363.02	\$16.96	\$0.09	1%	1%	99%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	80	0%	79	76	75	95%	\$696.67	\$9.17	\$0.00	0%	5%	95%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	58	0%	56	29	27	48%	\$669.70	\$23.09	\$0.00	0%	50%	50%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	4,080	0%	2,028	4,080	2,028	100%	\$25,753.62	\$6.31	\$0.00	0%	0%	100%
Don't prescribe oral antibiotics for members with upper URI or ear infection (acute sinusitis, URI, viral respiratory illness or acute otitis externa)	51,198	6%	41,935	50,905	41,677	99%	\$907,243.03	\$17.82	\$0.09	1%	1%	99%
Diagnostic Testing	143,606	16%	104,455	86,220	55,862	53%	\$52,056,074.13	\$603.76	\$5.27	39%	40%	60%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	6,251	1%	6,240	4,644	4,635	74%	\$1,201,208.48	\$258.66	\$0.12	1%	26%	74%
Don't do imaging for uncomplicated headache.	4,390	1%	4,157	1,581	1,514	36%	\$2,020,085.05	\$1,277.73	\$0.20	2%	64%	36%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope	452	0%	442	328	319	72%	\$574,914.49	\$1,752.79	\$0.06	0%	27%	73%
and a normal neurological examination.  Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or	-						*- *-	. ,	•			
an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of	2,018	0%	1,926	1,246	1,176	61%	\$376,200.13	\$301.93	\$0.04	0%	38%	62%
allergy.  Don't routinely do diagnostic testing in patients with chronic urticaria.	72	0%	72	62	62	86%	\$48,671.08	\$785.02	\$0.00	0%	14%	86%
Don't perform electroencephalography (EEG) for headaches.	590	0%	571	291	287	50%	\$472,215.28	\$1,622.73	\$0.05	0%	51%	49%
Don't perform imaging of the carotid arteries for simple syncope without other	1,045	0%	1.010	353	336	33%	\$648,622.51	\$1,837.46	\$0.07	0%	66%	34%
neurologic symptoms.  Don't order computed tomography (CT) scan of the head/brain for sudden hearing			,-									
loss.	488	0%	460	253	244	53%	\$1,466,121.84	\$5,794.95	\$0.15	1%	48%	52%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	1,676	0%	1,645	978	964	59%	\$2,617,835.00	\$2,676.72	\$0.26	2%	42%	58%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	0%	*	*	*	100%	\$3,257.14	\$325.71	\$0.00	0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	3,606	0%	3,501	2,384	2,327	66%	\$4,493,144.09	\$1,884.71	\$0.45	3%	34%	66%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	0%	*	*	*	100%	\$204.79	\$29.26	\$0.00	0%	0%	100%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	0%	*	*	*	100%	\$42.02	\$21.01	\$0.00	0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	449	0%	386	316	259	67%	\$453,418.39	\$1,434.87	\$0.05	0%	30%	70%
Don't routinely order imaging tests for patients without symptoms or signs of	103,901	12%	66,070	69,511	39,579	60%	\$34,105,088.24	\$490.64	\$3.45	26%	33%	67%
significant eye disease.  Don't perform voiding cystourethrogram (VCUG) routinely in first febrile urinary tract infection (UTI) in children aged 2–24 months	·	0%	13	0	0	0%	\$0.00	\$0.00	\$0.00	0%	100%	0%
Don't order computed tomography (CT) head imaging in children 1 month to 17 years of age unless indicated.	1,443	0%	1,400	1,261	1,224	87%	\$1,236,754.44	\$980.77	\$0.13	1%	13%	87%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are	17,193	2%	16,544	2,993	2,918	18%	\$2,338,291.16	\$781.25	\$0.24	2%	83%	17%
present.  Disease Approach	12,599	1%	9,383	6,556	5,582	59%	\$15,562,136.15	\$2,373.72	\$1.58	12%	48%	52%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDS) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	5,394	1%	4,458	4,443	3,680	83%	\$177,384.65	\$39.92	\$0.02	0%	18%	82%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	2,638	0%	2,162	0	0	0%	\$0.00	\$0.00	\$0.00	0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	43	0%	42	43	42	100%	\$114,017.83	\$2,651.58	\$0.01	0%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	2,388	0%	1,334	318	240	18%	\$15,905.73	\$50.02	\$0.00	0%	87%	13%
Don't perform Computed tomography (CT) scans in the routine evaluation of abdominal pain.	956	0%	917	719	689	75%	\$1,499,221.74	\$2,085.15	\$0.15	1%	25%	75%
Don't perform revascularization without prior medical mangement for renal artery stenosis.	304	0%	269	300	265	99%	\$2,186,320.53	\$7,287.74	\$0.22	2%	1%	99%
Don't perform vertebrolplasty for osteoporotic vertebral fractures.	264	0%	224	254	214	96%	\$2,825,641.38	\$11,124.57	\$0.29	2%	4%	96%

Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service	Per Member Per Month	% of Overall Low Value Spending	Quality Index	Low Value Index
Don't place peripherally inserted central catheters (PICC) in stage III–V CKD patients without consulting nephrology.	559	0%	526	460	433	82%	\$8,666,048.02	\$18,839.23	\$0.88	7%	18%	82%
Don't recommend more than a single fraction of palliative radiation for an uncomplicated painful bone metastasis.	53	0%	53	19	19	36%	\$77,596.27	\$4,084.01	\$0.01	0%	64%	36%
Preoperative Evaluation	150,026	17%	89,020	73,705	49,142	55%	\$42,044,443.02	\$570.44	\$4.26	32%	51%	49%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal	82,054	9%	53,657	68,387	44,421	83%	\$40,634,275.81	\$594.18	\$4.11	31%	17%	83%
Don't obtain baseline diagnostic cardiac testing (trans-thoracic/esophageal echocardiography – TTE/TEE) or cardiac stress testing in asymptomatic stable patients with known cardiac disease (e.g., CAD, valvular disease) undergoing low or moderate risk non-cardiac surgery	285	0%	260	180	168	65%	\$116,249.04	\$645.83	\$0.01	0%	37%	63%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	67,687	8%	35,103	5,138	4,553	13%	\$1,293,918.17	\$251.83	\$0.13	1%	92%	8%
Routine FU/Monitoring	13	0%	13	13	13	100%	\$9,317.72	\$716.75	\$0.00	0%	0%	100%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	13	0%	13	13	13	100%	\$9,317.72	\$716.75	\$0.00	0%	0%	100%
Screening Tests	514,459	59%	350,969	91,587	84,875	24%	\$21,516,879.44	\$234.93	\$2.18	16%	82%	18%
Don't perform PSA-based screening for prostate cancer in all men regardless of	43,065	5%	35,006	31,415	28,015	80%	\$3,392,193.74	\$107.98	\$0.34	3%	27%	73%
age. Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	15,951	2%	15,328	4,429	4,131	27%	\$1,706,036.74	\$385.20	\$0.17	1%	72%	28%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	2,418	0%	2,368	487	482	20%	\$88,868.65	\$182.48	\$0.01	0%	80%	20%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	325,683	37%	190,995	20,644	18,968	10%	\$8,297,220.47	\$401.92	\$0.84	6%	94%	6%
Don't perform population based screening for 25-OH-Vitamin D deficiency	77,672	9%	61,066	18,801	17,836	29%	\$3,063,178.14	\$162.93	\$0.31	2%	76%	24%
Don't perform coronary angiography in patients without cardiac symptoms unless high-risk markers present.	7,785	1%	5,909	667	629	11%	\$3,368,598.60	\$5,050.37	\$0.34	3%	91%	9%
Don't order unnecessary cervical cancer screening (Pap smear and HPV test) in all women who have had adequate prior screening and are not otherwise at high risk for cervical cancer	41,885	5%	40,297	15,144	14,814	37%	\$1,600,783.10	\$105.70	\$0.16	1%	64%	36%

<sup>\*</sup> Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 12/31/17.

Services defined as low value or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data was analyzed.

Total Low Value services reported include a combination of services categorized as low value and likely low value.



# 2016 Southwestern HPR Low Value Services Report- Overall

					Total l	Low Value (Likely	Low & Low Value C	ombined)				
Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service	Per Member Per Month	% of Overall Low Value Spending	Quality Index	Low Value Index
Totals	1,119,384	100%	742,055	391,332	289,218	39%	\$150,679,397.40	\$385.04	\$12.63	100%	65%	35%
Common Treatments  Don't order antibiotics for adenoviral conjunctivitis (pink eye).	<b>92,923</b> 84	<b>8%</b> 0%	<b>67,528</b> 84	<b>92,237</b> 78	<b>66,957</b>	<b>99%</b> 93%	<b>\$1,432,662.88</b> \$806.13	<b>\$15.53</b> \$10.34	<b>\$0.12</b> \$0.00	<b>1%</b> 0%	1% 7%	<b>99%</b> 93%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	85	0%	79	35	33	42%	\$1,209.54	\$34.56	\$0.00	0%	59%	41%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	15,017	1%	7,025	15,017	7,025	100%	\$88,075.08	\$5.87	\$0.01	0%	0%	100%
Don't prescribe oral antibiotics for members with upper URI or ear infection (acute sinusitis, URI, viral respiratory illness or acute otitis externa)	77,737	7%	60,340	77,107	59,821	99%	\$1,342,572.13	\$17.41	\$0.11	1%	1%	99%
Diagnostic Testing	176,353	16%	131,233	107,004	70,045	53%	\$61,426,804.29	\$574.06	\$5.15	41%	39%	61%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	7,993	1%	7,988	6,020	6,015	75%	\$1,508,217.56	\$250.53	\$0.13	1%	25%	75%
Don't do imaging for uncomplicated headache.	5,215	0%	4,932	1,951	1,843	37%	\$1,810,380.02	\$927.92	\$0.15	1%	63%	37%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	629	0%	623	436	430	69%	\$656,940.07	\$1,506.74	\$0.06	0%	31%	69%
Don't perform unproven diagnostic tests, such as immunoglobulin G (lgG) testing or an indiscriminate battery of immunoglobulin E (lgE) tests, in the evaluation of allergy.	2,908	0%	2,771	1,754	1,671	60%	\$497,684.54	\$283.74	\$0.04	0%	40%	60%
Don't routinely do diagnostic testing in patients with chronic urticaria.	62	0%	62	44	44	71%	\$24,431.34	\$555.26	\$0.00	0%	29%	71%
Don't perform electroencephalography (EEG) for headaches.	739	0%	714	411	398	56%	\$572,015.39	\$1,391.76	\$0.05	0%	44%	56%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,325	0%	1,298	557	547	42%	\$787,081.10	\$1,413.07	\$0.07	1%	58%	42%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	730	0%	696	321	314	45%	\$1,708,620.79	\$5,322.81	\$0.14	1%	56%	44%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,389	0%	2,337	1,356	1,336	57%	\$4,297,676.27	\$3,169.38	\$0.36	3%	43%	57%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	0%	*	*	*	100%	\$2,200.61	\$275.08	\$0.00	0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	3,893	0%	3,753	2,668	2,577	69%	\$4,237,368.27	\$1,588.22	\$0.36	3%	31%	69%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	0	0%	0	0	0	0%	\$0.00	\$0.00	\$0.00	0%	-	-
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	0%	*	*	*	100%	\$65.79	\$21.93	\$0.00	0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	882	0%	691	661	488	71%	\$718,397.33	\$1,086.83	\$0.06	0%	25%	75%
Don't routinely order imaging tests for patients without symptoms or signs of significant	128.203	11%	84.785	87.672	51.287	60%	\$41.878.313.89	\$477.67	\$3.51	28%	32%	68%
eye disease.  Don't perform voiding cystourethrogram (VCUG) routinely in first febrile urinary tract infection (UTI) in children aged 2–24 months	*	0%	*	0	0	0%	\$0.00	\$0.00	\$0.00	0%	100%	0%
Don't order computed tomography (CT) head imaging in children 1 month to 17 years of age unless indicated.	1,589	0%	1,539	1,381	1,339	87%	\$1,259,511.16	\$912.03	\$0.11	1%	13%	87%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	19,777	2%	19,025	1,761	1,745	9%	\$1,467,900.16	\$833.56	\$0.12	1%	91%	9%
Disease Approach	29,516	3%	19,634	17,507	12,841	65%	\$19,742,889.55	\$1,127.71	\$1.66	13%	41%	59%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDS) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	17,701	2%	12,111	13,862	9,729	80%	\$536,270.32	\$38.69	\$0.04	0%	22%	78%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	2,954	0%	2,348	0	0	0%	\$0.00	\$0.00	\$0.00	0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	71	0%	71	71	71	100%	\$159,482.33	\$2,246.23	\$0.01	0%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	5,937	1%	3,204	1,144	785	25%	\$50,860.32	\$44.46	\$0.00	0%	81%	19%
Don't perform Computed tomography (CT) scans in the routine evaluation of abdominal pain.	1,358	0%	1,293	1,151	1,097	85%	\$1,868,782.73	\$1,623.62	\$0.16	1%	15%	85%
Don't perform revascularization without prior medical mangement for renal artery stenosis.	302	0%	256	299	254	99%	\$2,319,005.91	\$7,755.87	\$0.19	2%	1%	99%
Don't perform vertebrolplasty for osteoporotic vertebral fractures.	245	0%	221	236	213	96%	\$2,847,432.22	\$12,065.39	\$0.24	2%	4%	96%

Total Low Value (Likely Low & Low Value Combined)												
Low Value Measure Rule	Total Services Measured	Percentage of all Services Measured	Number of Individuals who Received Services	Number of Low Value Services	Number of Individuals who Received a Low Value Service	% of Distinct Members with Services	Total Proxy Cost of Low Value Services	Average Proxy Cost per Service		% of Overall Low Value Spending	Quality Index	Low Value Index
Don't place peripherally inserted central catheters (PICC) in stage III–V CKD patients without consulting nephrology.	870	0%	801	717	665	83%	\$11,833,349.93	\$16,503.97	\$0.99	8%	18%	82%
Don't recommend more than a single fraction of palliative radiation for an uncomplicated painful bone metastasis.	78	0%	77	27	27	35%	\$127,705.79	\$4,729.84	\$0.01	0%	65%	35%
Preoperative Evaluation	199,228	18%	113,167	86,740	57,310	51%	\$49,080,950.61	\$565.84	\$4.12	33%	56%	44%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal	99,957	9%	65,283	82,151	53,161	81%	\$46,889,681.96	\$570.77	\$3.93	31%	18%	82%
Don't obtain baseline diagnostic cardiac testing (trans-thoracic/esophageal echocardiography – TTE/TEE) or cardiac stress testing in asymptomatic stable patients with known cardiac disease (e.g., CAD, valvular disease) undergoing low or moderate risk non-cardiac surgery	207	0%	198	117	114	58%	\$76,942.85	\$657.63	\$0.01	0%	43%	57%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	99,064	9%	47,686	4,472	4,035	8%	\$2,114,325.80	\$472.79	\$0.18	1%	95%	5%
Routine FU/Monitoring	14	0%	14	14	14	100%	\$5,559.16	\$397.08	\$0.00	0%	0%	100%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	14	0%	14	14	14	100%	\$5,559.16	\$397.08	\$0.00	0%	0%	100%
Screening Tests	621,350	56%	410,479	87,830	82,051	20%	\$18,990,530.91	\$216.22	\$1.59	13%	86%	14%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	46,620	4%	38,953	35,440	32,074	82%	\$3,612,127.95	\$101.92	\$0.30	2%	24%	76%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	21,662	2%	20,806	6,685	6,267	30%	\$2,348,777.37	\$351.35	\$0.20	2%	69%	31%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	2,481	0%	2,441	458	451	18%	\$71,244.19	\$155.56	\$0.01	0%	82%	18%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	417,262	37%	234,532	15,386	14,232	6%	\$6,525,787.01	\$424.14	\$0.55	4%	96%	4%
Don't perform population based screening for 25-OH-Vitamin D deficiency	80,567	7%	64,451	13,147	12,608	20%	\$2,069,503.25	\$157.41	\$0.17	1%	84%	16%
Don't perform coronary angiography in patients without cardiac symptoms unless high- risk markers present.	9,572	1%	7,287	597	564	8%	\$2,759,493.60	\$4,622.27	\$0.23	2%	94%	6%
Don't order unnecessary cervical cancer screening (Pap smear and HPV test) in all women who have had adequate prior screening and are not otherwise at high risk for cervical cancer	43,186	4%	42,009	16,117	15,855	38%	\$1,603,597.54	\$99.50	\$0.13	1%	63%	37%

<sup>\*</sup> Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 12/31/17.

Services defined as low value or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data was analyzed.

Total Low Value services reported include a combination of services categorized as low value and likely low value.

Low Value Measure	Source	Source URL	Specialty Society Label
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	USPSTF	http://www.uspreventiveservicestaskforce.org/prostatecancerscreeing/prostatefinalrs.htm	n Urology
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	USPSTF	http://www.uspreventiveservicestaskforce.org/uspstf/uspscolo.htm	Gastroenterology
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	Choosing Wisely	http://www.choosingwisely.org/doctor-patient-lists/american- academy-of-family-physicians/	American Academy of Family Physicians
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	Choosing Wisely	http://www.choosingwisely.org/doctor-patient-lists/american- academy-of-family-physicians/	American Academy of Family Physicians
Don't do imaging for uncomplicated headache.	Choosing Wisely	http://www.choosingwisely.org/doctor-patient-lists/american- college-of-radiology/	American College of Radiology
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	Choosing Wisely	http://www.choosingwisely.org/wp- content/uploads/2012/12/5things 12 factsheet Amer College Phypdf	American College of Physicians
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	Choosing Wisely	http://www.choosingwisely.org/doctor-patient-lists/american- academy-of-allergy-asthma-immunology/	American Academy of Allergy, Asthma & Immunology
Don't routinely do diagnostic testing in patients with chronic urticaria.	Choosing Wisely	http://www.choosingwisely.org/wp-content/uploads/2012/12/5things_12_factsheet_AAAAI1.pdf	American Academy of Allergy, Asthma & Immunology
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	Choosing Wisely	http://www.choosingwisely.org/doctor-patient-lists/american- academy-of-family-physicians/	American Academy of Family Physicians
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDS) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	Choosing Wisely	http://www.choosingwisely.org/doctor-patient-lists/american- society-of-nephrology/	American Society of Nephrology
Don't perform electroencephalography (EEG) for headaches.	Choosing Wisely	http://www.choosingwisely.org/wp-content/uploads/2013/02/AAN Sthings-List_Web.pdf	_ American Academy of Neurology
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms. $ \\$	Choosing Wisely	http://www.choosingwisely.org/wp-content/uploads/2013/02/AAN 5things-List_Web.pdf	_ American Academy of Neurology
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	Choosing Wisely	http://www.choosingwisely.org/wp-content/uploads/2013/04/AAO 5things-List Web.pdf	American Academy of Ophthalmology
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	Choosing Wisely	http://www.choosingwisely.org/wp-content/uploads/2013/02/AAO HNSF-5things-List_Web.pdf	_ American Academy of Otolaryngology - Head and Neck Surgery Foundation
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	Choosing Wisely	http://www.choosingwisely.org/wp-content/uploads/2013/02/AAO HNSF-5things-List_Web.pdf	_ American Academy of Otolaryngology - Head and Neck Surgery Foundation
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	Choosing Wisely	http://www.choosingwisely.org/wp-content/uploads/2013/02/SCCT 5things-List Web.pdf	Society of Cardiovascular Computed Tomography
Don't perform routine head CT scans for emergency room visits for severe dizziness.	MISC Research	http://healthcareinnovationing.com/tour#/view/emergency- department-default/article/Hopkins-Report-Says-ED-CT-Scans- Overused-For-	John Hopkins Report
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	Choosing Wisely	http://www.choosingwisely.org/doctor-patient-lists/american- college-of-obstetricians-and-gynecologists/	The American College of Obstetricians and Gynecologists
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	Choosing Wisely	http://www.choosingwisely.org/wp-content/uploads/2013/02/AAO HNSF-5things-List Web.pdf	American Academy of Otolaryngology—Head & Neck Surgery Foundation
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	Choosing Wisely	http://www.choosingwisely.org/wp-content/uploads/2013/02/AAP- 5things-List . Web.pdf	: American Academy of Pediatrics
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	Choosing Wisely	http://www.choosingwisely.org/wp- content/uploads/2013/02/ACRheumatology-5things-List_Web.pdf	American College of Rheumatology

Low Value Measure	Source	Source URL	Specialty Society Label
Don't perform population based screening for 25-OH-Vitamin D deficiency	Choosing Wisely	http://www.choosingwisely.org/wp-content/uploads/2013/02/ASCP 5things-List_Web.pdf	= American Society for Clinical Pathology
·		interventions-dont-work/2013-07-	
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	MISC Research	24?utm_medium=nl&utm_source=internal http://archinte.jamanetwork.com/article.aspx?articleid=1868536	American Academy of Orthopaedic Surgeons
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	MISC Research	http://ajp.psychiatryonline.org/doi/pdf/10.1176/appi.ajp.2013.13020	O American Psychiatric Association
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or		http://www.choosingwisely.org/doctor-patient-lists/american- society-of-anesthesiologists/	
comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal	Chaosing Wisels	http://www.choosingwisely.org/wp-content/uploads/2013/04/AAO-	American Society of Anesthesiologists
expected to be minimal	Choosing Wisely	Sthings-List Web.pdf	
Don't obtain baseline diagnostic cardiac testing (trans-thoracic/esophageal echocardiography  — TTE/TEE) or cardiac stress testing in asymptomatic stable patients with known cardiac		http://www.choosingwisely.org/doctor-patient-lists/american- society-of-anesthesiologists/	
disease (e.g., CAD, valvular disease) undergoing low or moderate risk non-cardiac surgery		http://www.choosingwisely.org/wp-content/uploads/2013/02/ASE-	American Society of Anesthesiologists & American Society of Echocardiography
	Choosing Wisely	Sthings-List_Web-feb.pdf	
Don't perform advanced sperm function testing, such as sperm penetration or hemizona		http://www.choosingwisely.org/doctor-patient-lists/american-	American Society for Reproductive Medicine
assays, in the initial evaluation of the infertile couple.  Don't perform a postcoital test (PCT) for the evaluation of infertility.	Choosing Wisely	society-for-reproductive-medicine/	
bon eperiorna postedia reselventi in the eradadion of meranity.	<b>9</b> 1 1 11 1	http://www.choosingwisely.org/doctor-patient-lists/american-	American Society for Reproductive Medicine
	Choosing Wisely	society-for-reproductive-medicine/	
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency		http://www.choosingwisely.org/clinician-lists/acep-ct-of-abdomen-	
department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	MISC Research	and-pelvis-for-ed-patients-under-50/	American College of Emergency Physicians
presenting with symptoms consistent with ancomplicated renal conc.	WISC RESCUEIT	http://www.google.com/url?url=http://www.asahq.org/~/media/site	<u>e</u>
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	MISC Research	s/asahq/files/public/resources/standards-guidelines/practice- advisory-for-preanesthesia-	American Society of Anesthesiologists Task Force on Preanesthesia Evaluation.  Anesthesiology
Don't perform coronary angiography in patients without cardiac symptoms unless high-risk		http://www.choosingwisely.org/clinician-lists/american-society- nuclear-cardiology-stress-cardiac-imaging-coronary-angiography-	
markers present.	Choosing Wisely	without-cardiac-symptoms/	American Society of Nuclear Cardiology
Don't routinely order imaging tests for patients without symptoms or signs of significant eye		http://www.choosingwiselv.org/clinician-lists/society-cardiovascular http://www.choosingwisely.org/clinician-lists/american-academy- ophthalmology-routine-imaging-for-patients-without-symptoms-or-	
disease.	Choosing Wisely	signs-of-eye-disease/ http://www.choosingwiselv.org/clinician-lists/american-association-	American Academy of Ophthalmology
		http://www.choosingwisely.org/clinician-lists/american-academy-	
Don't perform Computed tomography (CT) scans in the routine evaluation of abdominal pain.	Choosing Wisely	pediatrics-ct-scans-to-evaluate-abdominal-pain/	American Academy of Pediatrics
		http://www.nejm.org/doi/full/10.1056/NEJMoa0905368#t=article http://www.cochrane.org/CD002944/PVD_balloon-angioplasty-	
Don't perform revascularization without prior medical mangement for renal artery stenosis.	MISC Research	versus-medical-therapy-for-patients-with-renal-artery-obstruction-	American Urological Association
	MISC Research	<u>ลณฺป-ทุ่าทะฟาดดตะดาครรมหคุ</u>	<u>0</u>
Don't perform vertebrolplasty for osteoporotic vertebral fractures.	MISC Research	<u>3</u>	American Academy of Orthopaedic Surgeons
	Choosing Wisely	http://www.choosingwisely.org/clinician-lists/american-society-	American Cosiate of Nontrology
Don't place peripherally inserted central catheters (PICC) in stage III–V CKD patients without consulting nephrology.	Choosing wisely	nephrology-peripherally-inserted-central-catheters-in-stage-iii-iv-ckd patients%20/_	American society of Nephrology
Doubt and any collision was to control of the first fall of the fa	Choosing Wisely	http://www.choosingwisely.org/clinician-lists/american-academy-family-physicians-voiding-cystourethrogram-urinary-tract-infections-	American Academy of Family Physicians
Don't perform voiding cystourethrogram (VCUG) routinely in first febrile urinary tract infection (UTI) in children aged 2–24 months	Choosing wisely	in-infants/	American Academy of Family Englishins
Day's recommend more than a single fraction of collisting radiation for an uncomplicated	Choosing Wisely	http://www.choosingwisely.org/clinician-lists/american-academy-	
Don't recommend more than a single fraction of palliative radiation for an uncomplicated painful bone metastasis.	Choosing wisely	hospice-palliative-care-single-fraction-palliative-radiation-for-bone- metastatis/	American Academy of Hospice and Palliative Medicine
Don't order computed tomography (CT) hand impains in shildren 1 month to 17	Choosing Wisely	neurological-surgeons-routine-ct-scans-for-mild-head-injury-in- children/	
Don't order computed tomography (CT) head imaging in children 1 month to 17 years of age unless indicated.	Choosing Wisely	children/ http://www.choosingwisely.org/clinician-lists/american-academy-	American Academy of Pediatrics
Pon't perform strong cardiag imaging or advanced non-invasive imaging in the initial	Choosing Wisely	cardiology-stress-cardiac-testing-or-advanced-non-invasive-imaging-	
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	Choosing Tribery	in-routine-evaluations/ http://www.choosingwisely.org/clinician-lists/american-college-	American College of Cardiology

Low Value Measure	Source	Source URL	Specialty Society Label
Don't order unnecessary cervical cancer screening (Pap smear and HPV test) in all women who have had adequate prior screening and are not otherwise at high risk for cervical cancer	Choosing Wisely	obstetricians-gynecologists-annual-cervical-cytology-in-women-30-to- 65/ http://www.choosingwisely.org/clinician-lists/american-society-	American College of Obstetricians and Gynecologists
Don't prescribe oral antibiotics for members with upper URI or ear infection (acute sinusitis, URI, viral respiratory illness or acute otitis externa)	Choosing Wisely	pediatrics-antibiotics-for-children-with-viral-respiratory-illness/ http://www.choosingwisely.org/clinician-lists/infectious-diseases-	American Academy of Family Physicians