



**VIRGINIA BUSINESS COALITION ON HEALTH  
HOSPITAL REPORT CARD (YR 2004 Data) - APPENDECTOMY  
Laparoscopic (Minimally Invasive Procedure) vs Open Surgery**

**DO YOU KNOW?**

30 Percent of all direct health care outlays today are a result of *poor quality*.  
...and Private purchasers absorb about one-third of these costs.  
Poor quality costs a typical employer between \$1,900 and \$2,250  
per covered employee per year.

Source: Midwest Business Group on Health and Juran Institute 2002

**Choose the Right Procedure ... At the Right Hospital**



# VIRGINIA BUSINESS COALITION ON HEALTH

## HOSPITAL REPORT CARD (YR 2004 Data)

### Appendectomy

Appendectomy is the surgical removal of the appendix. This is usually done when the appendix becomes infected.

#### Laparoscopic vs. Open Surgery

A Laparoscopic appendectomy is the removal of the appendix by placing a laparoscope through the umbilical port and additional trocars in the abdominal cavity. The appendix is identified, dissected from surrounding structures and its blood supply divided. The appendix is transected with staples or suture and removed. (ICD-9 Codes: 47.01, 47.11)

An appendectomy by traditional surgical method is an incision two to three inches in length is made through the skin and the layers of the abdominal wall in the area of the appendix. The surgeon enters the abdomen and looks for the appendix, usually located in the right lower abdomen. After examining the area around the appendix to be certain that no additional problem is present, the appendix is removed. This is done by freeing the appendix from its attachment to the abdomen and to the colon, cutting the appendix from the colon, and sewing the over the hole in the colon. If an abscess is present, the pus can be drained with drains (rubber tubes) that go from the abscess and out through the skin. The abdominal incision then is closed. (ICD-9 Codes: 47.09, 47.19)

Hospitals Compared	Per Year (Volume)		% Mortality		Complications								LOS in Days		Total Charges		The Leapfrog Group Data through 2006AUG30						
	LAP	OPEN	LAP	OPEN	% Hmh		% Iat		% Misc		% UXE		% Pnue		% UTI		LAP	OPEN	LAP	OPEN	CPOE	IPS	QI
Alexandria Hospital	0	227	n/a	0.54	n/a	1.79	n/a	6.3	n/a	0.83	n/a	1.32	n/a	1.1	n/a	0.91	n/a	4.86	n/a	\$ 18,870	o	o	o
Augusta Medical Center	0	156	n/a	0.74	n/a	0.94	n/a	2.06	n/a	0.15	n/a	0.32	n/a	0.98	n/a	0.94	n/a	4.72	n/a	\$ 18,657	NT	NT	o
Bon Secours-Maryview Medical Center	58	39	0	0.43	0.16	0.3	2.06	14.79	0.04	0.41	0.04	0.36	0.27	0.36	2.72	0.96	1.89	4.93	\$ 17,384	\$ 25,207	*	**	****
Buchanan General Hospital	0	35	n/a	0.66	n/a	0.47	n/a	6.16	n/a	0.38	n/a	1.03	n/a	2.1	n/a	0.5	n/a	4.89	n/a	\$ 23,935	NT	NT	o

Carilion Franklin Memorial Hospital	0	37	n/a	0.56	n/a	0.47	n/a	6	n/a	3.52	n/a	0.62	n/a	0.66	n/a	6.26	n/a	4.9	n/a	\$ 24,290	o	o	o
Carilion New River Valley Med. Center	33	42	0.04	0.41	0.08	0.32	5.18	13.93	0.04	0.3	0.04	0.66	0.27	1.08	0.5	1.71	1.86	4.36	\$ 14,927	\$ 21,223	o	o	o
Carilion Roanoke Memorial Hospital	94	181	0	0.36	1.3	0.69	2.98	7.48	2.06	0.62	0.82	2.14	0	2.52	0.5	1.6	1.74	5.36	\$ 13,988	\$ 21,992	o	o	o
CentraHealth LGH/VBH	110	57	0	0.71	0.04	0.34	0.24	2.19	0.04	0.19	0.04	0.76	0.49	1.28	1.9	0.14	2.2	4.73	\$ 11,080	\$ 17,797	o	o	o
Chesapeake General Hospital	57	49	0	0.45	0.08	1.04	2.95	10.26	0.04	6.45	0.04	0.58	0.27	0.49	1.67	0.21	2.37	5.32	\$ 12,286	\$ 18,725	*	**	***
Children's Hospital/King's Daughters	0	134	n/a	0.58	n/a	2.61	n/a	5.67	n/a	0.63	n/a	0.64	n/a	0	n/a	0	n/a	5.16	n/a	\$ 23,873	*	****	*****
Columbia Clinch Valley Medical Center	83	0	0.04	n/a	1.02	n/a	1.54	n/a	0.04	n/a	0.04	n/a	0.27	n/a	1.83	n/a	2.33	n/a	\$ 15,831	n/a	*	*	*
Columbia Alleghany Regional Hospital	0	44	n/a	0.47	n/a	1.84	n/a	3.56	n/a	3.71	n/a	2.26	n/a	4.39	n/a	9.8	n/a	5.14	n/a	\$ 21,626	*	*	****
Columbia Chippenham Medical Center	121	167	0	0.45	0.31	0.97	0.68	6.86	0.95	0.15	0.04	0.87	0.05	0.72	0	0.39	2.42	5.7	\$ 32,828	\$ 46,302	*	*	****
Columbia Henrico Doctors Hospital	71	106	0.04	0.47	0.04	0.44	6.6	4.03	0.04	0.15	0.04	1.68	0.93	0.43	0	0.18	2.36	4.74	\$ 34,774	\$ 41,691	*	*	**
Columbia Reston Hospital Center	0	173	n/a	0.34	n/a	0.21	n/a	8.7	n/a	0.64	n/a	4.03	n/a	0.49	n/a	3.04	n/a	4.43	n/a	\$ 21,810	*	*	*
Culpeper Memorial Hospital	0	51	n/a	0.53	n/a	0.49	n/a	5.49	n/a	0.47	n/a	0.79	n/a	0.67	n/a	1.1	n/a	4.73	n/a	\$ 20,670	o	o	**
Danville Regional Medical Center	0	73	n/a	1.1	n/a	0.26	n/a	3.16	n/a	0.17	n/a	0.34	n/a	0.29	n/a	4.8	n/a	5.47	n/a	\$ 21,125	o	o	o
DePaul Medical Center	36	45	0.04	0.66	0.08	1.47	9.37	13.45	0.04	1.48	0.04	2.93	0.27	0.56	0	3.68	2.38	4.47	\$ 18,205	\$ 22,207	*	*	**
Fauquier Hospital	32	0	0	n/a	0.12	n/a	1.54	n/a	0.04	n/a	0.04	n/a	0.27	n/a	0.5	n/a	2.61	n/a	\$ 15,477	n/a	*	*	**
Inova Fair Oaks Hospital	70	129	0.04	0.68	1.55	1.84	4	3.48	0.83	0.3	0.04	1.27	0.27	1.41	2.22	0.57	2.02	4.71	\$ 13,972	\$ 22,266	o	o	o
Inova Fairfax Hospital	265	523	0.04	0.59	0.36	0.57	1.89	5.91	0.69	0.79	0.04	2.48	0.27	0.74	1.98	1.21	2.6	4.86	\$ 13,421	\$ 20,896	o	o	o
Johnston Memorial Hospital	0	33	n/a	0.62	n/a	0.51	n/a	10.73	n/a	0.58	n/a	0.62	n/a	2	n/a	4.74	n/a	4.69	n/a	\$ 19,305	o	o	o
Lewis-Gale Hospitals	86	102	0	1.45	0.04	0.3	1.89	2.45	0.04	0.19	0.04	0.63	0.27	0.39	3.33	0.92	2.2	4.8	\$ 18,983	\$ 25,491	*	*	****
Loudoun Hospital Center	180	0	0.04	n/a	0.63	n/a	1.83	n/a	0	n/a	0.04	n/a	0.44	n/a	2.88	n/a	2.41	n/a	\$ 14,283	n/a	o	o	o
Martha Jefferson Hospital	103	42	0	0.43	0.12	0.41	1.54	7.28	1.85	2.59	0.04	0.56	0.27	0.56	0.5	1.24	1.29	4.22	\$ 10,966	\$ 18,347	o	o	o
Mary Immaculate Hospital	31	65	0	0.47	0.2	0.36	2.34	4.21	0.28	0.28	0.12	0.56	0.27	0.46	1.49	3.24	1.75	4.58	\$ 15,446	\$ 21,859	*	*	****
Mary Washington Hospital	56	295	0.04	1.32	0.04	0.51	1.54	5.23	1.29	0.81	0.04	0.69	0.27	2.06	1.67	0.95	2.03	5.24	\$ 11,472	\$ 21,001	o	o	o
MCV Hospital	0	137	n/a	0.34	n/a	0.13	n/a	6.95	n/a	0.24	n/a	1.93	n/a	0.88	n/a	3.12	n/a	5.33	n/a	\$ 30,389	****	*	**
Mem Hospital of Martinsville & Henry Co.	0	42	n/a	0.49	n/a	3.6	n/a	12.24	n/a	0.99	n/a	0.51	n/a	0.52	n/a	0.46	n/a	5.25	n/a	\$ 18,760	*	*	**
Memorial Regional Medical Center	46	62	0.04	0.51	0.04	0.34	2.61	8.34	2.51	0.26	0.04	0.49	0.05	0.29	3.33	0.25	2.63	5.3	\$ 25,579	\$ 31,289	UK	UK	UK
Mount Vernon Hospital	34	42	0.04	0.96	0.08	0.41	0.32	9.28	1.39	0.3	0.04	0.53	0.22	0.49	10.63	0.21	1.72	4.55	\$ 13,593	\$ 20,525	o	o	o
Obici Hospital	32	0	0	n/a	0.12	n/a	1.54	n/a	0.04	n/a	0.04	n/a	0.27	n/a	0.5	n/a	1.87	n/a	\$ 13,664	n/a	*	*	**
Potomac Hospital	52	168	0.04	3.44	0.08	0.38	6.27	3.24	0	1.82	0.04	0.51	0.22	0.46	2.22	0.39	2.3	4.76	\$ 15,919	\$ 23,346	o	o	o
Prince William Hospital	70	40	0.04	0.56	0.04	0.51	3.45	7.2	0.04	0.34	0.04	0.73	0.27	0.88	0	1.27	2.35	4.9	\$ 14,499	\$ 22,755	*	*	**
Riverside Regional Medical Center	34	124	1.13	2.61	0.04	0.36	1.09	7.47	0.04	1.95	3.05	1.42	0.05	0.59	0	0.55	1.72	4.38	\$ 17,562	\$ 23,842	*	*	****
Rockingham Memorial Hospital	72	155	0.04	0.45	1.65	1.47	1.51	3.93	0	0.28	0.04	4.49	0.88	0.62	1.67	4.57	1.61	3.98	\$ 8,528	\$ 14,233	o	o	o
Sentara Bayside Hospital	65	0	0.04	n/a	1.7	n/a	1.54	n/a	0.04	n/a	0.04	n/a	0.27	n/a	1.61	n/a	1.96	n/a	\$ 15,283	n/a	*	**	****
Sentara CarePlex Hospital	46	67	0	0.47	0.12	0.79	4.67	3.16	3.58	2.41	0.04	0.38	0.27	0.46	0.5	1.32	2.07	5.12	\$ 15,945	\$ 23,347	*	****	*****
Sentara Leigh Hospital	95	49	0	0.56	0.04	0.34	2.49	6	0	0.5	0.04	0.96	0.05	0.56	1.33	0.32	1.72	5.17	\$ 13,763	\$ 22,110	*	****	*****
Sentara Norfolk General Hospital	39	42	0.04	0.71	0.12	0.32	3.94	13.63	0.16	0.38	0.04	3.63	0.27	0.39	0.5	4.42	2.04	6.2	\$ 15,689	\$ 24,448	*	****	*****

Shore Memorial Hospital	0	32	n/a	0.64	n/a	0.49	n/a	3.14	n/a	4.31	n/a	0.79	n/a	0.88	n/a	1.61	n/a	6.38	n/a	\$ 22,682	NT	NT	o
Smyth County Community Hospital	0	41	n/a	0.68	n/a	1.29	n/a	9.44	n/a	5.4	n/a	3.97	n/a	0.79	n/a	1.1	n/a	4.62	n/a	\$ 21,336	NT	NT	o
Southampton Memorial Hospital	0	32	n/a	0.49	n/a	0.41	n/a	3.77	n/a	5.89	n/a	2.01	n/a	0.66	n/a	1.79	n/a	4.98	n/a	\$ 25,815	NT	NT	o
Southside Community Hospital	0	39	n/a	3.3	n/a	0.47	n/a	8.52	n/a	0.34	n/a	0.73	n/a	0.69	n/a	0.64	n/a	4.45	n/a	\$ 21,130	NT	NT	o
Southside Regional Medical Center	50	42	0.04	1.51	0.08	0.45	2.22	10.01	0.04	1.66	0.04	1.18	0.05	0.66	0.5	1.1	2.1	5.49	\$ 16,346	\$ 26,693	o	o	o
St. Mary's Hospital of Richmond	75	110	0.04	0.47	0.04	1.15	2.84	7.99	2.95	0.17	0.04	1.22	0.88	0.39	0	3.17	2.37	5.56	\$ 26,079	\$ 30,556	o	o	o
Twin County Regional Hospital	0	90	n/a	0.41	n/a	1.86	n/a	17.24	n/a	3.97	n/a	0.36	n/a	0.71	n/a	2.61	n/a	4.71	n/a	\$ 20,789	NT	NT	o
University of Virginia Medical Ctr	49	83	0.04	0.43	0.08	0.6	6.67	9.68	0	0.64	0.04	1.18	0.22	0.94	3.97	7.54	2.24	5.3	\$ 14,546	\$ 22,566	o	o	o
Virginia Beach General Hospital	97	31	0	0.36	0.08	1.56	2.55	14.91	0.04	0.38	0.04	0.89	0.27	0.75	0.4	1.99	2.17	5.77	\$ 14,173	\$ 24,228	*	****	****
Virginia Hospital Center Arlington	0	229	n/a	0.68	n/a	0.77	n/a	3.32	n/a	0.28	n/a	0.6	n/a	0.13	n/a	3.28	n/a	4.82	n/a	\$ 22,390	*	*	*
Williamsburg Community Hospital	52	0	0	n/a	0.08	n/a	8.21	n/a	1.91	n/a	0.04	n/a	0.27	n/a	3.33	n/a	2.08	n/a	\$ 12,757	n/a	*	****	****
Winchester Medical Center	81	176	0	0.46	0.08	0.58	1.03	1.8	0	1.25	0.74	1.79	0.22	0.87	1.11	0.25	1.81	4.95	\$ 8,544	\$ 16,704	***	**	****
Wythe County Community Hospital	0	42	n/a	0.41	n/a	1.3	n/a	17.24	n/a	1.74	n/a	0.56	n/a	1.08	n/a	0.28	n/a	3.99	n/a	\$ 20,098	NT	NT	o
<b>AVERAGE</b>	<b>46.70</b>	<b>88.30</b>	<b>0.03</b>	<b>0.68</b>	<b>0.20</b>	<b>0.73</b>	<b>1.91</b>	<b>6.56</b>	<b>0.40</b>	<b>1.16</b>	<b>0.11</b>	<b>1.11</b>	<b>0.19</b>	<b>0.76</b>	<b>1.04</b>	<b>1.72</b>	<b>1.34</b>	<b>4.40</b>	<b>\$ 10,336</b>	<b>\$ 20,551</b>			

### Methodology

Measures used to compare these hospitals are: the number of patients treated at each hospital, the percentage of patients who died (mortality), the percentage of patients who developed problems (complications), the average number of days people stay in each hospital (length-of-stay), and each hospital's average charges (costs). This report relies on Virginia All Patient Data (2004). The complications used are identified using guidelines from the Agency for Healthcare Research and Quality (AHRQ).

### Legend

**Patients Per Year:** Number of patients treated at each hospital; **n/a:** when hospital volume was zero (0), n/a was applied to rate of mortality, complication, length of stay and cost.

**Mortality:** % of patients who died while being treated

**Total Charges:** Average hospital charges for treatment; excludes physician fees and outpatient services.

**LOS:** Average number of days people stay in the hospital for treatment.

**Complications:** % of patients who developed problems while being treated

**Hmh:** Hemorrhage Complications

**Pneu:** Pneumonia

**Misc:** Miscellaneous complications

**Iat:** Iatrogenic or Care Related Complications

**Res:** Respiratory Problems

**UXE:** Unexplained Events

**UTI:** Urinary Tract Infection

### The Leapfrog Group [www.leapfroggroup.org](http://www.leapfroggroup.org)

#### LEAPFROG QUALITY & SAFETY PRACTICES:

**CPOE:** Electronic prescribing systems that intercept, and reduce errors by 50% or more, when they most commonly occur. **IPS:** Staffing ICUs with physicians who have credentials in critical care medicine has shown to reduce the risk of patients dying by more than 10%.

**QI:** Quality Index: 27 safe practices that reduce risk of harm to patients in certain processes, systems or environments of care (National Quality Forum).

\*\*\* Fully implemented

\*\* Good progress in implementing

\* Good early stage effort in implementing

\* Willing to report; did not meet criteria for good early stage effort.

**N/A-Not Applicable** (hospitals were not in target area in 2004)

The Virginia Business Coalition on Health is a Regional Roll-out Leader for the Leapfrog Group for Patient Safety Hospital Survey. Visit [www.myVBCH.org](http://www.myVBCH.org) for more information and links to our quality initiatives.