

**Cost of Colonoscopy in
Maryland Local Public Health
Colorectal Cancer Screening Programs
Report,
Fiscal Year 2009

Cigarette Restitution Fund Program**

Surveillance and Evaluation Unit
Center for Cancer Surveillance and Control
Maryland Department of Health and Mental Hygiene
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SUMMARY

In fiscal year 2001, 23 of Maryland's 24 local jurisdictions established colorectal cancer screening programs (excluding Baltimore City). All programs used colonoscopy either: 1) for people at average risk as the initial screening or as follow-up to a positive fecal occult blood test, or 2) for those with a positive family or personal risk history for initial screening or surveillance. In 2003, the Surveillance and Evaluation Unit (SEU) of the Center for Cancer Surveillance and Control (CCSC) evaluated the cost of colonoscopy in these programs and distributed the report in 2004 (CCSC Health Officer Memo #04-29).

In April 2009, the SEU repeated the evaluation. We selected a sample of the 10 most recent colonoscopies performed (with or without biopsy) in each jurisdiction from the cancer Client Database (CDB) and for each sampled colonoscopy, we calculated the total amount *billed* for the colonoscopy and related charges, and the total amount *paid* by the local programs to the providers for the colonoscopy.

In this analysis, a sample of 197 recent colonoscopy procedures, including 102 (51.8%) with biopsy and 95 (48.2%) without biopsy, was selected from the 1,766 colonoscopies performed from August 2007 to July 2009, with the majority of colonoscopies being performed between July 1, 2008 to June 30, 2009. The statewide estimated mean amount *billed* for a procedure with and without biopsy (that is, the colonoscopy including the associated charges) was \$2,181 (range \$678-\$6,232); the statewide estimated mean amount *paid* with and without biopsy by programs was \$1,092 (range \$499-\$3,563).

The statewide mean amount *billed* with biopsy was \$2,413. The statewide mean amount *billed* without biopsy was \$1,897. The statewide mean amount *paid* with biopsy was \$1,223. The statewide mean amount *paid* without biopsy was \$933.

There was wide variation in the amount paid for a procedure among the jurisdictions as well as wide variation within some local programs. For example, the maximum amount paid for colonoscopy with biopsy in Garrett County was \$844, whereas in Carroll and Charles counties, the maximum amount paid was \$3,563 and \$2,848 respectively. Some programs reimburse the facility fee at Medicare rates; whereas those using facilities regulated by the Health Services Cost Review Commission (HSCRC) reimburse using HSCRC rates.

BACKGROUND

Maryland's colorectal cancer (CRC) public health screening programs funded through the Cigarette Restitution Fund (CRF) Program are administered by local health departments (LHDs). The funds are awarded to the local units by the Maryland Department of Health and Mental Hygiene, Center for Cancer Surveillance and Control (CCSC).

In this decentralized program, LHDs contract individually with primary care providers, gastroenterologists, surgeons, hospitals, ambulatory surgical centers, gastroenterology centers, pathologists, and laboratories using standard contracts. The contracts detail the procedures allowed under the contract and the amounts that the program will reimburse by CPT code billed.

With few exceptions, local programs pay Medicare rates for office visits before and/or after colonoscopy, for provider services, and for pathology laboratory fees associated with CRC screening. The Maryland Health Services Cost Review Commission (HSCRC) sets reimbursement rates for hospitals and some ambulatory surgery centers (ASCs) in the state. Local programs pay Medicare rates for colonoscopy facility fees *unless* the facility is HSCRC regulated. For HSCRC regulated facilities, local programs pay HSCRC rates when billed for services (e.g., facility fees from hospitals, ASCs, or laboratories)—unless the local program has an agreement with the facility to pay less than the HSCRC rate.

In order to evaluate the cost of screening colonoscopies (both the amounts providers bill for procedures and the amounts that the local programs pay), the Surveillance and Evaluation Unit (SEU) of the Center for Cancer Surveillance and Control (CCSC), requested cost data information from the LHDs who referred clients for colonoscopy for CRC screening in Fiscal Year (FY) 2003. In FY2009, we repeated the evaluation and present the update in this report.

METHODS

Data Collection

In April 2009, we sampled colonoscopies from the 22 LHDs in Maryland that contract for colonoscopy procedures using CRF funding (not including Anne Arundel County, which stopped doing colonoscopies under CRF funding in FY2004 or Baltimore City, which did not perform CRF funded CRC screening until FY2009). In 2003, the local programs each identified a convenience sample by selecting their 10 most recent eligible clients who had a

colonoscopy; however, in 2009, the SEU selected 10 clients for review from each program based on their biopsy status and billing completion status from the cancer Client Database (CDB).

An initial query was run using SQL Server Management Studio software which selected all clients whose screening cycle started between July 1, 2008 and December 31, 2008. Initially, we selected five recent "eligible" colonoscopies (see definition below) with biopsy and five recent eligible colonoscopies without biopsy per county using the "final hierarchical diagnosis" field in our CDB to determine whether a biopsy had been performed (see Limitations). A diagnosis of "CRC Confirmed"; "Adenoma"; "Hyperplastic Polyp"; or "Other Polyp" usually signified that one or more biopsies had been performed. A diagnosis of "Normal; no or neg. FOBT"; "Normal-inadeq; no or neg. FOBT"; or "Other; no or neg. FOBT" usually signified that a biopsy had not been performed. A list with the selected colonoscopies was sent to each LHD. Programs compiled all bills (UB-92s and HCFA-1500s) from doctors, hospitals, other facilities, and laboratories and reported the amount *billed* and the amount *paid* for each bill. We asked that the billing information for each client be entered into the Billing Section of the CDB. Instructions on how to correctly enter the data were sent to all programs (Appendix A).

If complete billing information was not available on a selected procedure, another recent colonoscopy procedure was selected for inclusion in the sample. If a record had been misclassified by biopsy status, it was replaced with another recent colonoscopy procedure in the planned biopsy status to the extent possible; therefore, the final sample for some counties consisted of unequal combinations of biopsy and non-biopsy colonoscopies other than five with and five without biopsy. The final sample consisted of colonoscopies performed from August 2007 to July 2009.

We defined an "eligible" colonoscopy as a screening colonoscopy where the LHD had received and paid *all* bills related to the colonoscopy at the time of selection. Excluded from analysis were colonoscopies in which a local program paid only the co-payments and/or deductibles for an "under-insured" client, and those where the client's insurance paid all or part of the charges associated with the procedure.

The "cost of colonoscopy" was defined as the sum of amounts for pre- and/or post-procedure visit(s) to a primary care provider and/or gastroenterologist, facility fees, bowel preparation products, and pathology laboratory costs directly related to the colonoscopy. Excluded from the analysis were charges from additional procedures such as double contrast

barium enema (DCBE), sigmoidoscopy, and fecal occult blood test (FOBT) done within the same screening cycle.

Data Quality

We reviewed the data submitted for accuracy and completeness, and called local programs for clarification and supplementary data if needed. In the final sample, we chose colonoscopies performed from August 2007 to July 2009, with the majority of screenings being performed between July 1, 2008 and June 30, 2009. There were ten local programs where the sample was less than ten colonoscopies based on the method and criteria that we chose.

Estimated Mean Amounts Billed and Paid

We obtained data for the actual number of screening colonoscopies performed in each program in FY2009 categorized by “with” and “without” biopsy (Tables 1 and 2). We multiplied the mean amount billed or paid for colonoscopies with biopsy by the number of colonoscopies with biopsy in FY2009 to get the estimated total amount billed or paid with biopsy. We multiplied the mean amount billed or paid for colonoscopies without biopsy by the number of colonoscopies without biopsy in FY2009 to get the estimated total amount billed or paid without biopsy. To get the statewide mean amounts billed or paid, we divided the total of the estimated total amount billed or paid with or without biopsy by the total number of colonoscopies that were performed in the Maryland CRF public health program in FY2009 with or without biopsy.

RESULTS

All 22 programs that performed CRC screening under CRF in FY2008 and FY 2009 entered billing data for sampled colonoscopies in the CDB. Data were submitted on 197 colonoscopies performed from August 2007 to July 2009, including 102 (51.8%) with biopsy and 95 (48.2%) without biopsy. Ten programs had fewer than ten colonoscopies in the final analysis.

Tables 1 and 2 show summary data on amounts billed and amounts paid for colonoscopy by program. Each Table shows the total, mean, and range for procedures with biopsy, without biopsy, and the total number of colonoscopies in the sample. The last two columns show the number of colonoscopies performed by each program in FY09 and the estimated total amount billed to (Table 1) or paid by (Table 2) the program for all of their colonoscopies that year.

Based on this sample, the statewide estimated mean amount *billed* for a colonoscopy with and without biopsy including any pre- and post-colonoscopy associated charges such as an office visit(s) and laboratory fees was \$2,181 per colonoscopy (sample range \$678-\$6,232) (Tables 1 and 3). The statewide estimated mean amount the LHDs *paid* for colonoscopy with and without biopsy was \$1,092 per colonoscopy (sample range of \$499-\$3,563) (Tables 2 and 3).

Comparing the analysis that was done in 2003 with the analysis done in 2009, we found slight differences in the percentage of clients with and without biopsy. In 2003, the percentage of clients with biopsy was 48.2% and the percentage of clients without biopsy was 51.8%. In this analysis, the percentage of clients with biopsy was 51.8% and the percentage of clients without biopsy was 48.2%. The statewide estimated mean amount *billed* with and without biopsy was approximately \$338 higher per colonoscopy in 2009, compared to 2003; the statewide estimated mean amount *paid* with and without biopsy was approximately \$158 higher per colonoscopy.

In this sample, Howard County was *billed* the lowest mean amount per colonoscopy with biopsy (\$1,269) and the lowest mean amount per colonoscopy without biopsy (\$758). Wicomico County had the highest mean amount *billed* per colonoscopy with biopsy (\$3,933). Overall, Washington County had the highest mean amount *billed* per colonoscopy without biopsy (\$3,757).

Garrett County *paid* the lowest mean amount per colonoscopy with biopsy (\$766). Frederick County *paid* the lowest mean amount per colonoscopy without biopsy (\$598). Cecil County had the highest mean amount *paid* per colonoscopy with biopsy (\$2,482) and without biopsy (\$2,227).

Figures 1 through 4 show the mean, minimum, and maximum amount billed and paid by each of the programs for sampled colonoscopies with and without biopsy. The amounts are highly variable both within some programs, and among the programs.

CONCLUSIONS

Maryland's public health CRF CRC screening programs contracted with hundreds of providers statewide to establish provider networks needed to perform CRC screening with colonoscopy. Based on data from the sample of 197 colonoscopies which included the most recent ten eligible colonoscopies that were performed between August 2007 and July 2009, the statewide estimated mean amount *billed* for a procedure with and

without biopsy including the colonoscopy and the associated charges such as office visit(s) and laboratory fees, was \$2,181 (range \$678-\$6,232) (Tables 1 and 3); the statewide estimated mean amount *paid* for a colonoscopy with and without biopsy was \$1,092 (range of \$499-\$3,563) (Tables 2 and 3).

There was wide variation in the amount paid for a colonoscopy among the jurisdictions and within some local programs. This was also seen in 2003. These variations are related to one or more of the following:

- 1) Some facilities were HSCRC regulated facilities and generally cost more than Medicare rates;
- 2) Providers within and among jurisdictions varied in the services they wanted to provide to their patients (e.g., providers varied in performing a follow-up visit for all, some, or none of their patients);
- 3) Programs varied in their policies and procedures regarding payment for visits: programs decided how many and which type of office visits, in addition to the colonoscopy, they agreed to pay for);
- 4) Some patients needed additional exams (e.g., EKG or blood work) for clearance before colonoscopy;
- 5) Some endoscopists used an anesthesiologist for sedation when performing colonoscopy; and
- 6) A few local programs had negotiated "special rates" (below the HSCRC or Medicare rate) with their providers and/or facilities.

Our data looked only at the charges billed by private providers and amounts paid to these providers for colonoscopy and related office visits and procedures. The program operating costs for the screening program were not included. These operating costs include the expense of staff who negotiate contracts, handle billing, and perform education, outreach, case management/client navigation, and administration.

The data may be useful to Maryland programs as they evaluate their procedures and seek ways to contain costs. Additionally, other public health programs considering CRC screening with colonoscopy may find these data useful in program planning to estimate the costs of colonoscopy.

LIMITATIONS

The methods and criteria that we used to produce the sample differed from those used in our first analysis in 2003. Because of this, we encountered several issues throughout the process:

- 1) Selecting the sample of clients at CCSC rather than having the programs provide us with their 10 most recent colonoscopies posed challenges. We found that some of the clients we selected were not eligible for the analysis (e.g., counties were missing bills or all of the bills had not been received at the time of request, clients had Medicare or other insurance so the program paid very little of the full cost, etc.). These clients had to be replaced with clients that met our inclusion criteria.
- 2) Using the "final hierarchical diagnosis" field in the CDB to determine whether or not a biopsy was performed was not predictive of biopsy status. We later found that it was easier to gather these data by using the "Biopsy?" field in which staff select either "yes" or "no." Usually a diagnosis of "Other; No or Neg FOBT" would imply that there was no biopsy done; however, several colonoscopies with these diagnosis did in fact have one or more biopsies. Conversely, a diagnosis of "Other Polyp" would imply that a biopsy was done; however, in one procedure in the initial procedure selection, no biopsy was done.
- 3) Many programs do not regularly use the Billing Module in the CDB and therefore had little or no experience entering billing data prior to our analysis. This resulted in several incomplete or incorrect entries. We had to call or email the programs to correct and/or clarify their entries.

RECOMMENDATIONS

We recommend CCSC/SEU perform future analyses to keep up to date on the trends of the cost of colonoscopy incurred by screening programs. For future analyses, we recommend a change in methodology by clarifying and improving record selection. We also recommend that LHDs and other programs utilize the information in this report when planning their CRC screening programs.

ACKNOWLEDGEMENTS

We wish to thank the staff of Maryland's 22 local public health department colorectal cancer screening programs for providing the data for this analysis, Eileen Steinberger, MD, MS for generating the sample of colonoscopies, and student intern Belinda Weinberg for her assistance with data analysis and report generation.

REFERENCES:

¹ Maryland Health Services Cost Review Commission:

http://www.hscrc.state.md.us/about_us/about_us.html

² Centers for Medicare and Medicaid Services; Medicare Rates –

<http://www.cms.hhs.gov/physicians/mpfsapp/step0.asp>

or <http://www.cms.hhs.gov/providers/pufdownload/>

Table 1.

Amount Billed for Colonoscopy

	With Biopsy						Without Biopsy						Total Billed (With Biopsy and Without Biopsy)						
	N	Total	Mean	Min	Max	Estimated Total Amt. Billed With Biopsy FY09*	N	Total	Mean	Min	Max	Estimated Total Amt. Billed Without Biopsy FY09@	N	Min	Max	Number of Colonoscopies FY09*	Estimated Total Amt. Billed FY09~		
Allegany	5	\$ 13,469.82	\$ 2,693.96	\$ 1,754.23	\$ 3,541.26	25	\$ 67,349.10	5	\$ 6,884.87	\$ 1,376.97	\$ 983.06	\$ 1,683.08	34	\$ 46,817.12	10	\$ 983.06	\$ 3,541.26	59	\$ 114,166.22
Baltimore County	5	\$ 14,803.31	\$ 2,960.66	\$ 2,125.85	\$ 4,763.23	129	\$ 381,925.14	5	\$ 12,633.00	\$ 2,526.60	\$ 1,895.00	\$ 3,275.00	107	\$ 270,346.20	10	\$ 1,895.00	\$ 4,763.23	236	\$ 652,271.34
Calvert	5	\$ 10,859.42	\$ 2,171.88	\$ 1,790.96	\$ 2,553.85	36	\$ 78,187.82	5	\$ 8,353.92	\$ 1,670.78	\$ 1,656.84	\$ 1,716.84	20	\$ 33,415.60	10	\$ 1,656.84	\$ 2,553.85	56	\$ 111,603.42
Caroline	5	\$ 11,321.51	\$ 2,264.30	\$ 1,755.20	\$ 3,086.93	19	\$ 43,021.74	5	\$ 6,373.66	\$ 1,274.73	\$ 1,076.66	\$ 1,388.85	8	\$ 10,197.84	10	\$ 1,076.66	\$ 3,086.93	27	\$ 53,219.58
Carroll	4	\$ 7,894.98	\$ 1,973.75	\$ 953.54	\$ 3,563.27	40	\$ 78,949.80	5	\$ 6,179.96	\$ 1,235.99	\$ 775.30	\$ 1,853.66	35	\$ 43,259.72	9	\$ 775.30	\$ 3,563.27	75	\$ 122,209.52
Cecil	5	\$ 18,158.35	\$ 3,631.67	\$ 2,207.06	\$ 6,231.67	22	\$ 79,896.74	4	\$ 11,014.51	\$ 2,753.63	\$ 1,611.75	\$ 3,848.99	11	\$ 30,289.90	9	\$ 1,611.75	\$ 6,231.67	33	\$ 110,186.64
Charles	5	\$ 12,295.70	\$ 2,459.14	\$ 1,733.41	\$ 2,848.38	27	\$ 66,396.78	5	\$ 7,770.26	\$ 1,554.05	\$ 1,306.18	\$ 2,118.27	40	\$ 62,162.00	10	\$ 1,306.18	\$ 2,848.38	67	\$ 128,558.78
Dorchester	5	\$ 8,500.12	\$ 1,700.02	\$ 835.91	\$ 2,073.89	53	\$ 90,101.06	5	\$ 7,602.43	\$ 1,520.49	\$ 1,254.66	\$ 1,928.72	22	\$ 33,450.78	10	\$ 835.91	\$ 2,073.89	75	\$ 123,551.84
Frederick	3	\$ 5,875.17	\$ 1,958.39	\$ 1,392.28	\$ 2,662.44	65	\$ 127,295.35	4	\$ 4,430.76	\$ 1,107.69	\$ 1,107.69	\$ 1,107.69	42	\$ 46,522.98	7	\$ 1,107.69	\$ 2,662.44	107	\$ 173,818.33
Garrett	9	\$ 23,663.96	\$ 2,629.33	\$ 2,262.41	\$ 3,306.95	35	\$ 92,026.55	1	\$ 1,700.11	\$ 1,700.11	\$ 1,700.11	\$ 1,700.11	20	\$ 34,002.20	10	\$ 1,700.11	\$ 3,306.95	55	\$ 126,028.75
Harford	5	\$ 11,074.25	\$ 2,214.85	\$ 2,094.08	\$ 2,320.00	18	\$ 39,867.30	5	\$ 9,825.00	\$ 1,965.00	\$ 1,720.00	\$ 2,765.00	30	\$ 58,950.00	10	\$ 1,720.00	\$ 2,765.00	48	\$ 98,817.30
Howard	5	\$ 6,345.75	\$ 1,269.15	\$ 855.93	\$ 1,547.63	33	\$ 41,881.95	4	\$ 3,033.19	\$ 758.30	\$ 686.74	\$ 914.26	42	\$ 31,848.50	9	\$ 686.74	\$ 1,547.63	75	\$ 73,730.45
Kent	3	\$ 8,568.38	\$ 2,856.13	\$ 2,242.28	\$ 3,210.13	13	\$ 37,129.65	3	\$ 6,856.94	\$ 2,285.65	\$ 2,218.53	\$ 2,319.36	25	\$ 57,141.17	6	\$ 2,218.53	\$ 3,210.13	38	\$ 94,270.81
Montgomery	5	\$ 6,869.50	\$ 1,373.90	\$ 895.00	\$ 2,089.00	121	\$ 166,241.90	5	\$ 6,452.00	\$ 1,290.40	\$ 678.00	\$ 1,691.00	146	\$ 188,398.40	10	\$ 678.00	\$ 2,089.00	267	\$ 354,640.30
Prince George's	5	\$ 14,876.05	\$ 2,975.21	\$ 2,872.07	\$ 3,043.28	115	\$ 342,149.15	5	\$ 12,437.39	\$ 2,487.48	\$ 2,340.00	\$ 2,899.14	59	\$ 146,761.20	10	\$ 2,340.00	\$ 3,043.28	174	\$ 488,910.35
Queen Anne's	3	\$ 5,671.32	\$ 1,890.44	\$ 1,565.43	\$ 2,374.00	31	\$ 58,603.64	3	\$ 6,408.41	\$ 2,136.14	\$ 1,964.93	\$ 2,380.48	14	\$ 29,905.91	6	\$ 1,565.43	\$ 2,380.48	45	\$ 88,509.55
St Mary's	4	\$ 9,270.86	\$ 2,317.72	\$ 1,544.00	\$ 3,060.86	10	\$ 23,177.15	4	\$ 9,270.86	\$ 2,317.72	\$ 1,544.00	\$ 3,060.86	13	\$ 30,130.30	8	\$ 1,544.00	\$ 3,060.86	23	\$ 53,307.45
Somerset	3	\$ 9,734.06	\$ 3,244.69	\$ 2,151.00	\$ 4,269.59	24	\$ 77,872.48	7	\$ 19,560.33	\$ 2,794.33	\$ 1,583.49	\$ 3,374.00	22	\$ 61,475.32	10	\$ 1,583.49	\$ 4,269.59	46	\$ 139,347.80
Talbot	5	\$ 9,591.33	\$ 1,918.27	\$ 1,605.60	\$ 2,383.23	54	\$ 103,586.36	4	\$ 4,683.36	\$ 1,170.84	\$ 993.73	\$ 1,397.50	18	\$ 21,075.12	9	\$ 993.73	\$ 2,383.23	72	\$ 124,661.48
Washington	4	\$ 13,267.90	\$ 3,316.98	\$ 2,942.77	\$ 3,670.65	49	\$ 162,531.78	2	\$ 7,513.14	\$ 3,756.57	\$ 2,938.89	\$ 4,574.25	38	\$ 142,749.66	6	\$ 2,938.89	\$ 4,574.25	87	\$ 305,281.44
Wicomico	4	\$ 15,732.47	\$ 3,933.12	\$ 3,502.71	\$ 4,780.32	33	\$ 129,792.88	4	\$ 11,660.04	\$ 2,915.01	\$ 2,796.32	\$ 3,026.32	36	\$ 104,940.36	8	\$ 2,796.32	\$ 4,780.32	69	\$ 234,733.24
Worcester	5	\$ 14,310.27	\$ 2,862.05	\$ 2,416.92	\$ 3,567.53	20	\$ 57,241.08	5	\$ 9,311.10	\$ 1,862.22	\$ 1,486.12	\$ 2,185.66	12	\$ 22,346.64	10	\$ 1,486.12	\$ 3,567.53	32	\$ 79,587.72
Total:	102	\$ 252,154.48				972	\$ 2,345,225.40	95	\$ 179,955.24			794	\$ 1,506,186.91	197	\$ 678.00	\$ 6,231.67	1,766	\$ 3,851,412.31	
			Statewide Mean Amount Billed With Biopsy^:						Statewide Mean Amount Billed Without Biopsy^:						Statewide Estimated Mean Amount Billed^:				
			\$ 2,413						\$ 1,897						\$ 2,181				

* Number of Colonoscopies = Colonoscopies performed by the local programs from July 1, 2008 to June 30, 2009 (Source: CDB, CoPD, June 23, 2010)

** Estimated Total Amount Billed With Biopsy = Mean amount billed for Colonoscopy With Biopsy multiplied by the Number of Colonoscopies With Biopsy in Fiscal Year 2009.

@ Estimated Total Amount Billed Without Biopsy = Mean amount billed for Colonoscopy Without Biopsy multiplied by the Number of Colonoscopies Without Biopsy in Fiscal Year 2009.

~ Estimated Total Amount Billed FY09 = Sum of Estimated Total Amount Billed With Biopsy + Estimated Total Amount Billed Without Biopsy.

^ Statewide Mean Amount Billed = Total of Estimated Total Amount Billed FY09 / Total of Number of Colonoscopies in each category (With Biopsy, Without Biopsy, Total Billed).

Table 2.

Amount Paid for Colonoscopy

	With Biopsy						Without Biopsy						Total Paid (With Biopsy and Without Biopsy)				
	N	Total	Mean	Min	Max	Estimated Total Amt. Paid With Biopsy FY09**	N	Total	Mean	Min	Max	Estimated Total Amt. Paid Without Biopsy FY09@	N	Min	Max	Number of Colonoscopies FY09*	Estimated Total Amt. Paid FY09~
Allegany	5	\$ 5,935.62	\$ 1,187.12	\$ 615.16	\$ 1,684.00	25 \$ 29,678.10	5	\$ 4,003.89	\$ 800.78	\$ 634.57	\$ 930.22	34 \$ 27,226.45	10	\$ 615.16	\$ 1,684.00	59	\$ 56,904.55
Baltimore County	5	\$ 5,761.09	\$ 1,152.22	\$ 859.53	\$ 1,539.31	129 \$ 148,636.38	5	\$ 4,626.42	\$ 925.28	\$ 727.47	\$ 1,267.26	107 \$ 99,004.96	10	\$ 727.47	\$ 1,539.31	236	\$ 247,641.34
Calvert	5	\$ 4,466.10	\$ 893.22	\$ 697.27	\$ 1,013.47	36 \$ 32,155.92	5	\$ 3,655.54	\$ 731.11	\$ 719.67	\$ 776.20	20 \$ 14,622.20	10	\$ 697.27	\$ 1,013.47	56	\$ 46,778.12
Caroline	5	\$ 7,779.34	\$ 1,555.87	\$ 1,118.49	\$ 2,062.30	19 \$ 29,561.49	5	\$ 3,682.26	\$ 736.45	\$ 578.91	\$ 1,031.49	8 \$ 5,891.60	10	\$ 578.91	\$ 2,062.30	27	\$ 35,453.09
Carroll	4	\$ 7,894.98	\$ 1,973.75	\$ 953.54	\$ 3,563.27	40 \$ 78,949.80	5	\$ 6,179.96	\$ 1,235.99	\$ 775.30	\$ 1,853.66	35 \$ 43,259.72	9	\$ 775.30	\$ 3,563.27	75	\$ 122,209.52
Cecil	5	\$ 12,409.08	\$ 2,481.82	\$ 2,207.06	\$ 2,873.63	22 \$ 54,600.04	4	\$ 8,906.04	\$ 2,226.51	\$ 1,611.75	\$ 2,803.96	11 \$ 24,491.61	9	\$ 1,611.75	\$ 2,873.63	33	\$ 79,091.65
Charles	5	\$ 12,295.70	\$ 2,459.14	\$ 1,733.41	\$ 2,848.38	27 \$ 66,396.78	5	\$ 7,116.37	\$ 1,423.27	\$ 1,306.18	\$ 1,610.03	40 \$ 56,930.80	10	\$ 1,306.18	\$ 2,848.38	67	\$ 123,327.58
Dorchester	5	\$ 4,533.96	\$ 906.79	\$ 731.49	\$ 1,151.05	53 \$ 48,059.87	5	\$ 3,842.72	\$ 768.54	\$ 499.37	\$ 1,173.43	22 \$ 16,907.88	10	\$ 499.37	\$ 1,173.43	75	\$ 64,967.75
Frederick	3	\$ 2,824.50	\$ 941.50	\$ 748.72	\$ 1,191.07	65 \$ 61,197.50	4	\$ 2,391.40	\$ 597.85	\$ 597.35	\$ 599.35	42 \$ 25,109.70	7	\$ 597.35	\$ 1,191.07	107	\$ 86,307.20
Garrett	9	\$ 6,895.08	\$ 766.12	\$ 685.52	\$ 843.57	35 \$ 26,814.20	1	\$ 660.51	\$ 660.51	\$ 660.51	\$ 660.51	20 \$ 13,210.20	10	\$ 660.51	\$ 843.57	55	\$ 40,024.40
Harford	5	\$ 5,634.80	\$ 1,126.96	\$ 1,012.72	\$ 1,277.55	18 \$ 20,285.28	5	\$ 4,048.74	\$ 809.75	\$ 759.73	\$ 834.53	30 \$ 24,292.50	10	\$ 759.73	\$ 1,277.55	48	\$ 44,577.78
Howard	5	\$ 6,345.75	\$ 1,269.15	\$ 855.93	\$ 1,547.63	33 \$ 41,881.95	4	\$ 3,033.19	\$ 758.30	\$ 686.74	\$ 914.26	42 \$ 31,848.50	9	\$ 686.74	\$ 1,547.63	75	\$ 73,730.45
Kent	3	\$ 4,736.70	\$ 1,578.90	\$ 1,349.99	\$ 1,720.93	13 \$ 20,525.70	3	\$ 3,849.36	\$ 1,283.12	\$ 1,205.79	\$ 1,406.00	25 \$ 32,078.00	6	\$ 1,205.79	\$ 1,720.93	38	\$ 52,603.70
Montgomery	5	\$ 4,535.49	\$ 907.10	\$ 836.57	\$ 987.64	121 \$ 109,758.86	5	\$ 3,482.00	\$ 696.40	\$ 678.00	\$ 701.00	146 \$ 101,674.40	10	\$ 678.00	\$ 987.64	267	\$ 211,433.26
Prince George's	5	\$ 5,571.23	\$ 1,114.25	\$ 1,012.63	\$ 1,186.09	115 \$ 128,138.29	5	\$ 4,553.58	\$ 910.72	\$ 823.63	\$ 1,036.35	59 \$ 53,732.24	10	\$ 823.63	\$ 1,186.09	174	\$ 181,870.53
Queen Anne's	3	\$ 3,624.94	\$ 1,208.31	\$ 1,106.28	\$ 1,362.31	31 \$ 37,457.71	3	\$ 2,780.59	\$ 926.86	\$ 617.15	\$ 1,202.97	14 \$ 12,976.09	6	\$ 617.15	\$ 1,362.31	45	\$ 50,433.80
St Mary's	4	\$ 4,076.40	\$ 1,019.10	\$ 765.21	\$ 1,383.34	10 \$ 10,191.00	4	\$ 4,527.86	\$ 1,131.97	\$ 697.39	\$ 1,627.12	13 \$ 14,715.55	8	\$ 697.39	\$ 1,627.12	23	\$ 24,906.55
Somerset	3	\$ 4,917.56	\$ 1,639.19	\$ 846.00	\$ 2,035.78	24 \$ 39,340.48	7	\$ 13,201.83	\$ 1,885.98	\$ 1,201.83	\$ 2,000.00	22 \$ 41,491.47	10	\$ 846.00	\$ 2,035.78	46	\$ 80,831.95
Talbot	5	\$ 6,621.20	\$ 1,324.24	\$ 760.59	\$ 1,748.99	54 \$ 71,508.96	4	\$ 2,997.11	\$ 749.28	\$ 688.44	\$ 784.73	18 \$ 13,487.00	9	\$ 688.44	\$ 1,748.99	72	\$ 84,995.96
Washington	4	\$ 4,399.84	\$ 1,099.96	\$ 1,014.35	\$ 1,168.43	49 \$ 53,898.04	2	\$ 1,824.38	\$ 912.19	\$ 843.13	\$ 981.25	38 \$ 34,663.22	6	\$ 843.13	\$ 1,168.43	87	\$ 88,561.26
Wicomico	4	\$ 4,985.24	\$ 1,246.31	\$ 1,179.09	\$ 1,377.37	33 \$ 41,128.23	4	\$ 4,240.18	\$ 1,060.05	\$ 1,029.02	\$ 1,104.64	36 \$ 38,161.62	8	\$ 1,029.02	\$ 1,377.37	69	\$ 79,289.85
Worcester	5	\$ 9,624.74	\$ 1,924.95	\$ 1,692.11	\$ 2,379.88	20 \$ 38,498.96	5	\$ 6,119.73	\$ 1,223.95	\$ 952.96	\$ 1,389.17	12 \$ 14,687.35	10	\$ 952.96	\$ 2,379.88	32	\$ 53,186.31
Total:	102	\$ 135,869.34				972 \$ 1,188,663.54	95	\$ 99,723.66				794 \$ 740,463.05	197	\$ 499.37	\$ 3,563.27	1,766	\$ 1,929,126.59
			Statewide Mean Amount Paid With Biopsy^:						Statewide Mean Amount Paid Without Biopsy^:					Statewide Estimated Mean Amount Paid^:			
			\$	1,223				\$	933				\$	1,092			

* Number of Colonoscopies = Colonoscopies performed by the local programs from July 1, 2008 to June 30, 2009 (Source: CDB, CoPD, June 23, 2010)

** Estimated Total Amount Paid With Biopsy = Mean amount paid for Colonoscopy With Biopsy multiplied by the Number of Colonoscopies With Biopsy in Fiscal Year 2009. These estimates assume the counties were paying the entire bill and not just the co-pays or deductibles for Medicare, etc.

@ Estimated Total Amount Paid Without Biopsy = Mean amount paid for Colonoscopy Without Biopsy multiplied by the Number of Colonoscopies Without Biopsy in Fiscal Year 2009.

~ Estimated Total Amount Paid FY09 = Sum of Estimated Total Amount Paid With Biopsy + Estimated Total Amount Paid Without Biopsy.

^ Statewide Mean Amount Paid = Total of Estimated Total Amount Paid FY09 / Total of Number of Colonoscopies in each category (With Biopsy, Without Biopsy, Total Paid).

Table 3.

Cost of Colonoscopy Local Public Health Colorectal Cancer Screening Programs Maryland Cigarette Restitution Fund Program, FY2009 Mean and Range of Amounts Billed and Paid for Colonoscopy				
Category	FY2009		FY2003	
	Mean	Range by LHD (Min-Max)	Mean	Range by LHD (Min-Max)
<u>Billed</u>				
Statewide With Biopsy	\$2,413	\$836--\$6,232		
Statewide Without Biopsy	\$1,897	\$678--\$4,574		
Statewide Total*	\$2,181	\$678--\$6,232	\$1,843	\$612--\$4,830
<u>Paid</u>				
Statewide With Biopsy	\$1,223	\$615--\$3,563		
Statewide Without Biopsy	\$ 933	\$499--\$2,804		
Statewide Total*	\$1,092	\$499--\$3,563	\$ 934	\$440--\$3,207

* Statewide Total is with and without biopsy

Figure 1.

**Amount Billed for Colonoscopy With Biopsy
Maryland Local Public Health CRFP Colorectal Cancer Screening Programs,
FY2009**

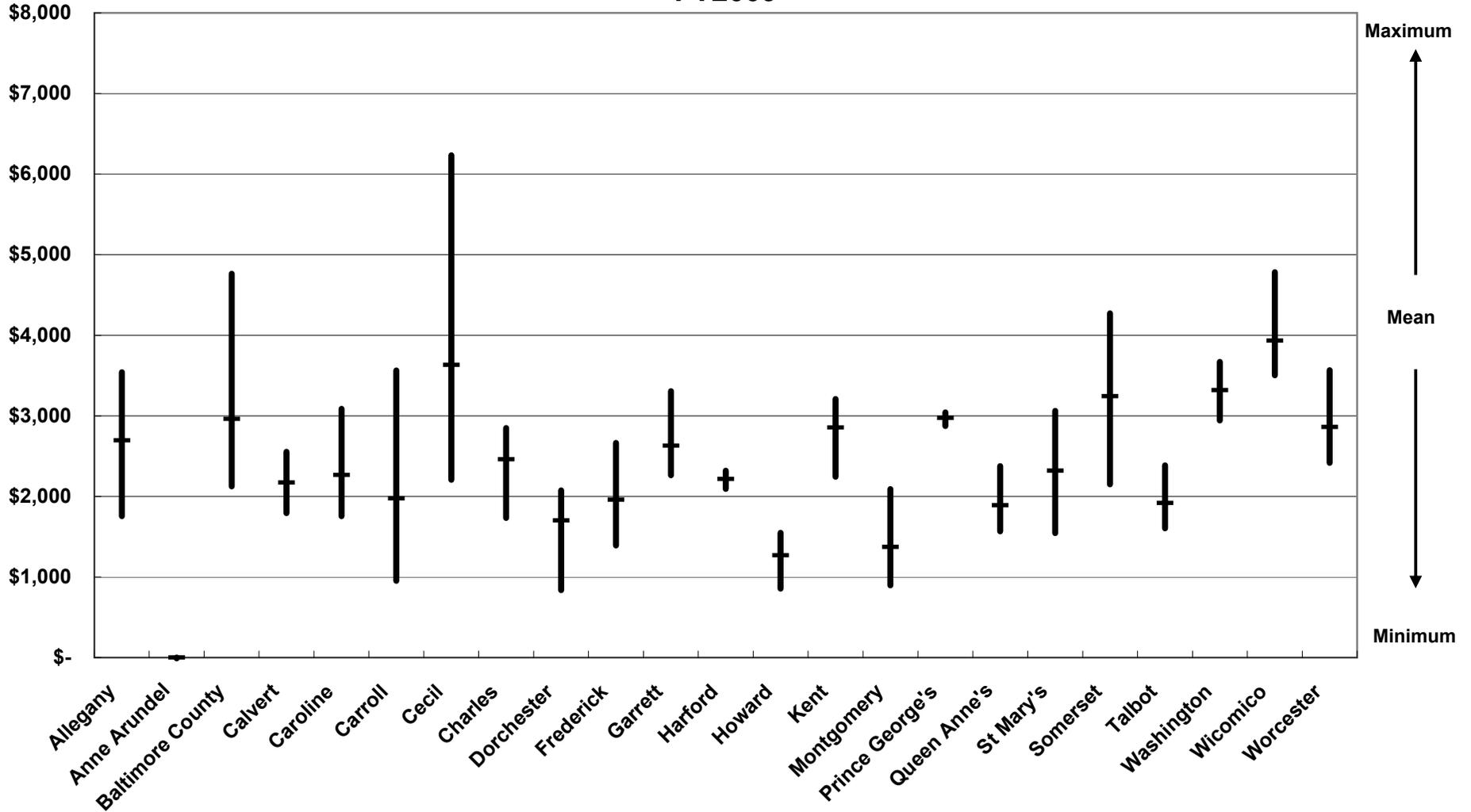


Figure 2.

**Amount Billed for Colonoscopy Without Biopsy
Maryland Local Public Health CRFP Colorectal Cancer Screening Programs,
FY2009**

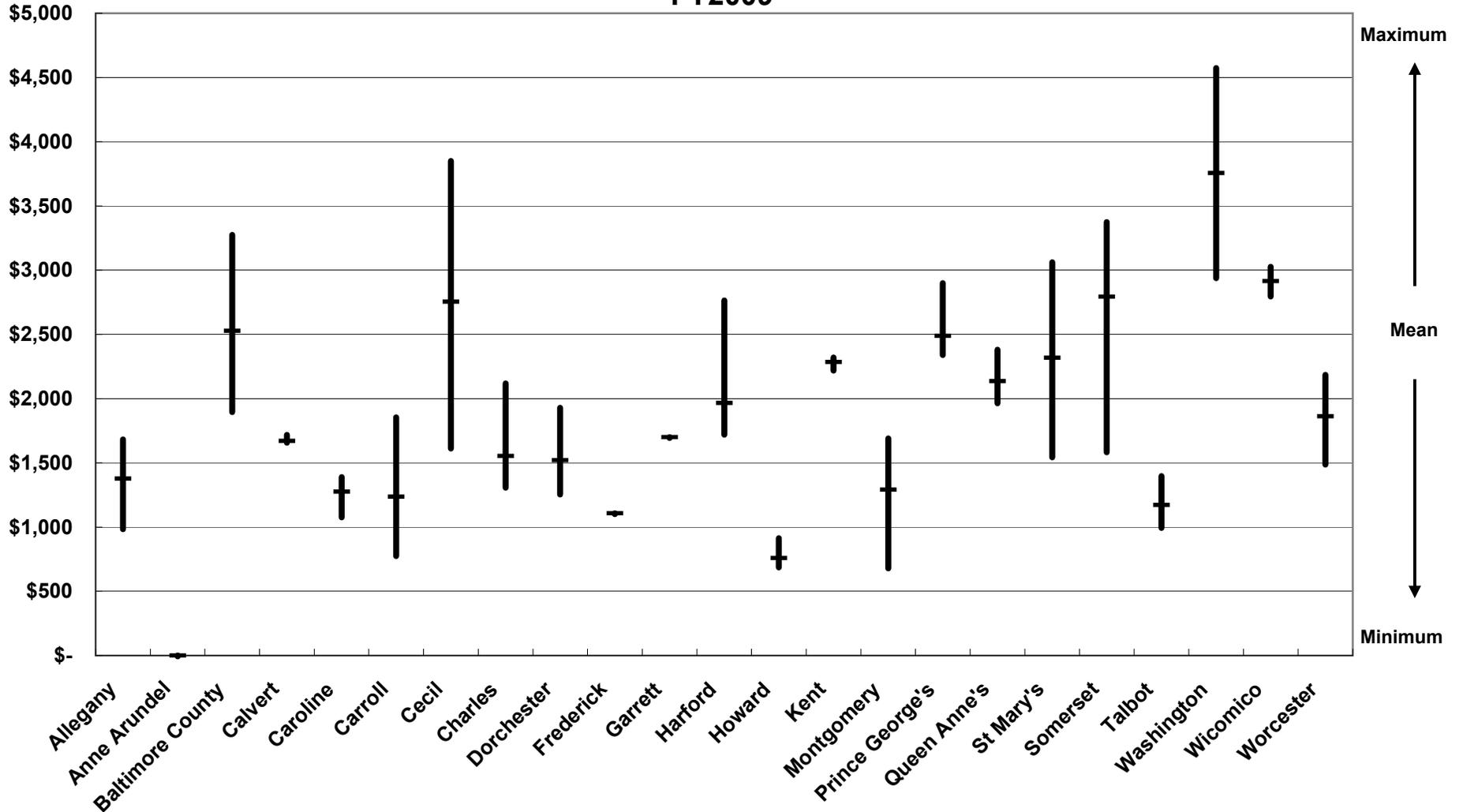


Figure 3.

Amount Paid for Colonoscopy With Biopsy Maryland Local Public Health CRFP Colorectal Cancer Screening Programs, FY2009

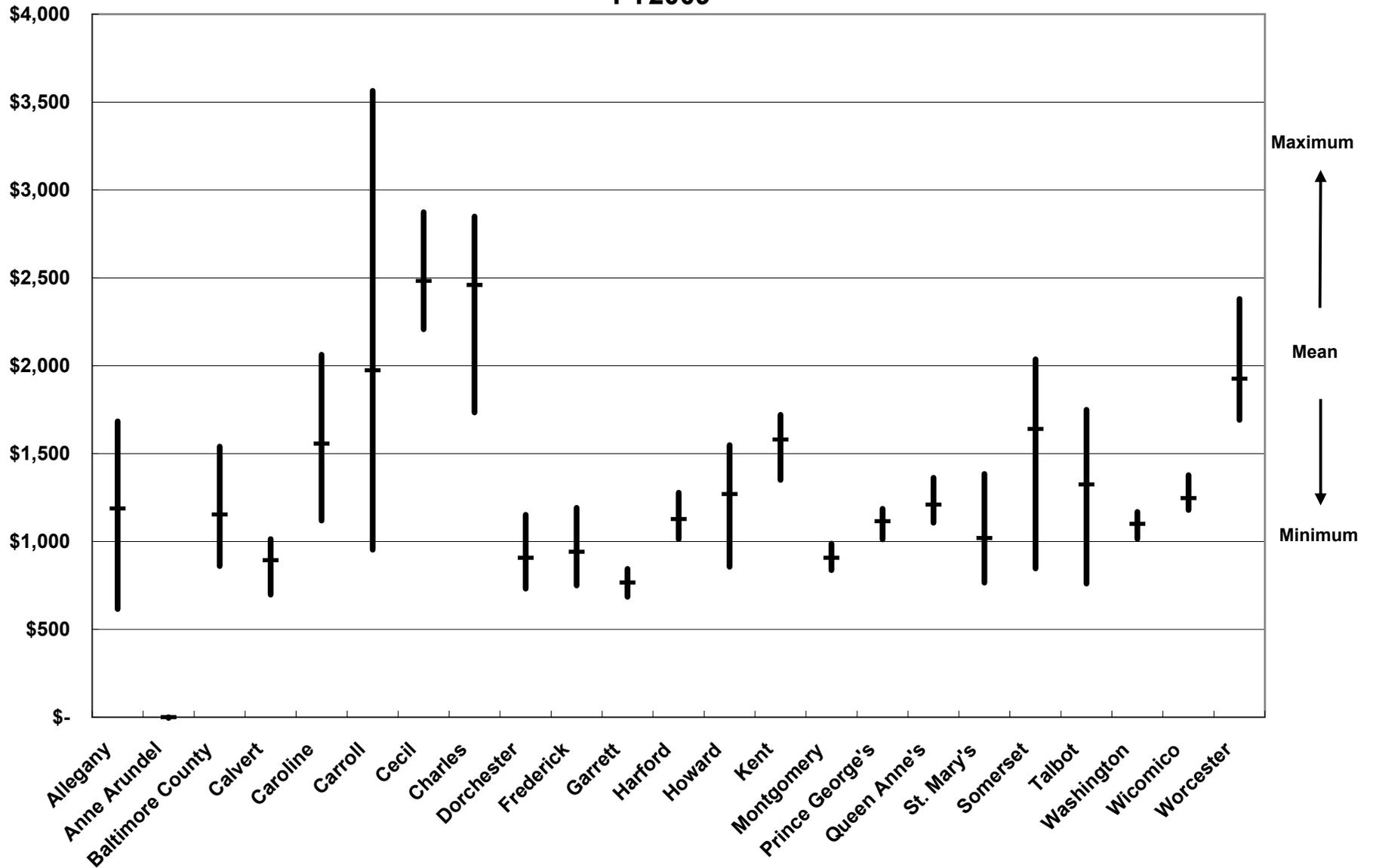
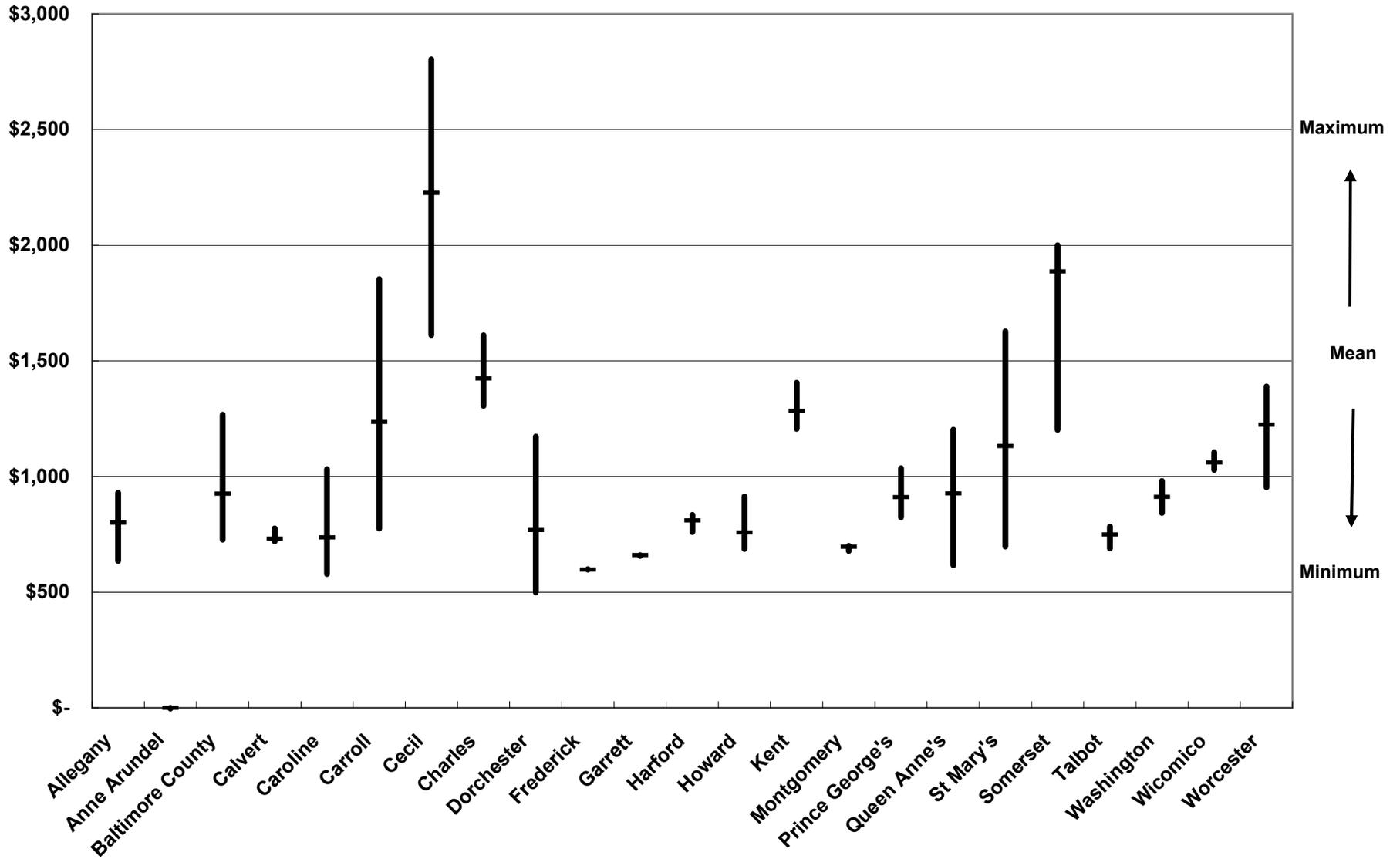


Figure 4.

Amount Paid for Colonoscopy Without Biopsy Maryland Local Public Health CRFP Colorectal Cancer Screening Programs, FY2009



Appendix A

Instructions



STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene

201 W. Preston Street • Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – John M. Colmers, Secretary

Family Health Administration

Russell W. Moy, M.D., M.P.H., Director – Joan Salim, Deputy Director

CCSC HOM # 09-11

MEMORANDUM

Date: April 22, 2009

To: Health Officers
CRFP and Colorectal Cancer Contacts
CRF Program Directors

From: Carmela Groves, R.N., M.S.
Chief, Surveillance and Evaluation Unit, CCSC

Re: Cost of Colonoscopy in the Cigarette Restitution Fund Program

We are planning to repeat the 'cost of colonoscopy survey' project. The purpose of this project is to determine what our local programs currently are being **charged** and what they are **paying** for colonoscopies for patients under our program as of 2009 in the Cigarette Restitution Fund Program (CRFP). This survey was performed in 2003 (HO Memo #03-05) and the *Cost of Colonoscopy in Local Public Health Colorectal Cancer Screening Programs* report was published (HO Memo #04-29).

The procedure for data collection is different than what was done in 2003. We are asking that each CRFP local program enter the billing information on 10 clients who have completed colonoscopies for whom we specify and enter the billing information into the Client Database (CDB) Billing Section. See Attachment 1 for the CDB ID and cycle number of the colonoscopies we identified for entry.

Once the data is entered, we will compile the data, examining amounts billed and the corresponding amounts paid for colonoscopies and associated costs of the screening procedure. We will provide you with a similar report to the 2004 report that will be useful to Maryland programs as you evaluate procedures, plan budgets, and seek ways to contain costs.

Please enter billing records by May 15, 2009. Attached is a screen capture of the Billing data entry page, with 'required' fields highlighted in red and a set of instructions

(Attachment 2). Please enter one billing record per procedure. Also, be sure to enter every procedure associated with the colonoscopy, such as facility fee, anesthesia, physician fee, etc.

If you need assistance with training on the Billing Section or have any questions, please let me know. Thank you.

If you have any questions, please feel free to contact me at 410-767-2616 or cgroves@dhhm.state.md.us.

Attachments (sent electronically to Health Officers and CRF-CPEST Cancer Coordinators)

cc: Carlessia Hussein, R.N., Dr. P.H.
Russell Moy, M.D., M.P.H./Joan Salim
Donna Gugel
Diane Dwyer, M.D.

Attachment 2: HO Memo 09-11
Instructions for Entering into the Client Database (CDB) Billing Section
April 2009

1. Search the CDB ID for the client you will enter, starting from the CDB Main Menu

CPEST Client Database

Today is: Monday, April 6, 2009 [Help ?](#) [Logoff](#)

Current User: CARMELA GROVES **Jurisdiction:** Statewide

System Messages Message Date: 12/08/2008

New dbm starting 12/08/2008 Jia Soellner is our new dbm and can be reached at 767-0815 or jsoellner@dhmh.state.md.us

Client Tools	Reports	Administration
Search For Client - ID	Reports Menu	Security Role Maintenance
Search For Client - Personal Info		System Configuration Settings
Add New Client		System Messages
		Sponsor Maintenance
		Program User Maintenance

Search for Clients by ID

Select search criteria and click the search button.

[Main Menu](#) [Add Client](#)

Type of ID: CDB ID Local ID BCCP ID

Program:

ID:

[Search By Personal Info](#)

2. Open the 'Billing Info' section from the Client Information

Client Information for 'One, Keith N'

Use the links provided to add or edit information for the selected client.

CDB ID: [Help ?](#)

Search Again By [IDs](#) OR [Personal Information](#) [Main Menu](#)

Client Profile

[Client Summary Report](#) [Edit Core Data](#)

Jurisdiction/Program: Baltimore City-UMMS

Client Name: One, Keith N **CDB ID:** 20002

DOB: 11/09/1945 **Local ID:** 01-02-00021

Gender: Male **BCCP ID:** 05001109457896

4 Digit SSN: 7896 **CPEST Enrollment Date:** 01/01/2003

Race: White/Caucasian **Ethnicity:** Non-Hispanic/Latino

Address Information

Residential Address: 789 W 23rd Avenue 103
Baltimore, MD 21598

Mailing Address: 789 W P.O Box 1123 Avenue 103
Baltimore, MD 21598

Other Information

Primary Health Care Provider: Jane Doe
123 Jame Street
Baltimore, MD 21201

Insurance: No

Primary:

Secondary:

[Recall Info](#) [Billing Info](#)

3. Select Module = 'Colorectal Cancer' from the drop down; Click Add Expense

Client Billing

CDB ID:

Client Name: One, Keith N CDB ID: 20002 Module:

Expenses

Expense ID	Procedure Date	Provider	Procedure Name	Estimated Expense	Date Paid	Amount Paid	Actions
3	01/01/2004	Baltimore GI Associates	colonoscopy professional fee	\$1,000.00	02/15/2004	\$100.00	Edit Delete

4. Enter information as reflected in the red highlights and Save entry. Enter every procedure/charge associated with the colonoscopy, including, but not limited to: facility fee, physician fee, prep costs, anesthesia, drugs, laboratory (bloodwork), pathology (biopsy), other testing (e.g., EKG, chest xray).

Client Billing - Add New Expense

Enter the information for the new expense.

Client Name: One, Keith N **CDB ID:** 20002

Expense ID: [System Generated] **Module:** CRC **Jurisdiction:** Baltimore City-UMMS

Estimated Expense Amount: \$0.00 **Estimated Funding Source:** []

Cycle: -- Select Cycle --

Procedure: -- Select Procedure from List --

OR Procedure Name: []

Provider: -- Select Provider -- or Add Provider

Procedure Date [mm/dd/yyyy]: [] **Date Results Received [mm/dd/yyyy]:** []

Procedure Code: [] **Sponsor:** []

CPT Modifiers: [] **Bowel Prep Payment:** --Select --

Ambulatory Payment Classification: []

EOB Date Received [mm/dd/yyyy]: []

Date Bill Received [mm/dd/yyyy]: [] **Invoice Amount:** \$0.00

Date Approved [mm/dd/yyyy]: [] **Date Paid [mm/dd/yyyy]:** [] **Amount Paid:** \$0.00

Paid Funding Source: [] **Person Responsible:** []

Direct Payment Number: []

Purchase Order Number: [] **Purchase Order Amount:** \$0.00

Check Number: [] **Check Date:** []

Text 1: [] **Text 2:** []

Comments:

Procedures can be entered into the billing table by two different methods:

1) If the procedure is a standard procedure that appears in the database (e.g., colonoscopy or pre-screening visit) or a procedure you have already entered in additional procedures as 'other' (e.g., lab work, chest-ray, or EKG), the name of this procedure will appear in the drop-down box ('Select Procedure from List' in field called '**Procedure**'). Much of the information associated with that procedure will auto-fill (except cycle number), if it

has been completed. If a provider name has NOT been included with that procedure, you can select the Provider Name from the Provider drop down box or click the 'Add Provider' button to add the provider.

2) If the charge is not for a standard procedure (e.g.; anesthesia or pathology services or facility charge), enter the name of the charge in the field called '**Procedure Name**'. Once this is done, you can select the 'Provider Name' from the drop down list (if you have already entered the name in the Health Care Provider Page.)

5. Repeat instructions 3 and 4 for each billing record.