

Introduction to CMS Health Care Price Projections & Issues for Economic Damages Experts

Joseph I Rosenberg, CFA, LLC

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Background

- Forensic economists/damages experts have been making health care price projections for a long time, especially for Life Care Plans (LCP)
- Two most common methods to project prices for health care goods and services:
 - Extrapolating from Bureau of Labor Statistics (BLS) health care components of the CPI
 - Using detailed price projections from the Center for Medicare and Medicaid Services (CMS) for various categories of health care goods and services
- This presentation is based on an article co-authored with Sean Keehan, Senior Economist in the Office of the Actuary at CMS and published in *The Earnings Analyst* in December 2019

Goal of TEA Article and this Presentation

- Explain what CMS health care price projections are all about
- Map and compare CMS historical price growth rates over time with similar categories tracked by BLS
- Explain how and why the two data series differ, including how out-of-pocket spending is tracked vs. insurance/third party spending
- Provide a summary of pros and cons of using CMS vs. BLS data for health care price forecasting, especially in LCPs
- Assist economists in defending their choice of method and data source for price projections used in LCPs

CMS Overview

- Office of the Actuary publishes 10-year projections of the National Health Expenditure (NHE) Accounts
- Goal is “measuring the total annual dollar amount of health care consumption in the U.S.....”.
 - Last final total was 17.7% of GDP in 2018;
 - March 2020 projection (pre-Covid-19) was to grow overall by 5.4% per year from 2019-2028, rising to 19.7% of GDP.
- Payments for health care in NHE include out-of-pocket, all insurance, and other third-party payers and programs
- Price projections underlying NHE are available to anyone upon request, but a decision was made not to publish them separately

March 2020 CMS Projections (2019 based on 10 months of “actual” data)

Consumer Spending			Prescription		Home		Medical	Nursing	Other	Other	Over The	Personal	
	Deflator	Dental	Drugs	Durables	Health	Hospital	Services	Home	Professional	PPHC	Counter	Health Care	Physician
	PCWC	PDNT	PDRUG	PDUR	PHH	PHSP	PMSVC	PNH	POPC	POPER	POTC	PPHC	PPHY
2019	1.9	1.9	-0.3	1.5	2.6	2.0	1.7	4.1	0.8	1.9	0.3	1.5	0.7
2020	2.1	2.7	1.1	1.4	2.4	2.3	1.9	3.4	1.3	2.5	0.6	1.9	1.0
2021	2.3	3.0	1.8	1.4	2.5	2.5	2.2	3.4	1.7	2.9	0.9	2.2	1.4
2022	2.2	3.4	2.3	1.3	2.5	2.7	2.4	3.2	2.0	3.1	1.2	2.4	1.7
2023	2.3	3.5	2.6	1.3	2.5	2.7	2.5	3.2	2.3	3.1	1.4	2.5	1.8
2024	2.3	3.6	2.8	1.2	2.6	2.7	2.5	3.1	2.5	3.1	1.5	2.5	1.9
2025	2.2	3.7	3.0	1.2	2.7	2.7	2.6	3.0	2.6	3.1	1.6	2.6	2.0
2026	2.3	3.7	3.1	1.2	2.7	2.8	2.6	3.0	2.7	3.2	1.7	2.7	2.1
2027	2.3	3.7	3.2	1.2	2.8	2.9	2.7	3.0	2.7	3.3	1.8	2.8	2.2
2028	2.2	3.8	3.4	1.2	2.8	2.9	2.9	3.0	2.7	3.4	1.9	2.8	2.3

Schedule 1: Components of PHC Expenditure Chain-Type Annual Weighted Price Index

Industry/Commodity or Service	Price proxy	2018 % weight	NHE/CMS Acronym
PHC		100.0	PPHC
Hospital Care	PPI hospitals*	38.8	PHSP
Physician and Clinical Services	Composite Index: PPI for Office of Physicians and PPI for medical & diagnostic laboratories	23.6	PPHY
Other Professional Services	CPI services by other medical professionals	3.4	POPC
Dental Services	CPI dental services	4.4	PDNT
Home Health Care	PPI home health care services	3.3	PHH
Other Health, Residential, and Personal Care:		6.2	POPER
Other (School Health, Worksite Health Care, Other Federal, Other State & Local, etc.)	CPI physicians' services		
Home and Community-Based Waivers (HCBW)	CPI care of invalids & elderly at home		
Ambulance	CPI-U All Items		
Residential Mental Health & Substance Abuse Facilities	PPI residential mental retardation facilities		
Nursing Care Facilities and Continuing Care Retirement Communities	PPI nursing care facilities	5.5	PNH
Prescription Drugs	CPI prescription drugs	10.9	PDRUG
Other Non-Durable Medical Products	CPI internal & respiratory over-the-counter drugs	2.2	POTC
Durable Medical Equipment	Composite Index: CPI for eyeglasses and eye care and CPI nonprescription medical equipment and supplies	1.8	PDUR

*Producer Price Index for hospitals, U.S. Department of Labor, Bureau of Labor Statistics. Used beginning in 1994. Indexes for 1960-93 are based on a CMS-developed output or transaction price index.

Schedule 2: Definitions of published medical care indexes and relative importance as of December 2018.

Item	Definition	Relative importance (percent)	% of Medical Care Index
Medical care	Medical care commodities and medical care services	8.682	100%
A. Medical care commodities	Prescription drugs, nonprescription over-the-counter-drugs, and other medical equipment and supplies	1.707	20%
1. Medicinal drugs	All prescription and over-the-counter drugs	1.65	19%
a. Prescription drugs	All drugs dispensed by prescription. Mail order outlets are included. Prices reported represent transaction prices between the pharmacy, patient, and third party payer, if applicable.	1.308	15%
b. Nonprescription drugs	All nonprescription drugs, including topicals	0.342	4%
2. Medical equipment and supplies	Nonprescription medicines and dressings used externally, contraceptives, and supportive and convalescent medical equipment (e.g., adhesive strips, heating pads, athletic supporters, and wheelchairs)	0.057	1%
B. Medical care services	Professional medical services, hospital services, nursing home services, adult day care, and health insurance	6.974	80%
1. Professional services	Physicians, dentists, eye care providers, and other medical professionals	3.255	37%
a. Physicians' services	Services by medical physicians in private practice, including osteopaths, which are billed by the physician. Includes house, office, clinic, and hospital visits. (Excludes independent lab work and ophthalmologists. See Eyeglasses and eye care.)	1.732	20%
b. Dental services	Services performed by dentists, oral or maxillofacial surgeons, orthodontists, periodontists, or other dental specialists in group or individual practice. Treatment may be provided in the office or hospital.	0.785	9%
c. Eyeglasses and eye care	Services and goods provided by opticians, optometrists, and ophthalmologists. Includes eye exams, dispensing of eyeglasses and contact lenses, office visits, and surgical procedures in the office or hospital.	0.319	4%
d. Services by other medical professionals	Services performed by other professionals such as psychologists, chiropractors, physical therapists, podiatrists, social workers, and nurse practitioners in or out of the office. Also, includes independent lab work and imaging services.	0.419	5%
2. Hospital and related services	Services provided to inpatients and outpatients. Includes emergency room visits, nursing home care and adult day care.	2.621	30%
a. Hospital services	Services provided to patients during visits to hospitals, ambulatory surgical centers, or other similar settings.	2.34	27%
i. Inpatient hospital services (1)	Services for inpatients. Includes a mixture of itemized services, Diagnosis Related Group -based services, per diems, packages, or other bundled services.	N/A	
ii. Outpatient hospital services (1)	Services provided to patients classified as outpatients in hospitals, free standing services facilities, ambulatory surgery, and urgent care centers.	N/A	
b. Nursing home and adult day care services	Charges for residential care at nursing homes, nursing home units of retirement homes, and convalescent or rest homes. Also includes non-residential adult day care.	0.193	2%
c. Care of invalids, elderly and convalescents in the home	Fees paid to individuals or agencies for the personal care of invalids, elderly or convalescents in the home including food preparation, bathing, light house cleaning, and other services	0.088	1%
3. Health Insurance	Indirect approach based on retained earnings method. See Health Insurance section.	1.099	13%

**Schedule 3: Comparison of BLS and CMS
Consumer/Personal Health Care Spending (2017 GDP =
\$19,485.4, all numbers in billions) (1)**

	Total Non- Health Insurance or Third-Party Spending	Total Health Insurance Spending	Other Third Party Payers	Total Consumer/ Personal Health Care Spending
BLS (all OOP)	\$196.77	\$443.86	\$0.00	\$640.63
% GDP	1.01%	2.28%	0.00%	3.29%
% Total Consumer Health Care Spending	30.72%	69.28%	0.00%	100.00%
CMS	\$365.50	\$2,347.30	\$248.30	\$2,961.10
% GDP	1.88%	12.05%	1.27%	15.20%
% Total Personal Health Care Spending	12.34%	79.27%	8.39%	100.00%

(1) Sources: BLS: Consumer Expenditure (CE) Survey, Table 1300, and BLS Factsheet "Measuring Prince Change in the CPI: Medical Care", Last Modified April 24, 2019; CMS: Personal Health Care Expenditures; Aggregate and per Capita Amounts, Percent Distribution and Annual Percent. Note: 2017 GDP later revised to \$19,519.4 bil.

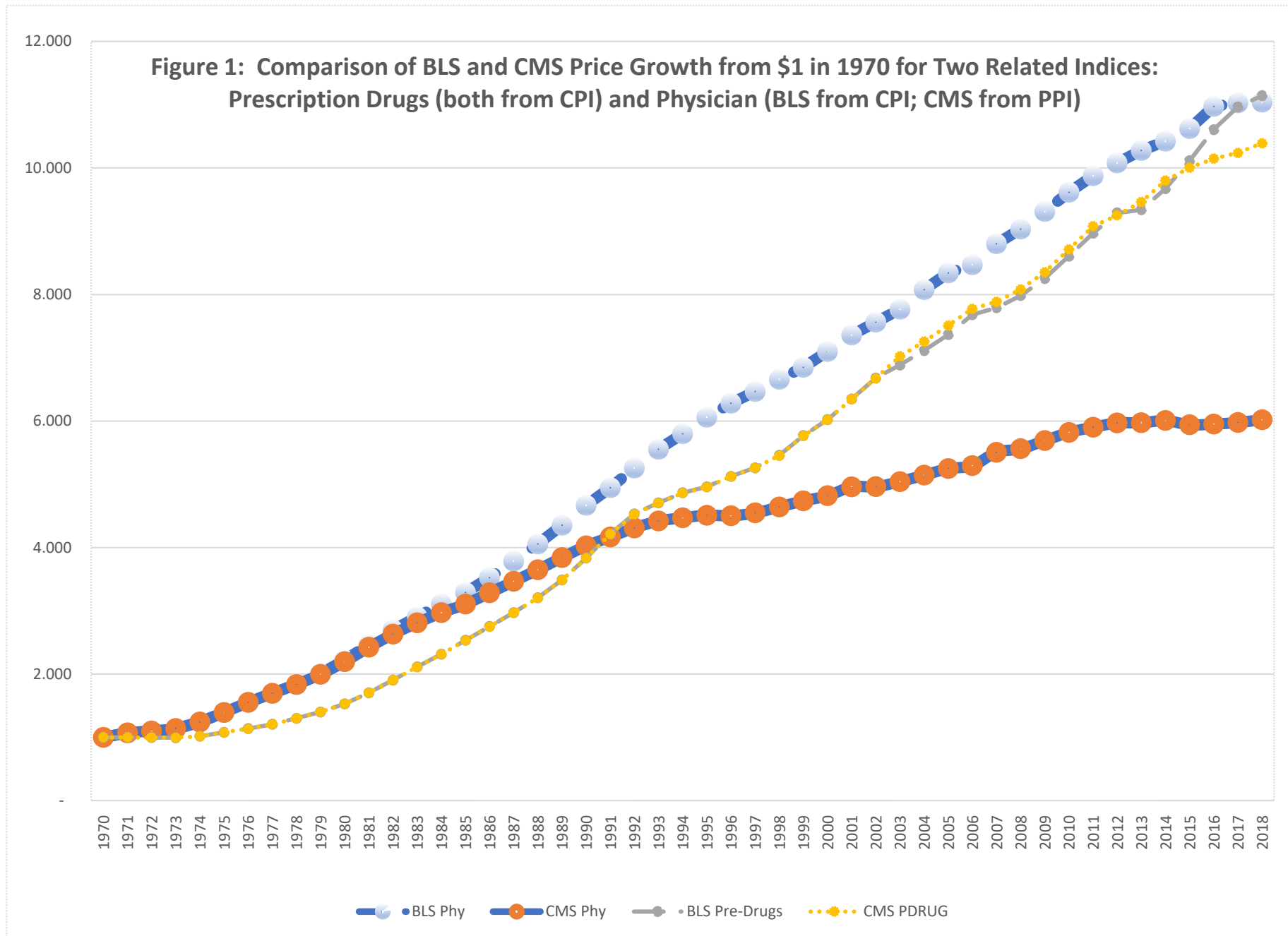
Schedule 4: Mapping of BLS Medical Care Components of CPI to CMS/NHE Price Projection Categories

Item	Percentage of the Medical Care Index	Percentage Excl Health Ins.	Comparable CMS Category Name	CMS Label (color-coded for split)	Percentage	Delta %
Medical care	100%					
A. Medical care commodities	20%					
1. Medicinal drugs	19%					
a. Prescription drugs	15%	17.05%	Presc Drugs	PDRUG	11.26%	-5.8%
b. Nonprescription drugs	4%	4.55%	Over the Cntr	POTC	1.85%	-2.7%
2. Medical equipment and supplies	1%	1.14%	Durables & Non-Durables	PDUR, POTC	0.45%	-0.7%
B. Medical care services	80%					
1. Professional services	37%					
a. Physicians' services	20%	22.73%	Physician	PPHY	23.45%	0.7%
b. Dental services	9%	10.23%	Dental Services	PDNT	4.36%	-5.9%
c. Eyeglasses and eye care	4%	4.55%	Durables	PDUR	1.70%	
d. Services by other medical professionals	5%	5.68%	Other Professional Services	POPC	3.26%	-2.4%
2. Hospital and related services	30%					
a. Hospital services	27%	30.68%	Hospital Care	PHSP	38.59%	7.9%
b. Nursing home and adult day care services	2%	2.27%	Nursing Home & Other Personal Health Care Svc	PNH: 5.6% POPER: 6.2%	11.80%	9.5%
c. Care of invalids, elderly and convalescents in the home	1%	1.14%	Home Health	PHH	3.28%	2.1%
3. Health Insurance	13%					
Sum	100%	100.00%			100.00%	

Schedule 5: Mapping of Estimated OOP Spending in BLS and CMS (\$ millions)					
Item	BLS Estimated OOP Spending	CMS Label (color-coded for split)	CMS Estimated OOP Spending	Estimated Delta OOP Spending	OOP % Excess CMS over BLS
Medical care					
A. Medical care commodities					
1. Medicinal drugs					
a. Prescription drugs	37,137	PDRUG	46,716	9,578	25.8%
b. Nonprescription drugs	25,959	POTC	57,190	31,231	120.3%
2. Medical equipment and supplies	11,193	PDUR, POTC	16,861	5,668	50.6%
B. Medical care services					
1. Professional services					
a. Physicians' services	26,195	PPHY	60,052	33,857	129.2%
b. Dental services	38,054	PDNT	53,003	14,949	39.3%
c. Eyeglasses and eye care	16,597	PDUR	14,035	(2,562)	-15.4%
d. Services by other medical professionals	20,717	POPC	23,869	3,152	15.2%
2. Hospital and related services					
a. Hospital services	20,452	PHSP	33,923	13,471	65.9%
b. Nursing home and adult day care services	468	PNH: 5.6% POPER: 6.2%	59,807	59,339	12679%
c. Care of invalids, elderly and convalescents in the home		PHH			
Out-of-Pocket Estimated	196,773		365,455	168,682	85.7%

Sch.6: Comparative Health Care Price Growth Rates for NHE/CMS Data Sets Mapped to Closest BLS Categories

NHE/CMS Label	Dental Services		Prescription Drugs		Durable Medical Equipment (1)		Home Health Care		Hospital Care		Nursing Home + Other Personal Heath Care (2)		Other Professional Services		OTC Drugs/Other Non-Durable Medical Prod.(3)		Physician & Clinical Services		Medical Services (Both Composites)	
Index Source	BLS	CMS	BLS	CMS	BLS	CMS	BLS	CMS	BLS	CMS	BLS	CMS	BLS	CMS	BLS	CMS	BLS	CMS	BLS	CMS
CMS Code		PDNT		PDRUG		PDUR		PHH		PHSP		PNH & POPER		POPC		POTC		PPHY		PMSVC
Price Proxy	CPI	CPI	CPI	CPI	CPI	CPI	CPI	PPI	CPI	PPI	CPI	CPI & PPI	CPI	CPI	CPI	CPI	CPI	PPI	CPI	CPI & PPI
History Available	1947	1970	1947	1970	2009	1970	2005	1970	1996	1970	1996	1970	1986	1970	2009	1970	1947	1970	1935	1970
Growth Calc From	1970	1970	1970	1970	2009	2009	2005	2005	1996	1996	1996	1996	1986	1986	2009	2009	1970	1970	1970	1970
Growth thru 2018	5.38%	5.38%	5.15%	5.00%	0.80%	0.46%	1.47%	1.09%	5.61%	2.63%	3.81%	2.75%	2.74%	2.87%	-0.29%	-0.35%	5.13%	3.81%	5.95%	4.62%
Correlation Coef.	100.00%		99.86%		72.73%		97.03%		98.35%		99.73%		99.99%		99.67%		97.43%		98.59%	
Index Source					BLS	CMS									BLS	CMS				
CMS Code					Eyeglass	PDUR									Non-PreDr	POTC				
Growth Calc From					1986	1986									2009	2009				
Growth thru 2018					2.02%	1.80%									-0.35%	-0.35%				
Correlation Coef.					98.98%										100.00%					



Schedule 7: Pros and Cons of Using BLS vs. CMS for Medical/Health Care Price Forecasting

	PROS	CONS
BLS	BLS indexes are all published data. They reflect actual observed prices	Future may not look like the past, especially given current flux of health care policies. It is also arbitrary as to what historical period average to use
	Indexes account for what the consumer actually pays. Indexes are not burdened by prices of payments from all insurers and third parties. Payments by Medicaid and Medicare Part A are explicitly excluded from indexes	Consumer healthcare spending by BLS only accounts for about 1/5 of all personal health care spending. In addition, the argument that life care plans are better served by BLS-based projections in order to focus on consumer out-of-pocket payments is undermined by the fact that almost 70% of consumer spending on healthcare tracked by BLS includes health insurance, i.e., insurance premiums paid for by the consumer as deductions from employee paychecks and as well as premiums for Medicare Parts B and D
	Collateral Source Rule prohibits mentioning of insurance payments to plaintiff in many cases	CSR is not absolute. In at least 38 states, plaintiff is not allowed to receive compensation more than once for the same medical expenses; and in at least 21 states, evidence of collateral source benefits may be introduced for medical malpractice
CMS	CMS provides both historical and 10-year forecasted index data. Anyone can request a copy, and the Office of the Actuary co-author is a referenceable source	While the overall Personal Healthcare (PHC) Index is published, the underlying detailed CMS indexes are all unpublished data. Some economists will not use the CMS indexes for this reason alone
	Indexes include payments by all payees to providers of health care. Weighted prices reflect the most comprehensive data, since bulk of spending involves negotiated prices paid by third-party providers, including private insurance, Medicare, and Medicaid	Some economists consider it a negative fact that CMS' PHC price indexes include payments made by all health care payers, and thus as compared with BLS indexes, are more heavily weighted by payments from insurers rather than from consumers