Episode Definitions: What you need to know for the Bundled Payments for Care Improvement Initiative

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AGENDA

- Bundled Payment Strategic Opportunities
- Episode Definitions in Bundled Payments for Care Improvement (BPCI)
- Chart Books
- Questions
- Upcoming Dates

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Bundled Payment for Care Improvement

Speakers

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Thank You

Thank you for your interest in partnering with the Innovation Center and CMS to help redesign care, improve quality and reduce costs across our country.

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Webinar Purpose

- Emphasize the strategic opportunities for care redesign through bundled payments
- Clarify episode definitions for BPCI in response to numerous questions and existence of alternate definitions in the commercial and academic sectors
- Describe a resource that the Innovation Center has made available (Chart Books) and how it relates to this program

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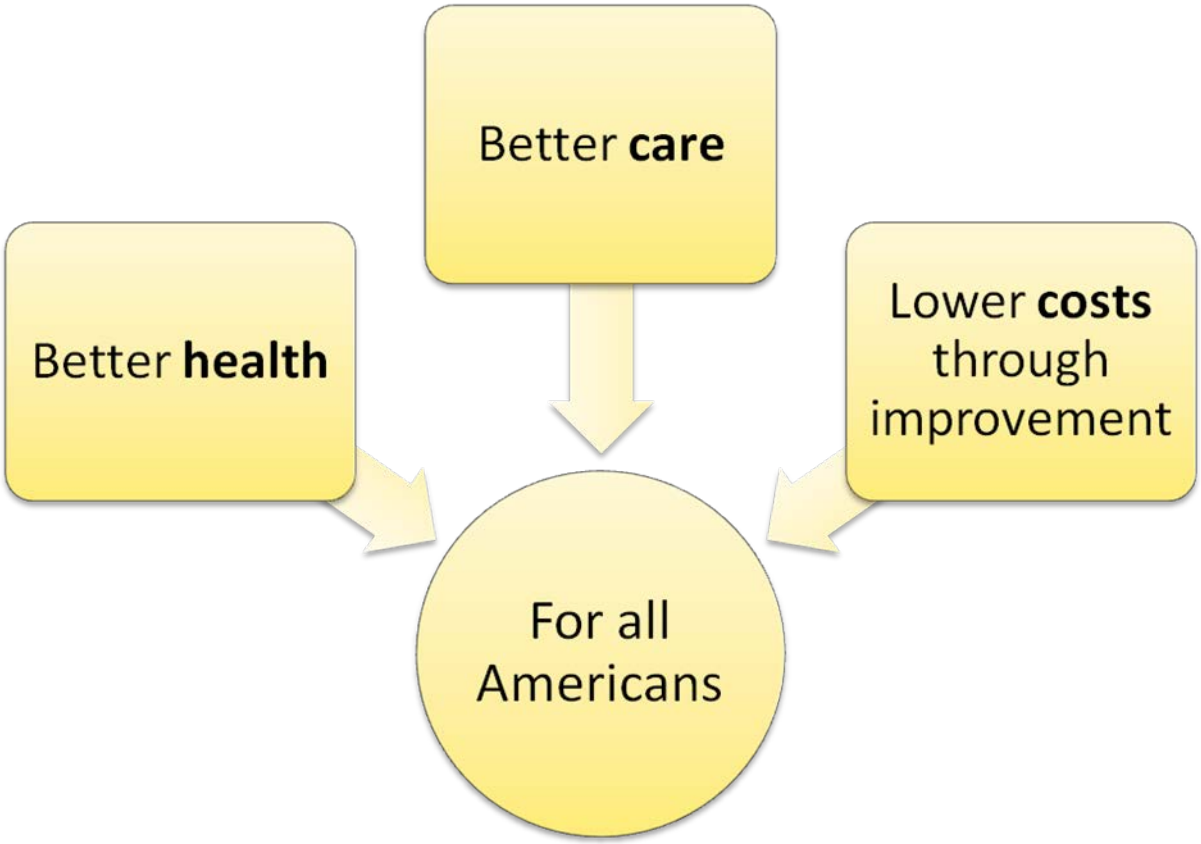
Our Goal:
The Three-Part Aim



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The Role of Bundled Payments in Achieving the Three Part Aim

- Improve the care for beneficiaries who are admitted to the hospital, both during and following the hospitalization
- Reduce the escalating costs including costs born by beneficiaries
- Eliminate waste by improving the coordination and continuity of care across providers and settings
- Provide a first step towards accountable care and an effective tool for established ACOs
- Create flexibility in payment arrangements that support the redesign of care and increase alignment across providers and settings

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The Case for Bundled Payments

- Large opportunity to reduce costs from waste and variation
- Gain sharing incentives align hospitals, physicians and PAC providers in the redesign of care that achieves savings and improves quality
- Improvements "spillover" to private payers
- Competencies learned in bundled payments lay the foundation for success in a value driven market
- Adoption of bundled payments is accelerating across both private and public payers
- Valuable synergies with ACOs, Value-Based Purchasing, PfP and other payment reform initiatives

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Bundled Payment Models

	Model 1	Model 2	Model 3	Model 4
Episode	All acute patients, all DRGs	Selected DRGs +post-acute period	Post acute only for selected DRGs	Selected DRGs
Services included in the bundle	All part A DRG-based payments	Part A and B services during the initial inpatient stay , post-acute period and readmissions	Part A and B services during the post-acute period and readmissions	All Part A and B services (hospital, physician) and readmissions
Payment	Retrospective	Retrospective	Retrospective	Prospective

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Rationale for BPCI Episode Parameters
BPCI Episodes Parameters:

- Allow flexibility for providers to select clinical conditions, time frames, and services with greatest opportunity for improvement
- Enable episodes that have sufficient numbers of beneficiaries to demonstrate meaningful results
- Assure enough simplicity to allow rapid analysis and implementation of episode definitions
- Achieve episodes with the appropriate balance of financial risk and opportunity
- Build on lessons from prior initiatives and CMS demonstrations

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MS-DRGs are the "Building Blocks" for Episodes in Models 2-4

- MS-DRGs represent an established, annually refined bundle of inpatient services and comprise a large portion of episode expenditures for most models
- Target prices or prospective payment amounts rely on historical MS-DRG payments as a significant component of bundles that include inpatient care
- Using MS-DRGs builds on widely accepted methodology for grouping clinical conditions for appropriate payment
- There is prior experience using MS-DRGs as the building blocks for episodes in CMS demonstrations and research

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What Triggers an Episode in BPCI?

- **Model 2:** Episode begins with an acute inpatient hospital admission for an included MS-DRG
- **Model 3**: Episode begins at initiation of SNF, IRF, HHA, or LTCH services within 30 days following discharge from an acute care inpatient hospital stay for an included MS-DRG
- **Model 4**: Episode begins with an acute care hospital admission for included MS-DRGs

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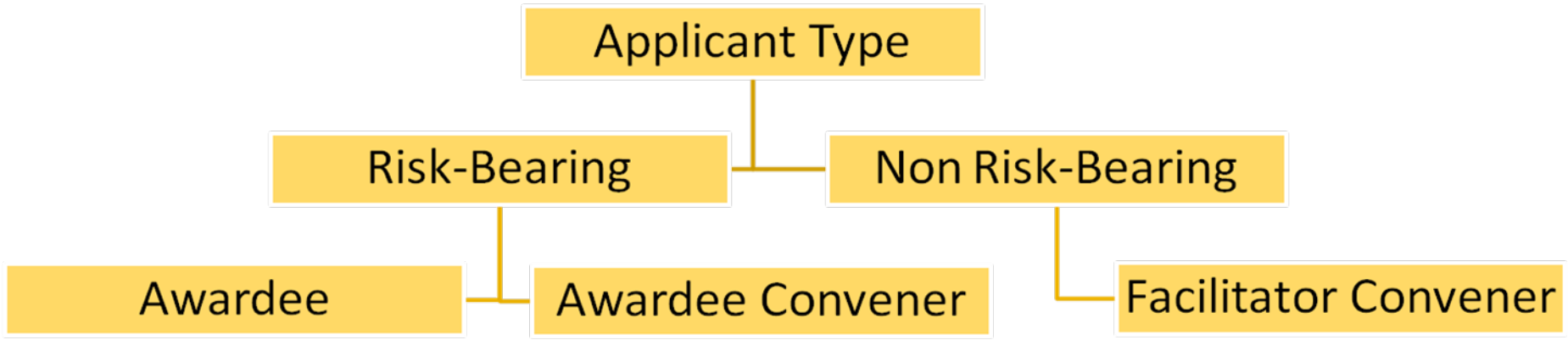
Applicant Roles

Applicants may apply for one of three roles:



- Must assume financial responsibility for its patients

- Must assume financial responsibility for its patients and its partners' patients

- Could serve in an administrative and technical assistance capacity for designated awardees
- Designated awardees assume financial responsibility

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What are the Timeframes for Episodes in BPCI?

- BPCI episodes must be constructed for a defined time period in contrast to some commercial episodes that may have a variable time length
  - Model 1 – the episode is the acute care hospitalization
  - Models 2,3 - applicants may propose a timeframe of 30 days or longer following hospital discharge or following episode initiation for Models 2 and 3, respectively. Applicants are encouraged to consider longer post-acute lengths to support care redesign throughout the transition back to the community
  - Model 4 – the episode is the acute care hospitalization and readmissions for 30 days post-discharge
- Claims for services that begin during the episode and extend beyond the end of the episode (e.g. home health services) may be either wholly included or prorated
  - Applicants may propose one of these two approaches

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What Services are Included or Excluded in a BPCI Episode ?

- Applicants must specify the services they propose for exclusion in terms of MS-DRGs for readmissions and ICD-9 diagnosis codes for other services
- Only services following hospital discharge are eligible for consideration for exclusion
- Proposed exclusions must be clinically relevant and material, and should be justified

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BPCI Episode Risk-adjustment

- In recognition of possible variation within MS-DRG defined episodes, applicants may propose risk-adjustment methodologies
- Methodologies must be replicable using Medicare claims data
- Useful methodologies will be accurate in explaining variation and have a sound clinical rationale

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Are IME, DSH, Capital Payments and Outlier Payments Included within a BPCI Episode?

- Discounts to MS-DRG payments under this initiative will not be applied to IME or DSH payments. IME and DSH payments are unaffected by BPCI
- IME, DSH, and capital payments will be removed in the calculation of target price
  - This will be done by CMS if applicants are unable to do so
- Outlier payments are included within the episode definition. Applicants should include outlier payments in their determination of the target price

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How Does BPCI Interact with Other Health Reform Initiatives?

- BPCI is not a Shared Savings (SS) program.
- By providing incentives for care redesign and collaboration, BPCI provides valuable synergies with other delivery system reform initiatives including ACOs, Partnership for Patients and Value-Based Purchasing
- Policies related to Readmissions, Hospital Acquired Conditions (HACs) and Value-Based Purchasing programs are unchanged and apply as appropriate to BPCI
- BPCI applications may be reviewed in light of participation in multiple programs to avoid counting savings twice in interacting programs and to assure a valid evaluation.

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How is the Final BPCI Episode Target Price Determined?

- A target price is determined for each year of the program by trending the baseline episode period (2009) forward 3 years to 2012 and thereafter for each year of the program, with application of the agreed upon discount
- IME and DSH are removed, along with other technical adjustments
- Episode definitions and discounts may be refined with potential awardees prior to initiation of the program

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What are the Chart Books?

- Two documents are available to support episode definition
  - **Analysis of Post-Acute Care Episode Definitions (November 2009 Chart Book) -** 5% sample of Medicare claims data from 2006
  - **Post-Acute Care Episodes Expanded Analytic File (June 2011 Chart Book) -** 30% sample of Medicare claims data from 2008
- Chart books were developed under a prior contract with RTI and funded by the HHS Assistant Secretary for Policy and Evaluation (ASPE)
- This research was designed to inform larger policy issues by examining a variety of episode definitions
- This research is being shared for informational purposes only and are available on the Learning Area of the Bundled Payment section of the Innovation Center Web site

HHS and CMS do not endorse specific episode definitions within these documents

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How do these Chart Books Relate to BPCI?

Chart Books:

- Demonstrate the distribution of Medicare payments for high volume MS-DRGs within major service categories
  - Allows providers to determine key areas to focus on care redesign
  - Provides a qualified national benchmark for several MS-DRGs
- Demonstrate areas where there is variation and potential opportunity to achieve savings
- Include some episode definitions that are not appropriate for BPCI
- Payment adjustments and exclusion criteria result in mean payments that do not correspond directly to applicant historical payments or BPCI episode prices
- Do not constitute an endorsement of specific MS-DRGs

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Overview of the Chart Books – Episode Definitions

- Both chart books include episodes initiated with an acute hospital inpatient stay which are relevant to BPCI
  - **June 2011 Chart Book** contains an additional analysis of community entrant post-acute care episodes not relevant to BPCI
- Acute hospital initiated episodes were defined by MS-DRGs , and standardized to remove the effects of payment policies including IME, DSH and geographic adjustments
- Various episode lengths were used including fixed and variable episode lengths
  - Only fixed time periods will be used in BPCI
- Episodes were constructed with and without prorating prospective payments which extend beyond the end of the episode

Overview of the Chart Books – Episode Definitions

- Episode payments are broken into service categories including inpatient hospital payments, inpatient physician payments, readmissions, home health, SNF, IRF, LTCH, and therapy services.

- The chart books include episode definitions which exclude acute hospital readmissions
  - In BPCI, readmissions will be included unless they are specifically excluded in the episode definition

Understanding High Volume Episodes

- Sections 1-4 of both chart books provide an overview of the amount of Medicare payment within each service category for the top 20 MS-DRGs by volume of discharges to PAC service

- **Model 2** includes all beneficiaries regardless of whether they are discharged to a PAC service. Mean payments per hospital discharge would be the most useful information.

- **Model 3** includes only beneficiaries who have been admitted to a PAC service, so the mean payments per user of PAC service would be the most useful information.
  - Hospital Outpatient Therapy cannot be used as an episode anchor for Model 3

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Understanding High Volume Episodes

Section 1-Table 5
Medicare Post-Acute Care Episode Payments and Utilization Per Discharge and Per PAC User, Top MS-DRGs By Volume, 2008
Acute Initiated Episodes
Episode Definition E: 30 Day Fixed Following Hospital Discharge (pro rated)

						Per Index Acute Hospital Discharge					Per PAC User				
MS-DRG	Number of Index Acute Hospital Discharges[1]	Number of PAC Users[2]	Percent of Beneficiaries Discharged to PAC (%)	Total Medicare Spending on PAC[3] ($)	Rank By Total PAC Spending	Mean Index Acute Hospital Payment Per Discharge ($)	Mean PAC Episode[4] Payment Per Discharge ($)	Mean Total Episode[5] Payment Per Discharge ($)	Total Medicare Spending (Acute + PAC) ($)	Rank By Total Medicare Spending	Mean Index Acute Hospital Payment Per PAC User ($)	Mean PAC Episode[4] Payment Per PAC User ($)	Mean Total Episode[5] Payment Per PAC User ($)	Total Medicare Spending (Acute + PAC) ($)	Rank By Total Medicare Spending
All MS-DRGs	1,705,794	659,549	39	4,989,135,506		8,531	3,845	12,377	8,162,999,259		10,572	7,564	18,136	11,961,872,243	
470: Major joint replacement or reattachment of lower extremity w/o MCC	95,971	90,434	94	559,053,777	1	11,079	5,893	16,972	1,534,852,275	1	11,120	6,182	17,302	1,564,693,439	1
065: Intracranial hemorrhage or cerebral infarction w CC	18,651	13,992	75	188,840,486	2	6,392	10,520	16,911	236,623,727	4	6,401	13,496	19,897	278,403,003	4
481: Hip & femur procedures except major joint w CC	14,368	13,704	95	165,087,649	3	10,295	11,567	21,861	299,587,854	3	10,296	12,047	22,342	306,178,751	3
194: Simple pneumonia & pleurisy w CC	35,980	13,064	36	81,458,328	8	5,347	3,112	8,459	110,506,550	15	5,471	6,235	11,706	152,929,070	10
690: Kidney & urinary tract infections w/o MCC	29,536	12,954	44	87,426,820	4	3,989	3,615	7,604	98,502,490	18	4,090	6,749	10,839	140,409,577	12
641: Nutritional & misc metabolic disorders w/o MCC	28,647	9,755	34	61,851,481	14	3,550	2,971	6,521	63,612,985	35	3,763	6,340	10,103	98,557,312	24
299: Peripheral vascular disorders w MCC	19,927	9,752	49	85,170,943	5	9,968	5,174	15,142	147,666,294	9	10,614	8,734	19,347	188,675,091	6
292: Heart failure & shock w CC	22,092	8,602	39	53,869,194	18	5,322	3,864	9,186	79,016,532	24	5,414	6,262	11,677	100,444,470	23
291: Heart failure & shock w MCC	19,401	8,561	44	64,168,141	11	7,199	4,819	12,017	102,881,485	16	7,307	7,495	14,803	126,724,874	14
552: Medical back problems w/o MCC	14,067	8,113	58	62,996,986	13	3,931	5,443	9,374	76,049,834	25	3,990	7,765	11,755	95,368,636	25
066: Intracranial hemorrhage or cerebral infarction w/o CC/MCC	13,854	7,965	57	72,160,098	10	5,152	5,783	10,935	87,097,548	22	5,210	9,060	14,270	113,658,438	18
312: Syncope & collapse	29,247	7,926	27	42,710,506	26	3,610	2,145	5,756	45,620,655	51	3,796	5,389	9,185	72,800,313	40
603: Cellulitis w/o MCC	20,521	7,590	37	40,566,111	27	4,186	2,578	6,765	51,342,802	46	4,304	5,345	9,649	73,234,795	37
482: Hip & femur procedures except major joint w/o CC/MCC	7,814	7,216	92	82,597,971	6	8,618	10,683	19,301	139,277,134	10	8,633	11,447	20,079	144,893,323	11
683: Renal failure w CC	16,395	6,765	41	50,899,078	21	6,437	4,247	10,684	72,278,328	28	6,464	7,524	13,988	94,626,502	26
392: Esophagitis, gastroent & misc digest disorders w/o MCC	42,290	6,683	16	32,078,961	37	3,409	1,715	5,125	34,248,175	67	3,703	4,800	8,503	56,824,887	51
460: Spinal fusion except cervical w/o MCC	13,223	6,649	50	46,772,728	23	21,360	3,957	25,317	168,331,008	7	21,955	7,035	28,990	192,752,801	5
193: Simple pneumonia & pleurisy w MCC	14,544	6,507	45	48,664,017	22	7,058	4,440	11,498	74,816,718	26	7,060	7,479	14,539	94,605,405	27
195: Simple pneumonia & pleurisy w/o CC/MCC	23,012	6,410	28	34,790,398	33	4,142	2,184	6,326	40,550,600	58	4,372	5,428	9,799	62,813,500	45
190: Chronic obstructive pulmonary disease w MCC	19,088	6,320	33	40,422,458	28	6,075	3,233	9,308	58,827,236	40	6,242	6,396	12,638	79,870,487	29

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Understanding High Volume Episodes

(Episodes = Acute inpatient stay plus 30 days post-discharge)

MS-DRG	Percent PAC users *	Mean total episode payment per discharge	Mean PAC payment per discharge	Mean PAC payment per PAC user
470: Major joint replacement or reattachment of lower extremity w/o MCC	94	$16,972	$5,893	$6,182
065: Intracranial hemorrhage or cerebral infarction w/CC	75	$16,911	$10,520	$13,496
194: Simple pneumonia & pleurisy w/CC	36	$8,459	$3,112	$6,235
292: Heart failure & shock w/CC	39	$9,186	$3,864	$6,262

*PAC User includes Home Health, SNF, IRF, LTCH, Hospital Outpatient Therapy. Does not include readmissions.

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Understanding High Volume Episodes

Section 4 - Table 3

Medicare Post-Acute Care Episode Payments and Utilization By Service Type, Per Service User, Per PAC User, and Per Hospital Discharge, 2006, Top 20 MS-DRGs by Volume of Discharges to PAC
Episode Definition C: 30 Day Fixed Following Hospital Discharge (pro rated)

			Index Acute Hospital[1]			Home Health			IRF			SNF			LTCH			Hospital Outpatient Therapy			Acute Hospital Readmissions		
MS-DRG	Descriptor	Number of PAC Users	Mean Payment Per Service User	Mean Payment Per PAC User	Mean Payment Per Hospital Discharge	Mean Payment Per Service User	Mean Payment Per PAC User	Mean Payment Per Hospital Discharge	Mean Payment Per Service User	Mean Payment Per PAC User	Mean Payment Per Hospital Discharge	Mean Payment Per Service User	Mean Payment Per PAC User	Mean Payment Per Hospital Discharge	Mean Payment Per Service User	Mean Payment Per PAC User	Mean Payment Per Hospital Discharge	Mean Payment Per Service User	Mean Payment Per PAC User	Mean Payment Per Hospital Discharge	Mean Payment Per Service User	Mean Payment Per PAC User	Mean Payment Per Hospital Discharge
	All MS-DRGs	109,236	$10,297	$10,297	$8,287	$1,801	$956	$352	$14,839	$1,615	$589	$6,499	$2,900	$1,057	$27,541	$634	$231	$462	$70	$28	$9,043	$1,402	$1,328
470	Major joint replacement or reattachment of lower extremity w/o MCC	14,447	$10,463	$10,463	$10,434	$2,481	$1,630	$1,445	$11,525	$2,231	$1,965	$5,871	$2,274	$2,006	$15,610	$49	$46	$398	$101	$91	$8,924	$550	$557
194	Simple pneumonia & pleurisy w CC	2,661	$5,107	$5,107	$5,028	$1,605	$773	$280	$15,066	$345	$126	$6,060	$3,026	$1,081	$22,191	$309	$122	$372	$57	$22	$7,696	$1,296	$1,179
65	Intracranial hemorrhage or cerebral infarction w CC	2,311	$6,307	$6,307	$6,291	$1,962	$675	$483	$19,242	$7,793	$5,468	$6,871	$3,297	$2,320	$23,554	$438	$304	$478	$75	$54	$7,899	$1,094	$1,084
481	Hip & femur procedures except major joint w CC	2,135	$9,698	$9,698	$9,739	$1,758	$561	$519	$15,243	$3,927	$3,506	$7,994	$5,733	$5,168	$24,715	$255	$227	$428	$29	$27	$7,815	$1,054	$1,081
690	Kidney & urinary tract infections w/o MCC	2,125	$4,025	$4,025	$3,896	$1,683	$596	$253	$16,703	$346	$145	$6,651	$4,222	$1,705	$16,473	$109	$44	$552	$73	$31	$7,462	$1,176	$1,064
66	Intracranial hemorrhage or cerebral infarction w/o CC/MCC	1,760	$5,985	$5,985	$6,044	$2,066	$951	$558	$17,804	$5,584	$3,213	$6,629	$2,380	$1,377	$23,926	$272	$187	$468	$105	$63	$8,469	$1,025	$957
641	Nutritional & misc metabolic disorders w/o MCC	1,647	$3,700	$3,700	$3,457	$1,650	$714	$253	$12,690	$408	$170	$6,925	$3,830	$1,339	$19,534	$107	$38	$470	$64	$24	$8,333	$1,320	$1,192
292	Heart failure & shock w CC	1,622	$5,299	$5,299	$5,179	$1,534	$898	$352	$14,756	$264	$122	$6,220	$2,784	$1,084	$20,597	$203	$95	$375	$39	$18	$8,014	$1,719	$1,930
871	Septicemia w/o MV 96+ hours w MCC	1,556	$9,475	$9,475	$9,217	$1,625	$534	$291	$15,460	$537	$289	$6,256	$3,892	$2,043	$23,589	$1,092	$585	$646	$88	$47	$9,970	$1,916	$1,748
482	Hip & femur procedures except major joint w/o CC/MCC	1,526	$8,304	$8,304	$8,288	$1,904	$747	$670	$14,862	$4,344	$3,792	$7,885	$5,069	$4,459	$21,842	$157	$137	$406	$37	$33	$8,008	$918	$955
195	Simple pneumonia & pleurisy w/o CC/MCC	1,510	$4,512	$4,512	$4,368	$1,627	$791	$240	$13,390	$160	$61	$6,039	$2,824	$857	$17,687	$70	$29	$394	$71	$22	$6,927	$885	$827
552	Medical back problems w/o MCC	1,433	$3,827	$3,827	$3,795	$1,772	$872	$476	$14,298	$1,537	$848	$6,860	$3,715	$1,971	$14,966	$63	$47	$510	$76	$46	$8,404	$1,361	$1,443
603	Cellulitis w/o MCC	1,277	$3,905	$3,905	$3,759	$1,594	$931	$324	$13,318	$198	$79	$6,121	$2,368	$838	$19,441	$365	$137	$384	$63	$25	$7,710	$1,026	$815
291	Heart failure & shock w MCC	1,252	$5,884	$5,884	$5,621	$1,594	$833	$372	$15,482	$618	$283	$6,294	$3,062	$1,349	$30,126	$674	$305	$633	$71	$32	$9,475	$2,414	$2,417
312	Syncope & collapse	1,245	$3,595	$3,595	$3,352	$1,766	$1,032	$259	$14,232	$640	$170	$7,219	$2,841	$717	$18,753	$75	$18	$430	$67	$19	$7,607	$837	$800
392	Esophagitis, gastroent & misc digest disorders w/o MCC	1,232	$3,849	$3,849	$3,498	$1,585	$827	$127	$14,048	$365	$65	$6,565	$2,632	$394	$17,091	$55	$13	$355	$65	$11	$7,973	$1,139	$917
293	Heart failure & shock w/o CC/MCC	1,215	$4,987	$4,987	$4,978	$1,472	$982	$286	$12,304	$101	$37	$6,378	$2,084	$624	$17,801	$132	$40	$388	$45	$15	$8,986	$1,686	$1,824
192	Chronic obstructive pulmonary disease w/o CC/MCC	1,098	$4,288	$4,288	$4,134	$1,450	$942	$207	$14,703	$295	$74	$5,478	$1,566	$359	$22,782	$415	$98	$305	$49	$15	$7,320	$1,173	$1,132
683	Renal failure w CC	1,082	$6,590	$6,590	$6,649	$1,561	$648	$268	$14,243	$369	$145	$6,526	$3,716	$1,475	$23,322	$302	$123	$828	$115	$47	$8,100	$1,625	$1,587
536	Fractures of hip & pelvis w/o MCC	924	$3,416	$3,416	$3,422	$1,710	$681	$600	$13,947	$2,219	$1,909	$7,605	$5,333	$4,569	$19,673	$85	$72	$668	$63	$54	$9,474	$1,261	$1,249

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MS-DRG 65: Intracranial hemorrhage or cerebral infarction w CC

Model 2 (mean payment per hospital discharge)

Service	Payment
Index hospitalization	$6,291
HHA	$483
SNF	$2,320
IRF	$5,468
LTCH	$304
Hospital Outpatient	$54
Readmissions	$1,084

Model 3 (mean payment per service user)

Service	Payment
HHA	$1,962
SNF	$6,871
IRF	$19,242
LTCH	$23,554
Readmissions	$7,899

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Understanding Geographic Variability

- Sections 5-6 of the **November 2009 Chart Book** and Sections 6-7 of the **June 2011 Chart Book** provide an overview of the variation in post-acute payments by state and core based statistical areas (CBSA) for all MS DRGs
- Sections 5-6 of the **November 2009 Chart Book** show the variation in post-acute payments for MS-DRG 470: Major joint replacement or reattachment of lower extremity w/o MCC and MS-DRG 194: Simple pneumonia & pleurisy w/CC
- Sections 7-8 of the **November 2009 Chart Book** show mean payments within service categories for 10 states and 10 CBSAs for the different episode definitions

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Section 5 - Table 15
Standardized Post-Acute Care Payments, By State
MS-DRG 470: Major joint replacement or reattachment of lower extremity w/o MCC
Episode Definition I: 90 Day Fixed: Any Claim Starting Within 90 Days After Hospital Discharge

State	Based on Location of Index Provider								Based on Beneficiary Residence							
	Number of PAC Users[1]	Percent of Beneficiaries Discharged to PAC (%)	Mean PAC Payment Per Index Acute Hospital Discharge[2] ($)	CV[3]	Mean PAC Payment Per PAC User ($)	CV[3]	Mean PAC LOS Per PAC User[4] (days)	CV[3]	Number of PAC Users[1]	Percent of Beneficiaries Discharged to PAC (%)	Mean PAC Payment Per Index Acute Hospital Discharge[2] ($)	CV[3]	Mean PAC Payment Per PAC User ($)	CV[3]	Mean PAC LOS Per PAC User (days)	CV[3]
Alabama	263	82.4	5,982	121.1	6,946	107.3	53.5	60.2	270	83.3	6,167	119.2	7,132	105.7	53.0	61.0
Alaska	14	70.0	2,922	150.5	4,174	114.0	34.4	50.5	17	73.9	3,373	129.9	4,564	99.5	34.2	51.2
Arizona	234	84.2	7,827	190.2	8,790	177.0	40.1	74.5	216	82.8	7,284	199.7	8,216	186.2	39.5	76.0
Arkansas	192	88.5	7,971	99.1	9,002	86.9	45.1	65.9	198	89.6	7,965	99.6	8,759	89.4	44.7	65.7
California	884	74.1	5,735	132.2	6,723	118.8	41.8	72.0	872	74.0	5,756	132.9	6,761	119.3	41.9	72.1
Colorado	195	85.5	5,254	111.8	6,030	98.9	45.2	70.8	194	85.8	5,464	111.6	6,300	98.0	46.3	69.0
Connecticut	201	97.1	6,826	112.7	6,978	111.0	53.2	58.4	203	97.1	7,051	112.0	7,209	110.3	53.3	58.5
Delaware	62	96.9	7,560	135.9	7,804	132.6	39.5	72.3	66	95.7	7,325	137.5	7,654	132.9	39.0	71.7
District of Columbia	12	92.3	7,726	88.7	8,370	80.5	32.1	91.4	20	95.2	8,045	74.1	8,447	68.8	41.1	71.8
Florida	1,049	95.9	7,889	112.5	8,165	109.1	50.0	58.6	1,020	95.8	7,679	114.4	7,954	111.0	49.9	58.6
Georgia	420	90.7	6,897	122.9	7,462	115.2	46.8	62.5	411	90.5	6,684	121.1	7,239	113.2	46.7	61.3
Hawaii	21	72.4	4,540	134.8	5,808	111.9	41.0	60.5	21	72.4	4,799	134.6	6,166	111.4	43.5	63.6
Idaho	91	77.1	5,432	115.4	6,592	96.6	49.5	62.6	89	78.8	5,237	118.0	6,188	101.9	48.6	63.2
Illinois	704	92.1	7,372	109.6	7,916	103.0	51.1	60.8	730	91.9	7,348	106.6	7,866	100.3	51.2	60.1
Indiana	380	82.8	6,953	146.3	8,304	128.4	51.9	62.4	378	83.4	7,152	151.1	8,467	134.1	51.9	62.5
Iowa	234	78.0	4,148	194.0	4,742	183.5	45.6	74.2	243	76.9	4,022	202.0	4,644	190.9	45.2	74.7
Kansas	177	78.3	5,999	134.2	7,196	117.9	46.1	58.5	169	78.6	5,998	133.0	7,144	117.6	47.1	58.4
Kentucky	256	92.4	8,422	108.2	9,112	100.3	50.1	62.6	260	90.6	8,089	111.3	8,927	101.4	50.1	62.2
Louisiana	196	92.9	9,919	109.4	10,259	99.3	50.9	60.0	190	91.3	9,487	108.0	10,308	100.3	51.6	60.0
Maine	110	96.5	7,223	102.2	7,412	100.1	54.3	58.7	114	95.8	7,169	101.4	7,412	98.5	54.0	59.5
Maryland	248	91.2	5,265	97.9	5,742	89.3	42.5	71.5	241	92.3	5,313	93.4	5,722	86.1	42.3	70.9
Massachusetts	377	99.5	9,178	91.0	9,227	90.5	60.3	51.7	371	99.5	9,117	90.6	9,166	90.1	60.0	52.7
Michigan	684	89.2	6,643	135.4	7,248	125.7	52.7	55.9	702	88.6	6,573	135.6	7,220	125.2	52.4	56.5
Minnesota	288	80.4	4,003	151.1	4,797	132.7	44.2	69.0	285	81.9	4,022	146.5	4,782	128.4	43.5	68.8
Mississippi	143	91.1	7,731	122.4	8,371	115.4	55.1	63.5	151	88.3	7,809	132.4	8,285	115.0	55.3	61.9
Missouri	380	94.1	7,038	97.7	7,238	94.6	47.4	64.5	387	93.3	6,971	99.6	7,283	95.3	47.1	64.5
Montana	56	66.7	3,139	133.7	3,916	107.3	41.6	76.8	55	64.7	3,080	137.8	3,952	108.9	45.2	71.0
Nebraska	156	80.0	3,641	159.4	4,298	143.8	41.9	59.7	149	80.5	3,790	154.8	4,445	139.9	42.3	58.5
Nevada	81	88.0	11,542	180.8	12,917	169.2	43.0	76.5	86	87.8	10,585	193.3	11,993	179.0	44.4	73.1
New Hampshire	90	97.8	6,680	95.7	6,479	96.4	50.8	60.2	96	98.0	7,091	107.6	6,912	109.3	49.6	59.0
New Jersey	377	97.9	9,988	82.5	9,970	81.6	53.1	59.4	378	97.2	9,856	83.3	9,913	81.7	53.2	59.8
New Mexico	77	92.8	7,811	100.5	8,341	94.5	53.6	56.8	80	88.9	7,268	107.4	8,040	98.4	51.8	58.7
New York	625	93.8	9,297	121.6	9,675	115.9	51.8	76.7	626	93.9	9,412	121.2	9,797	115.5	52.0	76.4
North Carolina	567	96.4	6,887	96.1	7,103	93.0	48.4	64.1	556	96.0	7,102	95.4	7,356	92.0	49.2	63.9
North Dakota	55	73.3	5,140	131.3	6,915	102.3	48.9	55.1	49	75.4	5,709	118.9	7,470	93.0	49.3	59.7
Ohio	679	87.7	7,725	166.8	8,603	155.7	54.6	57.0	671	88.4	7,827	166.3	8,649	156.1	54.3	58.1
Oklahoma	202	87.1	7,566	91.4	8,424	78.1	43.5	70.6	208	86.3	7,555	93.7	8,496	79.6	44.0	70.5
Oregon	122	76.7	3,932	139.1	5,037	114.7	45.0	72.5	133	76.9	4,233	133.3	5,387	110.0	44.1	73.2
Pennsylvania	625	93.3	8,986	110.7	9,579	104.6	50.8	59.9	632	93.5	8,981	110.2	9,546	104.5	50.4	59.9
Rhode Island	31	100.0	7,570	72.3	7,570	72.3	49.0	61.4	34	100.0	7,865	69.4	7,865	69.4	49.8	61.2
South Carolina	280	95.6	7,985	116.3	8,330	112.3	46.8	64.5	293	96.1	8,377	115.4	8,695	111.9	47.5	65.7
South Dakota	83	69.2	3,743	219.4	4,927	191.1	44.9	65.9	75	71.4	4,107	206.8	5,217	183.8	44.4	68.1
Tennessee	293	88.0	7,875	114.4	8,887	102.7	54.6	58.3	286	89.7	8,019	114.1	8,880	104.3	55.3	57.2
Texas	869	82.6	8,696	107.1	9,630	92.5	55.5	57.9	855	83.1	8,818	105.5	9,716	91.5	55.5	57.9
Utah	128	93.4	6,733	111.6	7,147	106.0	47.2	66.6	126	94.7	6,839	110.8	7,159	106.7	47.3	67.0
Vermont	44	89.8	5,582	87.6	5,736	77.6	53.5	58.0	43	89.6	5,945	83.5	6,145	73.4	55.1	57.4
Virginia	411	94.1	7,222	119.9	7,466	111.3	48.9	58.9	408	93.4	6,945	122.5	7,224	112.9	48.4	59.0
Washington	298	80.8	4,845	127.2	5,701	108.8	40.8	72.2	298	80.8	4,780	128.2	5,611	110.0	40.8	70.7
West Virginia	110	80.3	8,215	137.4	10,131	116.7	45.7	66.4	115	78.2	7,832	141.2	9,914	117.6	45.1	64.1
Wisconsin	326	74.9	3,843	152.8	4,820	129.3	47.0	58.5	326	74.3	4,015	152.2	5,093	127.9	47.2	57.9
Wyoming	33	75.0	5,086	126.5	6,494	104.4	48.2	72.6	37	77.1	4,767	136.2	6,116	111.8	44.7	77.7

MS-DRG 470: Major joint replacement or reattachment of lower extremity w/o MCC

(Episodes = Acute inpatient stay plus 90 days post-discharge)

State	Mean PAC payment per discharge	CV	Mean PAC payment per PAC user	CV	Mean PAC LOS per PAC user	CV
Alabama	$5,982	121.1	$6,946	107.3	53.5	60.2
Alaska	$2,922	150.5	$4,174	114.0	34.4	50.5
Arizona	$7,827	190.2	$8,790	177.0	40.1	74.5
Arkansas	$7,971	99.1	$9,002	86.9	45.1	65.9
California	$5,735	132.2	$6,723	118.8	41.8	72.0

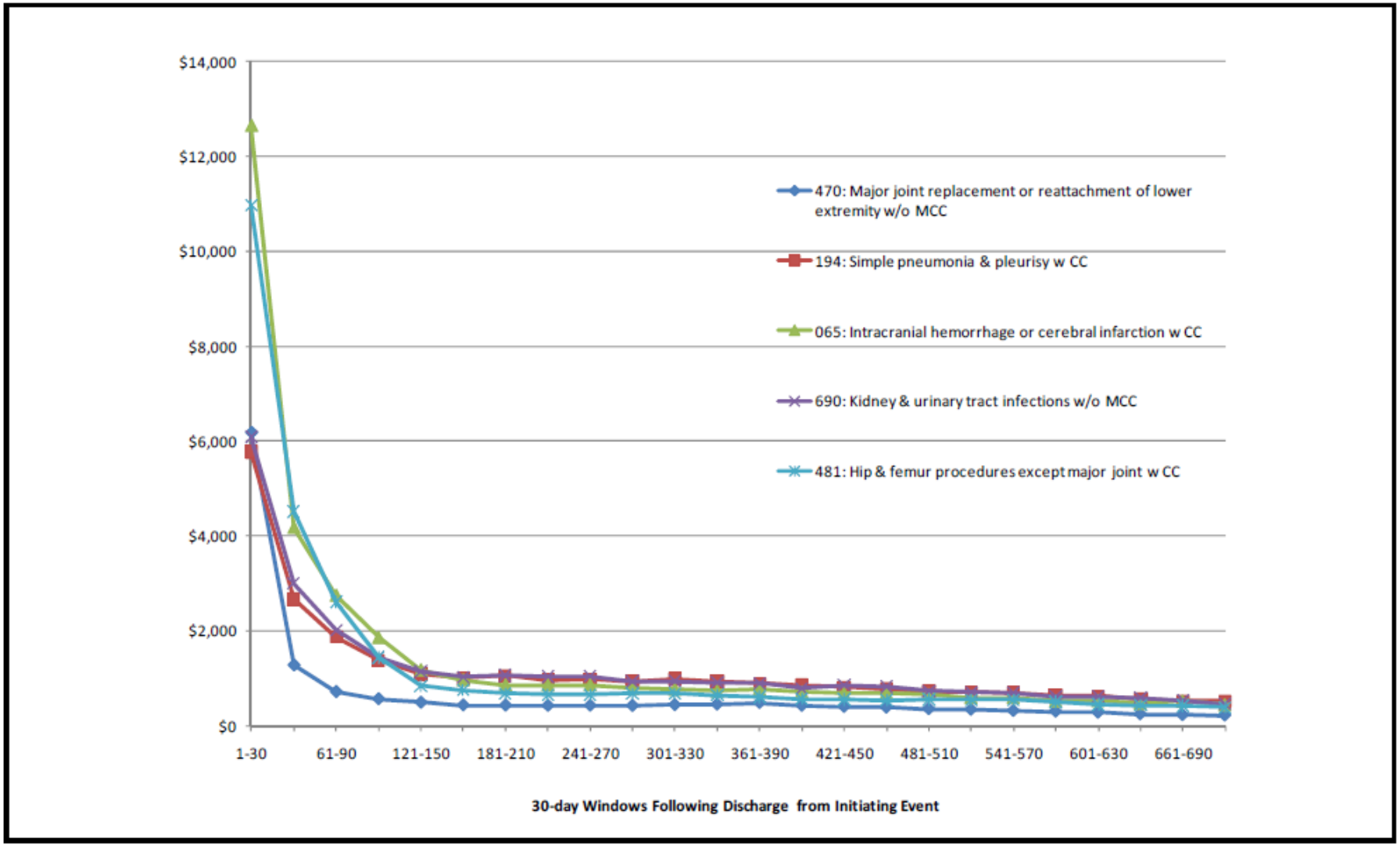
Coefficient of variation (CV) = Standard deviation / mean x 100

Center for Medicare & Medicaid INNOVATION

Understanding Patterns of Expenditures Over Time

- Section 7 of the Appendix in the **June 2011 Chart Book** provides various longitudinal analyses of expenditures following an inpatient discharge

Figure 9. Mean Acute and PAC Payments Per PAC User Following Discharge From an Acute Initiating Event, by MS-DRG



Note: All initiating events occurred in 2006. Twenty-four 30-day windows were constructed following discharge from the initiating event to follow service use for 2 years.

Source: RTI analysis of 2006, 2007, and 2008 Medicare claims (M3MM181).

Conclusion

- The Innovation Center looks forward to receiving your applications and testing your episode approaches

- The Innovation Center will offer ongoing Learning Activities to support the success of applicants as you prepare submissions and throughout the implementation process.

Questions and Answers

Please submit your questions via the chat function

Upcoming Dates

- Additional information about improvements to the application process will be available on the website, http://innovations.cms.gov/areas-of-focus/patient-care-models/bundled-payments-for-care-improvement.html
- Applications are due for Models 2-4 on April 30, 2012
- Data for those who submitted data use applications will be available approximately two months prior to the revised submission date
- Stay tuned to the website for information about upcoming seminars
- For further questions, please email BundledPayments@cms.hhs.gov

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