ALLEGHENY COUNTY HOSPITAL DEVELOPMENT AUTHORITY

AND

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.

as Trustee

FIRST SUPPLEMENTAL TRUST INDENTURE dated as of December 1, 2011

Amending the Trust Indenture dated as of March 1, 2010

Securing

Allegheny County Hospital Development Authority University of Pittsburgh Medical Center Revenue Bonds Series 2010C

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FIRST SUPPLEMENTAL TRUST INDENTURE

This FIRST SUPPLEMENTAL TRUST INDENTURE (this "First Supplemental Indenture"), dated as of December 1, 2011, between the ALLEGHENY COUNTY HOSPITAL DEVELOPMENT AUTHORITY (the "Issuer"), a body politic and corporate existing under the laws of the Commonwealth of Pennsylvania, and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as trustee under the Original Indenture (as defined hereinafter) (the "Trustee").

WITNESSETH:

WHEREAS, the Issuer and the Trustee have previously executed and delivered the Trust Indenture dated as of March 1, 2010 (the "Original Indenture") pursuant to which the Issuer issued a series of bonds designated "Allegheny County Hospital Development Authority University of Pittsburgh Medical Center Revenue Bonds, Series 2010C" in the original principal amount of \$50,000,000 (the "Bonds"), for the benefit of UPMC, a Pennsylvania nonprofit corporation (the "Corporation"); and

WHEREAS, as of the date of this First Supplemental Trust Indenture, RBC Capital Markets, LLC (the "Bondholder") is the Owner of all of the Outstanding Bonds; and

WHEREAS, Section 902 of the Original Indenture authorizes amendments to the Original Indenture by a supplemental indenture, with the written consent of the Issuer and the Owners of all Outstanding Bonds affected by such amendments; and

WHEREAS, the Corporation and the Bondholder have agreed to certain amendments to the terms of the Bonds and the Original Indenture for the purpose of, <u>inter alia</u>, (a) providing for the conversion of the Interest Mode (as defined in the Original Indenture) for the Bonds to an Index Rate Mode (as defined in the Original Indenture) on December 1, 2011 and (b) setting forth the index, spread, redemption provisions and other terms required by Section 205 of the Original Indenture; and

WHEREAS, the Corporation and the Bondholder have requested that the Trustee participate in the amendment of the Original Indenture by virtue of this First Supplemental Indenture, in accordance with Article IX of the Original Indenture.

NOW, THEREFORE, THIS FIRST SUPPLEMENTAL TRUST INDENTURE FURTHER WITNESSETH, that the Issuer hereby agrees and covenants with the Trustee for the equal and ratable benefit of the respective owners, from time to time, of the Bonds, or any part thereof, to amend the Original Indenture as follows:

Section 1. Definitions.

- (a) Capitalized terms used in this First Supplemental Indenture but not otherwise defined herein have the meanings ascribed thereto in the Original Indenture.
- (b) From and after the Amendment Date, the following new definitions shall be added to the Original Indenture:

"Alternate Index" means, on any Index Rate Determination Date,: (i) if One Month LIBOR is less than 1.00%, one hundred percent (100%) of One Month LIBOR, and (ii) if One Month LIBOR is equal to or more than 1.00%, seventy-two percent (72%) of One Month LIBOR.

"Amendment Date" means December 1, 2011.

"Applicable Spread" means the Applicable Spread specified in the chart below which corresponds to the lowest rating assigned by Moody's, S&P or Fitch to the Bonds or to any indebtedness of the Corporation which ranks on parity with the Bonds, without regard to third-party credit enhancement:

Moody's	S&P	<u>Fitch</u>	Applicable Spread
A1 or higher	A+ or higher	A+ or higher	60 bps
A2	Α	Α	80 bps
A3	A-	A-	100 bps
Baal or below	BBB+ or below	BBB+ or below	Maximum Rate less the SIFMA Municipal Index

"Bondholder Agreement" means the Bondholder Agreement dated December 1, 2011 between the Corporation and RBCCM LLC, as the initial Index Rate Bondholder, as amended from time to time.

"Bondholder Agreement Demand" means a written notice from the Index Rate Bondholder to the Trustee, stating that a Bondholder Agreement Event of Default has occurred and directing the Trustee to take one or both of the following actions: (i) increase the interest rate on the Bonds to the Maximum Rate; and/or (ii) declare all Outstanding principal of the Bonds to be due and payable on the date specified in such notice.

"Bondholder Agreement Event of Default" has the meaning ascribed to such term in the Bondholder Agreement.

"One Month LIBOR" means the one-month London Interbank Offered Rate quoted at approximately 11:00 a.m. London time as quoted by the British Bankers' Association as set forth on Bloomberg BBAM Page 3750 (or such other page as may replace Bloomberg BBAM Page 3750 or such other service or services generally available that displays or publishes the London interbank offered rates for United States dollar deposits), on the second London business day before the relevant interest period begins (or, if not so reported, then as determined by the Index Rate Bondholder). Such interest based on One Month LIBOR shall be computed on an actual days per month/360-day year basis.

"Special Mandatory Tender Date" means December 1, 2016.

(c) From and after the Amendment Date, the following terms in the Original Indenture are hereby amended and shall hereafter have the following meanings:

"Calculation Agent" means the Trustee or such other party designated by the Index Rate Bondholder and the Corporation to calculate the Index Rate from time to time.

"Indenture" means the Original Indenture, as amended and supplemented by this First Supplemental Indenture.

"Index Rate" means the Variable Rate of interest applicable to the Bonds as determined in accordance with Section 204(D) and Section 205 of this Indenture.

"Index Rate Bondholder" means RBCCM LLC and any subsequent Bondholder (including without limitation any affiliate of RBCCM LLC and any trust or partnership established by RBCCM LLC or any such affiliate) acquiring the Bonds while the Bonds are in the Index Rate Mode.

"Index Rate Determination Date" means (a) the last Business Day before the effective date of a change to the Index Rate, and (b) each Wednesday (or, if any Wednesday is not a Business Day, the next succeeding Business Day) thereafter, so long as the Bonds continue to bear interest at the Index Rate.

"Index Rate Mode" means the manner of determining the Index Rate with respect to any Bond, as set forth in Section 204(D) and Section 205 of this Indenture.

"Index Rate Period" means, with respect to each Bond that bears interest at an Index Rate, the period from and including the effective date of any change to the Index Rate to and including the following Wednesday and thereafter, each period from and including each Thursday to and including the earlier of the Wednesday of the following week or the day on which the Bonds cease to bear interest at the Index Rate.

"Interest Accrual Date" means: (a) with respect to any Bond which bears interest at a Daily Rate, Weekly Rate or Monthly Rate, (1) the effective date of the change to the Daily Rate Mode, the Weekly Rate Mode or the Monthly Rate Mode, as appropriate, and (2) the first Business Day of each calendar month thereafter; (b) with respect to any Bond which bears interest at a Semiannual Rate, an Annual Rate, a Fixed Rate or a Term Rate, (1) the effective date of the change to the Semiannual Rate Mode, the Annual Rate Mode, the Fixed Rate Mode or the Term Rate Mode, as appropriate, and (2) the fifteenth day of each May and November following such effective date; and (c) with respect to any Bond which bears interest at an Index Rate, (1) the effective date of the change to the Index Rate, and (2) the first Business Day of each calendar month thereafter.

"Interest Payment Date" means: (a) with respect to Variable Rate Bonds bearing interest at a Daily Rate, a Weekly Rate or a Monthly Rate, the first Business Day of the calendar month next succeeding the end of the Bond Interest Period to which such Interest Payment Date relates; (b) with respect to Fixed Rate Bonds and Variable Rate Bonds bearing interest at a Semiannual, Annual or Term Rate, May 15 and November 15 of each year; and (c) with respect to Variable Rate Bonds bearing interest at an Index Rate, January 3, 2012 and thereafter the first Business Day of the calendar month next succeeding the end of the Bond Interest Period to which such Interest Payment Date relates.

"Maximum Rate" means the lesser of (i) 15% per annum and (ii) the maximum rate permitted by law.

"RBCCM LLC" means RBC Capital Markets, LLC.

"Regular Record Date" means: (a) with respect to any Bond that bears interest at an Index Rate, a Daily Rate, a Weekly Rate, a Monthly Rate, or the Purchased Bond Rate, the opening of Business on the Business Day prior to each Interest Payment Date with respect

thereto; (b) with respect to any Bond that bears interest at a Semiannual Rate, Annual Rate, Term Rate or Fixed Rate, the first calendar day of the month (whether or not a Business Day) on which each Interest Payment Date occurs with respect thereto; and (d) with respect to each Redemption Date, the Business Day preceding the mailing of the applicable redemption notice for such Redemption Date.

"SIFMA Municipal Index" means the SIFMA Municipal Swap Index as of the most recent date for which such index was published or such other weekly, high-grade index comprised of seven-day, tax-exempt variable rate demand notes produced by Municipal Market Data, Inc., or its successor, or otherwise designated by the Securities Industry and Financial Markets Association; provided, that if such index is no longer produced by Municipal Market Data, Inc., or its successors, then "SIFMA Municipal Index" shall mean the Alternate Index.

Section 2. Amendments to Sections 202. Section 202.A(ii) of the Original Indenture is hereby amended to provide that the Bonds shall bear interest at the Index Rate on and after the Amendment Date (until redeemed or converted to another Interest Mode in accordance with the terms of the Indenture). Accordingly, subparagraph (ii) of Section 202.A is hereby amended by adding, immediately following the final sentence thereof, the following additional sentence:

"On and after the Amendment Date, the Bonds shall bear interest at the Index Rate in the Index Rate Mode until such time as they are either converted to another Interest Mode or redeemed (or mature) in accordance with the terms hereof."

- Section 3. Amendments to Section 204. Section 204 of the Original Indenture is hereby amended as follows:
- (a) Subsection A of Section 204 is hereby amended by replacing the second sentence of subsection A with the following sentence:

"Index Rate Bonds shall operate as described in Section 204.D and Section 205."

- (b) Section 204 is hereby amended by the addition of the following new subsection D, which shall govern the interest rate on the Bonds while any Bonds are in an Index Rate Mode.
 - "D. <u>Index Rate Mode</u>. On the last Business Day before the effective date of a change to the Index Rate Mode and on each Index Rate Determination Date thereafter, the Calculation Agent shall certify in writing to the Trustee, the Owners and the Corporation by Electronic Means the interest rate for any Bonds in the Index Rate Mode, which rate shall be equal to the SIFMA Municipal Index plus the Applicable Spread in effect for such Index Rate Period; *provided, however*, that:
 - (i) Upon delivery by the Index Rate Bondholder to the Trustee of a Bondholder Agreement Demand which directs the Trustee to increase the interest rate on the Bonds to the Maximum Rate, the interest rate for any Bonds in the Index Rate Mode shall be the Maximum Rate;
 - (ii) Upon receipt by the Trustee of a written notice from the Index Rate Bondholder indicating that a Tax Event (as defined in the Bondholder Agreement) has occurred, then the interest rate for any Bonds in the Index Rate Mode shall be equal to One Month LIBOR plus the Applicable Spread (the "Taxable Rate"); and

(iii) In no event shall the interest rate on any Bonds in the Index Rate Mode exceed the Maximum Rate.

Such interest rate shall be the Index Rate for such Bond for the next Index Rate Period. Bonds bearing interest at the Taxable Rate shall constitute Bonds in the Index Rate Mode.

Notwithstanding any provision of Section 203.C to the contrary, interest on Bonds in the Index Rate Mode shall be computed on the basis of a 365 or 366 day year, as applicable for the number of days actually elapsed, during such Index Rate Period.

At any time while the Bonds bear interest at the Taxable Rate, the Index Rate Bondholder shall have the right to tender its Bonds for purchase upon not less than 180 days prior notice to the Trustee and the Corporation of such intention to tender its Bonds for purchase, and on the Purchase Date designated in such notice (which shall be a Business Day) such Bonds shall be purchased by the Corporation at a price equal to the principal amount of such Bonds plus accrued interest on the Purchase Date. Any tender and purchase of Bonds pursuant to this paragraph shall be administered by the Trustee in accordance with the provisions of Section 504 of this Indenture.

The Corporation agrees to provide prompt written notice to the Trustee of any change in the rating of the Bonds or other indebtedness of the Corporation by any Rating Agency that results in a change in the Applicable Spread."

- (c) Section 204 is hereby amended by the addition of the following new subsection E, which shall govern matters relating to the Calculation Agent.
 - "E. <u>Calculation Agent</u>. The Trustee is hereby appointed Calculation Agent with respect to the Bonds commencing on the Amendment Date, and the Trustee hereby accepts such appointment. In acting as Calculation Agent hereunder, the Calculation Agent's actions shall be treated as actions of the Trustee for purposes of this Indenture and the Agreement, including without limitation the indemnification provisions of Section 804 hereof and the other provisions of Article VIII hereof. The Calculation Agent may resign in such capacity by written resignation filed with the Issuer, the Corporation and the Index Rate Bondholder at least thirty (30) days before the date when such resignation is to take effect, and may be removed by the Index Rate Bondholder or by the Corporation with the written consent of the Index Rate Bondholder for any reason upon at least thirty (30) days prior written notice. In addition, if the Trustee is acting as Calculation Agent, upon the resignation or removal of the Trustee for any reason, the Calculation Agent shall automatically be deemed to have resigned or been removed effective upon the effectiveness of the Trustee's resignation or removal.
- Section 4. Amendments to Section 207. The Bonds shall be converted to an Index Rate Mode on the Amendment Date. Section 207 of the Original Indenture is hereby amended to provide that any Bonds converted to an Index Rate Mode on the Amendment Date will not be subject to conversion from the Index Rate Mode to a different Interest Mode prior to December 1, 2014, except in the instance (i) where such Bonds bear interest at the Maximum Rate by reason of the occurrence of a Bondholder Agreement Event of Default or (ii) where the Corporation has received a demand pursuant to Section 1 of the Bondholder Agreement for the payment of increased costs. Accordingly, Paragraph C of Section 207 of the Original Indenture is hereby amended by the addition of the following, new subparagraph 5, appended to said Paragraph C:

- "5. (a) Notwithstanding the foregoing, any Bonds converted to the Index Rate Mode on the Amendment Date shall not be subject to conversion to any other Mode prior to December 1, 2014 except in the instance (i) where such Bonds bear interest at the Maximum Rate by reason of the occurrence of a Bondholder Agreement Event of Default or (ii) where the Corporation has received a demand pursuant to Section 1 of the Bondholder Agreement for the payment of increased costs, in which case the Bonds shall be subject to conversion from the Index Rate in accordance with Section 207 of this Indenture.
- (b) If the Bonds remain in the Index Rate Mode on the Special Mandatory Tender Date, the Corporation may effect a change to a different Interest Mode for the Bonds in accordance with this Section 207, or elect to continue the Index Rate Mode for the Bonds. In either case, on the Special Mandatory Tender Date, the Bonds shall be subject to mandatory tender for purchase. In the event that the Bonds are converted from the Index Rate to the Fixed Rate, the Bonds will be subject to mandatory tender for purchase on the Special Mandatory Tender Date in accordance with Section 507 ("Mandatory Tender and Purchase of Bonds on Fixed Rate Date"). Otherwise, the Bonds shall be tendered for purchase on the Special Mandatory Tender Date as provided in Section 506 ("Mandatory Tender and Purchase of Bonds Upon Change to a Variable Rate Mode"), regardless of whether or not then being converted to another Variable Rate Mode. The Trustee shall give Immediate Notice of any such mandatory tender for purchase to the Holders of the Bonds no less than seven (7) Business Days prior to the Special Mandatory Tender Date."
- Section 5. Amendments to Section 501. Section 501 of the Original Indenture is hereby amended to provide for the optional redemption of Bonds in the Index Rate Mode by deleting paragraph (2) of Section 501.A of the Original Indenture and replacing it with the following new paragraph (2):
 - 2. (a) While the Bonds bear interest at an Index Rate, the Bonds are subject to optional redemption prior to their Stated Maturity Date at the written request of the Corporation, in whole or in part, on any Interest Payment Date occurring on or after December 1, 2014, at a redemption price equal to 100% of the principal amount to be redeemed, plus interest accrued to the Redemption Date.
 - (b) Notwithstanding paragraph (a) above, the Bonds are subject to optional redemption prior to their Stated Maturity Date at the written request of the Corporation, in whole, on any Interest Payment Date when the Bonds are in the Index Rate Mode and either (i) interest on such Bonds is at the Maximum Rate because of the occurrence of a Bondholder Agreement Event of Default or (ii) the Corporation has received a demand pursuant to Section 1 of the Bondholder Agreement for the payment of increased costs, at a redemption price equal to 100% of the principal amount to be redeemed, plus interest accrued to the Redemption Date.
- Section 6. New Section 507A. A new Section, Section 507A, is hereby added to the Original Indenture, to follow Section 507, as follows:

"SECTION 507A. PROVISIONS APPLICABLE TO THE BONDS FROM AND AFTER THE AMENDMENT DATE.

(a) On any Conversion Date for the Bonds that occurs after the Amendment Date but prior to the Special Mandatory Tender Date, the Index Rate Bondholder shall have the right to elect to retain all, but not less than all, of its Bonds on the related Conversion Date. Such election to retain must be delivered in writing to the Trustee and

the Remarketing Agent (if any) by an authorized representative of the Index Rate Bondholder no less than three (3) Business Days prior to a Purchase Date, and shall be irrevocable once delivered. Upon receipt by the Trustee of any written election to retain Bonds by the Index Rate Bondholder, the Bonds shall not be remarketed in accordance with Section 506 or 507 (as applicable), but the Interest Mode of the Bonds shall change on the Conversion Date.

- (b) From and after the Amendment Date and for so long thereafter as the Bonds are in the Index Rate Mode, the Index Rate Bondholder shall have the option to cause the principal of all Outstanding Bonds, together with interest accrued thereon, to become due and payable immediately upon delivery to the Trustee of a Bondholder Agreement Demand which directs the Trustee to declare all Outstanding principal of the Bonds to be due and payable in accordance with Sections 701 and 702 of this Indenture."
- Section 7. Amendments to Section 513. Section 513 of the Original Indenture is hereby amended by adding the following sentence to the end of subsection E:

"In such event, an Event of Default shall be deemed to have occurred."

- Section 8. Amendments to Section 701. Section 701 of the Original Indenture is hereby amended to include two additional Events of Default with respect to the Bonds. The following new subparagraphs 5 and 6 are hereby added to paragraph (A) of Section 701, as a fifth and sixth possible Event of Default:
 - "5. if, while the Bonds are in the Index Rate Mode, the Index Rate Bondholder delivers to the Trustee a Bondholder Agreement Demand which directs the Trustee to declare all Outstanding principal of the Bonds to be due and payable; or
 - 6. if funds available for purchases of Bonds pursuant to Article V hereof are inadequate for the purchase of all Bonds tendered on any Purchase Date as provided in Section 513(E) hereof."
- Section 9. Amendments to Section 702. Section 702 of the Original Indenture is hereby amended to include the following sentence, which shall be added to the end of paragraph (B):

"If, while the Bonds are in the Index Rate Mode, the Index Rate Bondholder delivers to the Trustee a Bondholder Agreement Demand which directs the Trustee to declare all Outstanding principal of the Bonds due and payable, and the Index Rate Bondholder provides indemnity satisfactory to the Trustee, the Trustee shall declare the principal amount of all Outstanding Bonds to be immediately due and payable, and upon such declaration, the said principal, together with interest accrued to the date of payment, shall become due and payable on the date specified in such Bondholder Agreement Demand, all in accordance with the provisions of this Section 702."

Section 10. <u>Amendments to Section 806.</u> Section 806 of the Original Indenture is hereby amended to include the following paragraph, which shall be added to the end of said Section:

"The Trustee agrees to accept and act upon instructions or directions pursuant to this Indenture sent by unsecured e-mail, facsimile transmission or other similar unsecured electronic methods, provided, however, that (i) the Corporation and/or the Authority, as applicable,

subsequent to such transmission of written instructions, shall provide the originally executed instructions or directions to the Trustee in a timely manner, (ii) such originally executed instructions or directions shall be signed by an authorized officer of the Corporation or Authority, as applicable, and (iii) the Corporation and/or Authority, as applicable, shall provide to the Trustee an incumbency certificate listing such authorized officer, which incumbency certificate shall be amended whenever a person is to be added or deleted from the listing. If the Corporation or Authority elects to give the Trustee e-mail or facsimile instructions (or instructions by a similar electronic method) and the Trustee in its discretion elects to act upon such instructions, such instructions shall be deemed to constitute authorized instructions of the Corporation and/or Authority, as applicable. The Trustee shall not be liable for any losses, costs or expenses arising directly or indirectly from the Trustee's reliance upon and compliance with such instructions notwithstanding such instructions conflict or are inconsistent with a subsequent written instruction. The Corporation and Authority agree to assume all risks arising out of the use of such electronic methods to submit instructions and directions to the Trustee, including without limitation, the risk of the Trustee acting on unauthorized instructions, and the risk of interception and misuse by third parties."

- Section 11. Severability. In the event any provision of this First Supplemental Indenture shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof or of the Original Indenture.
- Section 12. Execution of Counterparts. This First Supplemental Indenture may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument. This Agreement may be delivered by the exchange of signed signature pages by facsimile transmission or by e-mail with a pdf copy or other replicating image attached, and any printed or copied version of any signature page so delivered shall have the same force and effect as an originally signed version of such signature page.
- <u>Section 13.</u> <u>Status of Original Indenture.</u> The Original Indenture, as hereby amended and supplemented, remains in full force and effect and is hereby ratified and confirmed.
- <u>Section 14.</u> <u>Bonds.</u> The Issuer and the Trustee agree that the provisions of the Bonds are deemed amended to conform to the Original Indenture as hereby amended and supplemented.

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[Signature Page to First Supplemental Trust Indenture]

IN WITNESS WHEREOF, the Issuer has caused this First Supplemental Trust Indenture to be executed in its name and behalf and attested by its duly authorized officers, and the Trustee has caused this First Supplemental Trust Indenture to be executed in its corporate name and behalf by its duly authorized officer; and the Issuer and the Trustee have caused this First Supplemental Trust Indenture to be dated as of the date first written above.

Attest:

ALLEGHENY COUNTY HOSPITAL DEVELOPMENT AUTHORITY

Bv:

Authorized Designate

Ву:

Chairmar

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee

By.

Vice Rresident