STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

HEALTH SERVICES COST REVIEW COMMISSION
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Date: July 31, 2009

To: HSCRC Commissioners

From: HSCRC Staff

Re: Update on Maryland Hospital Acquired Conditions Vetting

This memorandum summarizes the various activities of staff and representatives of the hospital and payer industries over the last two months since the approval of the MHAC recommendations at the 6/4/09 Commission meeting. HSCRC staff also provide its observations regarding these activities.

Technical and Clinical Vetting Sessions Convened

- MHAC technical payment workgroup meetings- Staff convened two meetings on 6/18/09 and 7/28/09.

- Clinical vetting meetings- Staff convened an initial teleconference (6/26/09) and two in-person clinical vetting sessions (7/10/09 and 7/24/09) on the clinical inclusion and exclusion logic. This constitutes a total of five vetting with the 2 convened in February of this year.

Staff Observations from Clinical Vetting

Staff has noted a good work effort with very good industry and stakeholder participation in the technical and clinical sessions to date. The document in the Commissioners' packets entitled "Hospital Industry Comments and HSCRC Responses to Clinical Assignment and Exclusion Logic of the Maryland Hospital Acquired Conditions/ 3M Potentially Preventable Complications as of July 30, 2009" details the general and specific comments staff have received on the clinical aspects of the PPCs as well as the responses to date. As the Comments document illustrates, ~40 comments have been received—some general but the majority about specific PPCs. As the responses to the comments also illustrate, many good and helpful suggestions were received, and 3M /HSCRC staff have accepted many if not most of the suggestions; these include both additions and deletions to the current exclusion logic of the PPCs. Staff further note that the modifications to the PPC logic are accomplished in context of an effort to be conservative, deferring to giving the industry the benefit of the doubt.

To summarize, staff believe the clinical vetting has helped tighten up the PPC logic around the edges, and will continue to do so as we establish a clinical vetting work group in the Fall of this year. In the MHA letter dated 7/28/09 also in the meeting packets, the MHA notes that there has been insufficient time to fully vet all 52 PPCs. In response, staff note that there will be diminishing marginal return with scrutiny of the PPCs as the MHA work group indicated their review focused on high potential areas. That said, we will, again, have an ongoing vetting process with a current and ongoing solicitation of comments to HSCRC, and the work group that will convene in the Fall to consider the comments we receive.

Staff Observations on the "Big Picture " Perspective

Staff has observed that there has been some misperceptions in the industry regarding how payment risk translates through the PPC logic and the ranking methodology, namely that that regressed amounts represent potential cuts to payment dollar for dollar on a case-specific basis, despite repeated staff response that the initiative is a rate-based methodology. Staff observed in our meeting on 7/24/09 that there was progress in clearing up this misperception.

As clinical personnel have been given a large volume of at risk and assigned PPC case data and have been concurrently also reviewing PPC individual exclusion logic, staff believe they have been less able to see the overall picture and focus on PPCs that have large volume and cost implications for their facilities. In light of this, HSCRC will convene workshops within the next month to review reports that will be helpful in providing a high level summary of their performance on PPCs as well as point to areas of concern to target at their facilities.

Staff has also conveyed in the meetings that there is a great potential for return on investment to hospitals if they are able to identify areas where the PPC rates are high and then successfully remove some proportion of complications and associated cost.

Technical Payment Workgroup Meetings

Staff also held two technical payment workgroup meetings with industry representatives. During these meetings the HSCRC staff began to discuss and negotiate the methodology for linking individual hospital performance on MHACs to financial incentives through the rate setting system. It is anticipated that an scaling methodology, similar to that used with the Quality-Based Reimbursement initiative, will be the basis of the financial incentive structure used for MHACs. Other key topics are being addressed: 1) the mechanism being used for indexing and ranking hospital performance on the basis of MHACs; 2) the amount of revenue to be scaled in the start-up year; 3) the functional form of the scaling method (continuous scaling or scaling with corridors); 4) potential areas of double reward or double penalty; and 5) quantification of potential returns on investment for hospitals that are successful in reducing complication rates. The technical payment workgroup will continue to meet in the coming months to resolve these and other issues. Payment incentives will apply to rate orders issued effective July 1, 2010 (FY 2011) for hospital performance on MHACs during FY 2010

Staff proposes that a moderate level of financial risk for the initial year of implementation, so there will be substantially less risk of penalties to hospitals initially.

Other MHA Comments from the 7/28/09 Letter

MHA's comment regarding evidence-based prevention protocols, staff believes, is questioning the preventability of the PPCs. In data that has been shared with MHA and the industry, there is significant

variation in performance on the individual PPCs and by hospital service lines. These ranges clearly show some hospitals' rates of preventable complications are unacceptably high relative to the demonstrated achievable best practice performance of other facilities. MHA and the industry have already been provided the variation by hospital by PPC in Appendix C Table 3 that accompanied the PPC case data provided for FY 2008 and for Quarters 1 and 2 of 2009. Based on 2008 data, Table 1 below provides the number and percent of hospitals with lower, higher and as expected PPC rates overall, and for medical, surgical and obstetric service lines. Table 2 below shows a wide range of PPC rates overall and for medical, surgical, and obstetric patients as illustrated in the lowest, highest and statewide rate values.

Table 1. Number and Percent of Hospitals with Lower, Higher and Expected Average PPC Rates

Category	Number of Hospitals with Higher Than Expected PPC Rate	Number of Hospitals with Lower Than Expected PPC Rate	Number of Hospitals with As Expected PPC Rate	Statewide PPC Rate	Best Practice PPC Rate
Overall	15 (35.7%)	19 (45.2%)	8 (19.0%)	4.77	3.57
Medical	13 (31.0%)	20 (47.6%)	9 (21.4%)	3.56	2.59
Surgical	13 (31.0%)	11 (26.2%)	18 (42.9%)	8.46	7.05
Obstetrical	5 (11.9%)	7 (16.7%)	30 (71.4%)	4.23	3.41

Table 2. Variation of PPC Rates: % of Lowest, Highest and Expected Rates

Category	Statewide PPC Rate	Lowest Hospital PPC Rate Hosp Act to Exp * State PPC Rate	Highest Hospital PPC Rate Hosp Act to Exp * State PPC Rate
Overall	4.77	1.86	10.17
Medical	3.56	1.11	9.51
Surgical	8.46	4.56	16.05
Obstetrical	4.23	1.55	9.27

Next Steps

As previously noted, reports workshops will be convened in the near term to provide additional summary information to hospitals on their PPC performance.

PPC data on Quarter 3 of 2009 will be provided within the next week to hospitals; the full 2009 year of data will be provided in October, and the normative statewide average statistics will be re-calculated using the revised PPC clinical logic.

Clinical vetting will continue with HSCRC's ongoing solicitation and tracking of comments, and the convening of the clinical work group in the Fall.

Maryland
Hospital Association

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July 28, 2009

Donald Young, M.D.
Chairman
Health Services Cost Review Commission
6109 Trotter Ridge Court
Columbia, MD 21044

Dear Dr. Young:

On August 5 you will be asked to approve the final list of potentially preventable complications (PPCs) to be included in the new Maryland Hospital-Acquired Conditions (MHAC) policy. The purpose of this letter is to share several concerns that have arisen during the clinical vetting process that we believe must be addressed as you consider this important action.

Dissemination of Evidence-Based Prevention Protocols

Over the past two months clinicians have been reviewing their case data and focusing on areas where it appears they have the greatest opportunity for improvement. During the vetting sessions, 3M representatives and Health Services Cost Review Commission (HSCRC) staff reiterated that if a hospital's actual complication rate for a given PPC was greater than the statewide risk-adjusted norm, this should signal further exploration. However, 3M has not shared the evidence-based research upon which their determinations are made or the prevention protocols that can be implemented to avoid these "highly preventable hospital-acquired conditions." More important, in some instances there are no clear prevention guidelines. It is inappropriate to have a statewide policy that penalizes hospitals without providing them with the information needed to improve their performance. **We recommend that 3M be required to release the known evidence-based practice protocols to prevent the occurrence of complications covered by the MHAC policy.**

Objective Third Party Review

Throughout the vetting process, Maryland Hospital Association (MHA) and hospital clinicians submitted recommended changes to the PPCs to HSCRC staff, who in turn referred these comments to 3M for review and response. Since 3M is the company that developed the PPC Grouper Software, the same clinicians who originally created the clinical assignment and exclusion logic of the PPCs were asked to both review and be the final arbiter of proposed changes to the PPC system.

By definition, in a vetting process reasonable clinicians may have different views and disagree, especially where there is a lack of clear evidence. **For this to be a valid process, the HSCRC must engage the services of an objective third party to consider the disparate views, balancing the proprietary interests of 3M with the views of other clinicians and making an independent determination of proposed modifications to the PPCs.**

- more -

Insufficient Time to Review All 52 PPCs

To aid in this process, MHA convened a PPC Clinical Advisory Work Group made up of clinicians across the state. In the brief time provided, they were able to review almost half of the PPCs covered under the proposed MHAC policy. At the same time, hospitals received data about hundreds to thousands of cases, and were only able to review a small sample of them. As indicated in previous comments by hospital leaders, these conditions and the 3M clinical logic are quite complex and it is a time-consuming and labor-intensive process to examine in detail each one. Consequently, approximately half of the PPCs have not been fully examined or discussed in the vetting process.

We appreciate the HSCRC staff's recognition of the need to continue to improve the PPC policy. The staff has agreed to form a clinical advisory group this fall "to support an ongoing process of receiving and responding to input that informs the refinement of the PPCs used as the basis of our payment adjustments for Maryland Hospital-Acquired Conditions." **We recommend that the work group be charged with continuing to perform an in-depth analysis of the PPCs, monitoring the impact on quality outcomes, and identifying issues that warrant immediate and/or longer term attention.**

Availability of Software and Reports

In June, the commission adopted a new payment policy for MHACs that is based on a 3M proprietary software tool. Just a few months earlier, the National Quality Forum, the national organization that is responsible for endorsing measures to be used for quality reporting and improvement, rejected the 3M PPC measures submitted for endorsement, in part because the PPC system is not publicly available and can only be accessed through purchase of a license. Since the state of Maryland is mandating use of a proprietary product to determine certain payment adjustments, as a public service **the 3M PPC Software Grouper should be made available to hospitals at no cost.** In addition, if arrangements are being made for another company to run the reports that hospitals need, these analyses should be provided to hospitals at no cost.

We appreciate the opportunity to submit these recommendations, and would be happy to provide more detailed information. I can be reached at 410-379-6200 or at bmiller@mhaonline.org.

Sincerely,

Beverly L. Miller
Senior Vice President, Professional Activities

cc: Robert Murray, HSCRC Executive Director

St. Mary's Hospital

Mr. Robert Murray, Executive Director
Ms. Diane Feeney, Associate Director
Health Services Cost Review Commission
4160 Patterson Avenue
Baltimore, Maryland 21215

July 20, 2009

Dear Diane:

While we applaud the Health Services Cost Review Commission's initiative to support pay for performance goals and support the concept of ensuring that patient care in Maryland is safe, effective, and efficient, we are writing to share our concerns about the Commission's new Potentially Preventable Complication (PPC) payment methodology under consideration at this time.

We are taking this opportunity to write to you because the conference call wherein hospitals were encouraged to share concerns was without much substance and appeared to be only a formality. The physician's continued and repeated response that the statistical methodology and excellent coding would account for the clinical concerns voiced on the call is not acceptable to physicians in our region, including Medical Staff Officers, Chiefs of Departments, professors of Medicine and bedside practicing physicians.

Aside from the fact that there has been inadequate time to account for the unfunded and extensive process the hospitals had to undertake to review their case data, once reviews were underway, the data were determined to be incorrect, causing a second wave of unfunded reviews to begin. *A solution would be to slow down the process so hospitals can adequately analyze the data and its impact on care and so the clinical work group can continue to vet the PPC's and identify needed inclusion and exclusion criteria.*

We certainly understand the statistical value of severity adjusting the cases and using complex formulas to identify the expected rates for the proposed potentially preventable complications. We also support excellent and detailed coding. However, when physicians around the region are learning of the 52 PPC's, they are not comforted by the fact that there is a proprietary 3M formula to keep the data equitable. They are less comforted by the expectation that coders can ensure that PPC's are realistically identified. They are most concerned that the PPC's are not, in some cases based on

clinically sound judgment, and are not, in some cases, preventable. Their response to these concerns is to stop providing comprehensive care or in some cases any care, to patients. Thus we believe this system will lead to a very serious and unintended consequence for the sickest patients in Maryland, which is to limit care or direct care to physicians/hospitals willing to take more risk, regardless of their abilities. Several of many examples are listed below.

Upon review of the PPC's, physicians are saying it would be foolhardy to do any urine analyses for patients in Maryland hospitals because the HSCRC regards *all* urinary tract infections as PPC's. A case can be made for patients with catheter-related urinary tract infections having a hospital acquired complication, but for those who do not have this entry site for bacteria, there is little to explain the HSCRC's rationale except that statistics will manage the concern. To reiterate, clinicians are not comforted by complicated formulas taking care of the clinical concerns. They are saying they may not order any more urine testing for hospitalized patients.

Patients with poor wound healing, hypoglycemia and or hypertension post operatively are others who may suffer. Physicians may no longer perform surgery on diabetic patients or those with peripheral vascular disease based on the PPC list, and are considering pulling out of the ventilator bundle indicators, which call for patients on ventilators to have tight glycemic control since hypoglycemia is a PPC. The literature is replete with articles about the potential for hypoglycemia when attempting tight glycemic control. Glycemic control was already a controversial subject, with leanings towards loosening the control and re-analyzing which patients best benefit from the lower blood sugars. With the literature so contradictory at this time, why would the HSCRC choose hypoglycemia for surgical patients as a topic for a PPC?

Physicians are seeing some of these contradictory data points as further illustration of the lack of understanding of governmental agencies attempting to engineer care by unfunded mandate. This new initiative, combined with the lack of tort reform in Maryland is resulting in physicians stating that their answer is not to care for those complicated patients or to leave the state.

The MHA clinical task force worked with Navigant Consulting to create a list of inclusion and exclusion criteria that make the current list of potentially preventable complications more realistic, regardless of the statistics. *A solution to reduce the unintended consequence of limited care and/or directed care to physicians who are willing to take more risks would be to allow clinically sound exclusion criteria for each PPC* so we are not asking clinicians to solely trust proprietary formulas by statisticians who are not related to patients or familiar with the practice of medicine when determining whether or not he/she will provide care to patients in need. *The MHA taskforce can continue its work to completion.* (See attachment 1)

Lastly, there are no evidence- based guidelines for some of the PPC's. *We would suggest that there be evidence- based data supporting the preventability of each complication and best practice guidelines to avoid each PPC.* What would be the evidence-based practice

to prevent the PPC about cardiac dysrhythmias for patients who are having electrophysiology studies when the dysrhythmias are induced to identify the best treatments? This was discussed on the conference call wherein the physician was unaware that the dysrhythmias in this instance are indeed induced.

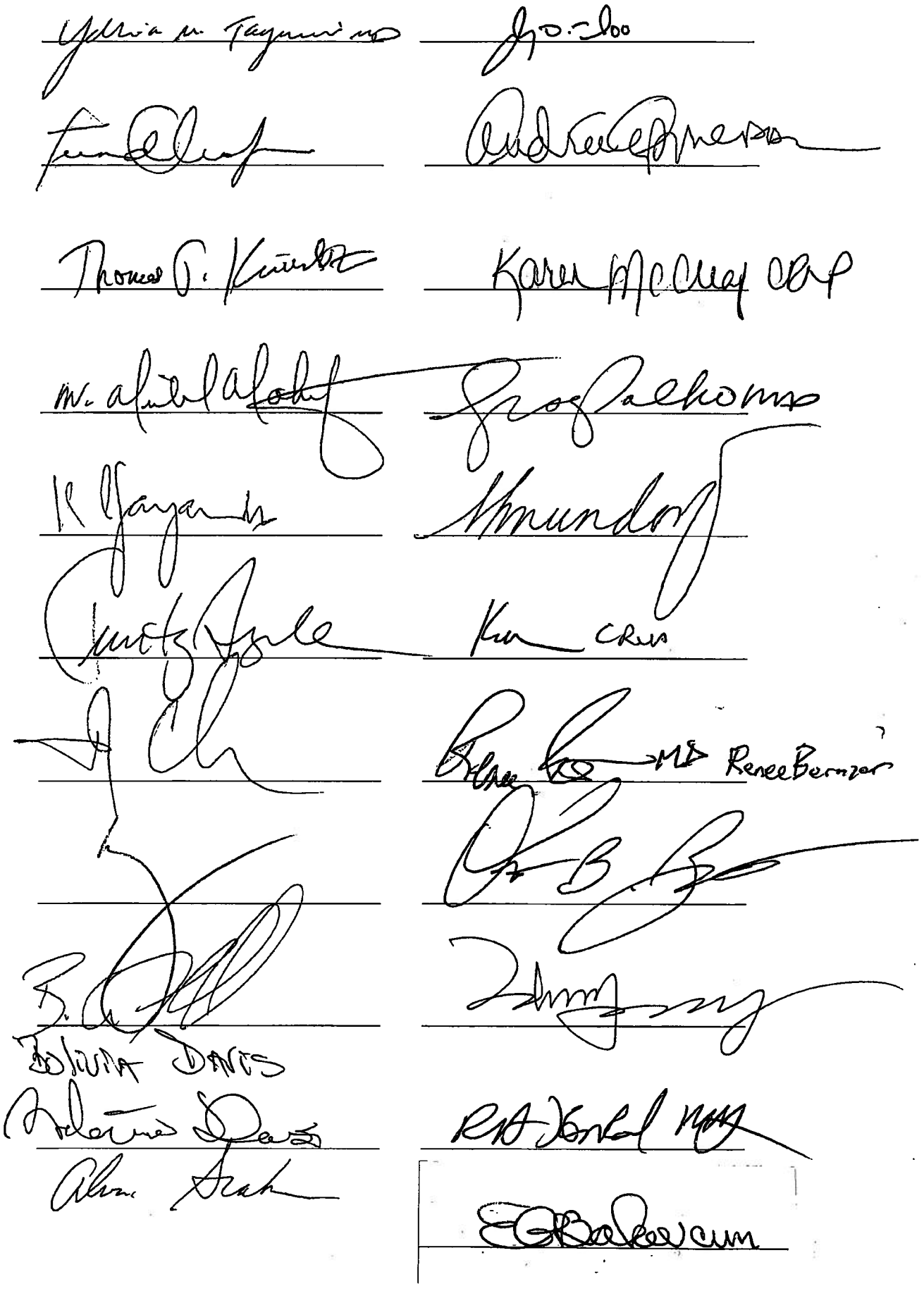
We believe the desire to move quickly is thwarting the opportunity to truly improve care. We believe the heavy reliance on coders and statistical analyses to compensate for suboptimal clinical analysis will lead to unintended consequences wherein care will be withheld, poorly documented, or directed to physicians and hospitals willing to take more risk than others, regardless of their clinical ability.

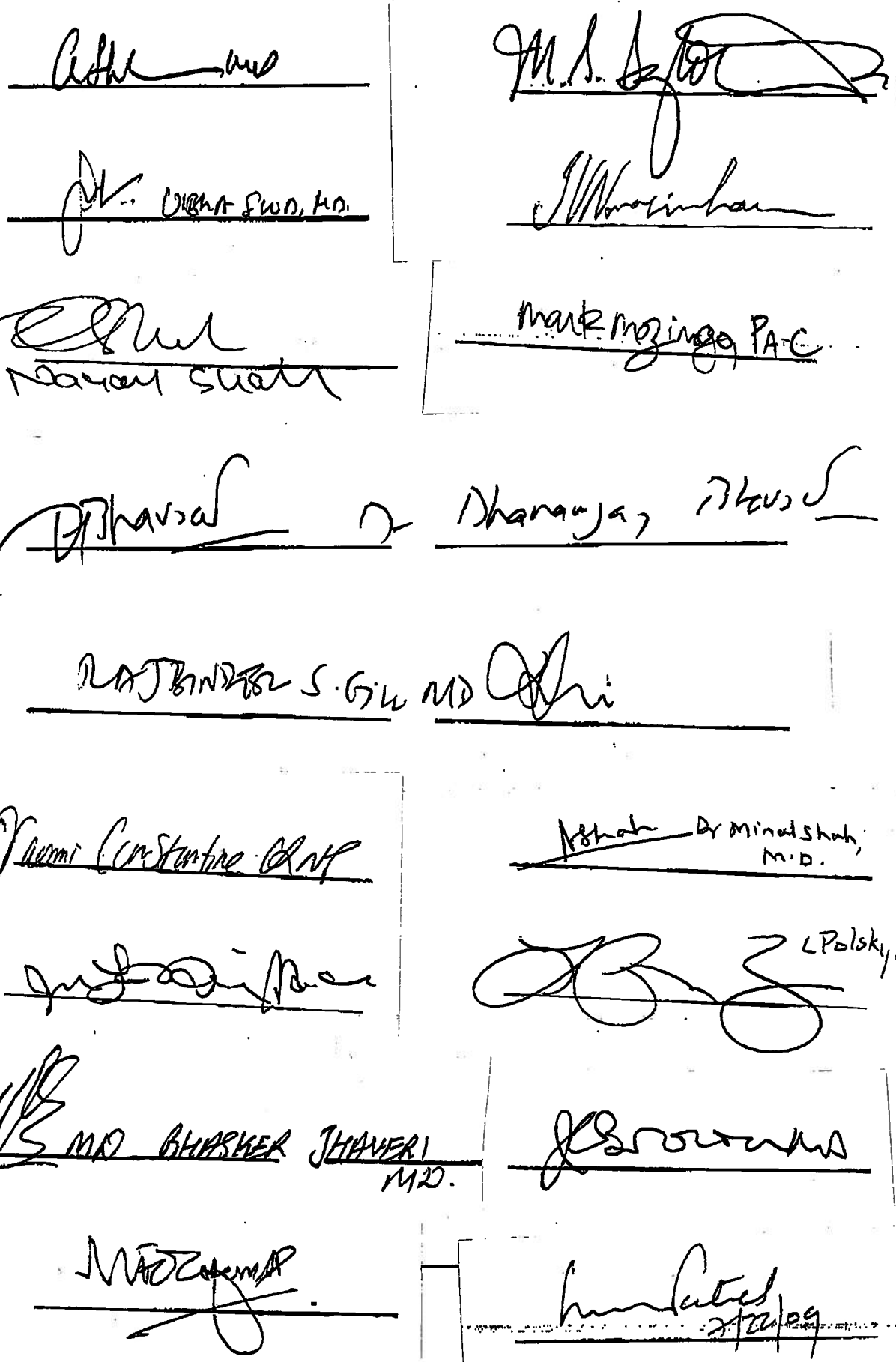
Please consider taking the time to allow more complete analysis of the data. Please consider making the recommended changes to the inclusion and exclusion criteria. Please use a think-tank approach to ensure that all PPC's have documented best practice strategies for real prevention.

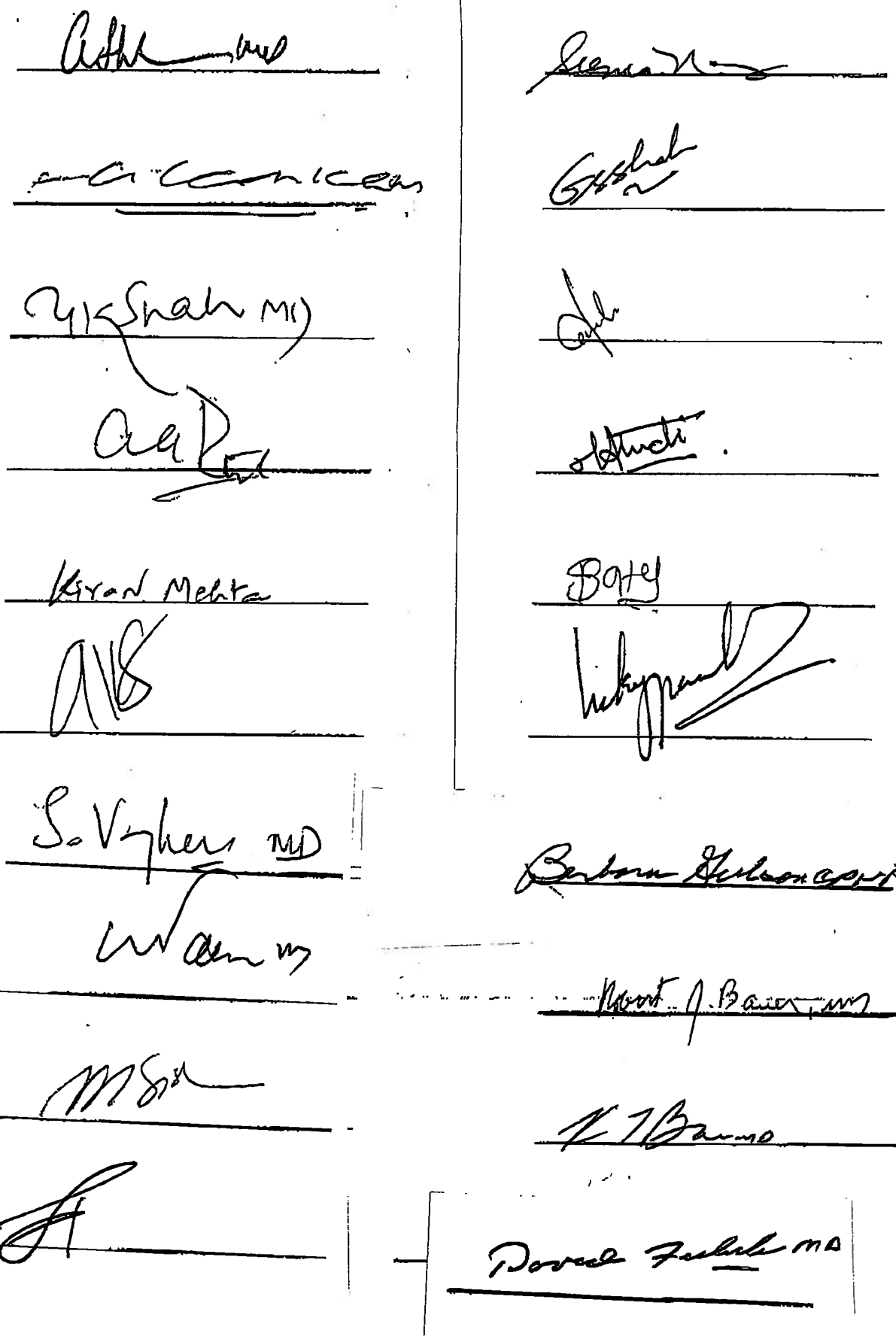
Thank you for your consideration of these requests.

Sincerely,

Attachments
Cc: Bev Miller, Vice President
Maryland Hospital Association







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(Atul R. Shah, MD)

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ATMunshi · M.D.
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July 31, 2009

Robert Murray
Executive Director

Dianne Feeney
Associate Director, Quality Initiative
Health Services Cost Review Commission
4160 Patterson Ave
Baltimore, MD 21215

RE: Maryland Hospital Acquired Conditions Policy

Dear Mr. Murray and Ms. Feeney:

On behalf of the members of MedChi, The Maryland State Medical Society, I wanted to take the opportunity to communicate some general comments and concerns that the physician community has regarding the Hospital Acquired Conditions Policy (MHAC) that will be considered for adoption at the Commission's August meeting. MedChi is aware of the significant work that has been done to bring this new ground-breaking program to its present configuration. MedChi is very supportive of the goals and objectives of the program and the comments incorporated in this letter are not intended to take away from MedChi's overall support for this initiative. However, our members felt compelled to express their concern over certain aspects of the program's development that they believe could jeopardize the long term success of the initiative. It is within that context that I express the following concerns/recommendations:

Number of PPCs: The number of potentially preventable conditions (PPCs) that will be incorporated into the initial implementation of the program has been expanded from 11 to 52. While Med Chi understands that the increased number of PPCs is related to the fact that the program will now be rate based and will not penalize hospitals for individual cases, it nonetheless is a significant number of PPCs to effectively incorporate into a program that is the first of its kind in the nation and for which there is no existing data/experience to help identify potential implementation difficulties. It's is Med Chi's belief that if too many PPCs are implemented initially, the administrative and system complexity of concurrently addressing so many clinical issues simultaneously may jeopardize the long term success of the program. This initiative clearly provided long term potential for system savings. That potential for system reform and savings should not be placed in jeopardy by rushing to implement such a large number of PPCs at the outset.

Objective Third Party Involvement in the Vetting Process: The Commission established a clinical "vetting" process intended to refine the PPCs to be included in this initiative. A significant number of clinicians have participated in these sessions however the structure of the "vetting process" has not fostered the collaborative dialogue that was intended nor resulted in consensus decisions on the parameters of the inclusions and exclusions of the PPCs under consideration. The PPCs by their very definition spark significant debate on the appropriate inclusions and exclusions. While the clinicians have raised various issues with the PPCs and have made significant and detailed recommendations for

modifications of some of those PPCs, the 3M consultants who developed the PPC model hold the authority to accept or reject the various recommendations. Many of the recommendations have been summarily dismissed by 3M without providing the clinical evidence upon which the 3M consultants made their decision. 3M and its consultants are to be applauded for the product they have produced and their vision for quality enhancement and cost containment. However, because 3M developed the PPC model, Med Chi believes that they should not also be the entity that makes the final decision on the scope of the PPCs. This is not a criticism of 3M and its consultants. In almost any circumstance one could imagine, an entity that develops a product/program has a bias in favor of its program that makes it exceedingly difficult for that entity to be objective regarding suggested modifications. The Commission should have an independent clinical entity that evaluates clinicians' suggested modifications to the PPCs and 3M's response to those suggestions. That independent clinical entity, and not 3M, should make the final determination on the scope of each PPC.

Ongoing Process: MedChi would strongly urge the Commission to establish a permanent Advisory Committee to continue to work with the Commission and 3M on the clinical "vetting" of the PPCs and the implementation of the MHAC. MedChi would further urge the Commission to narrow the number of PPCs that are initially implemented and to add PPCs to the program only once they are fully "vetted" by the Advisory Committee. MedChi appreciates that Commission has made significant changes in the structure of the program and believe that its careful and thoughtful implementation will in fact yield both quality enhancement and cost savings. However, the administrative complexity of implementation, both for the Commission and the hospitals, coupled with the fact that this is program has not been implemented anywhere in the country, calls for cautious, thoughtful, and pragmatic implementation. Starting with fewer PPCs "vetted" to a point of consensus amongst clinicians seems a prudent structure for implementation. It is easier to expand and enhance a successful program that is modest in its initial implementation than to resurrect an aggressive program that crumbled due to its initial complexity.

Thank you in advance for the Commission's consideration of MedChi's concerns. MedChi and its members look forward to continuing to work with the Commission as they finalize the parameters of the program and its implementation framework. The MHAC policy holds great promise and we are pleased to be at the table.

Sincerely,

Ronald C. Sroka, MD

Ronald C. Sroka, M.D.
President
MedChi, The Maryland State Medical Society

Cc: Members of the Health Services Cost Review Commission
The Honorable John Colmers, Secretary, DHMH
The Honorable Michael Busch
The Honorable Joan Carter Conway
The Honorable Ulysses Currie

The Honorable Mary Dulany-James
The Honorable Rob Garagiola
The Honorable Edward J. Kasemeyer
The Honorable Thomas Middleton
The Honorable Warren E. Miller
The Honorable Peter Hammen
The Honorable Shane Pendergrass

WASHINGTON COUNTY HOSPITAL

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August 04, 2009

Mr. Robert Murray, Executive Director
Ms. Diane Feeney, Associate Director
Health Services Cost Review Commission
4160 Patterson Avenue
Baltimore, MD 21215

Dear Ms. Feeney and Mr. Murray:

The purpose of this letter is to share my healthcare value (compassionate care; quality outcomes; patient safety; customer satisfaction; patient advocacy/resource utilization) perspective on the Maryland Hospital Acquired Conditions/Potentially Preventable Conditions (MD HAC/PPC) debate.

I wish to commend the HSCRC's commitment to partnering to advance safe, efficient, effective, timely, just/equitable patient-centered care as Maryland aspires to become the safest state for patient care in the country. I recognize our hospital to be in full partnership with your efforts.

The **context for my remarks** is as follows:

- Hospitals are complex and chaordic (functioning somewhere between chaos and organized).
- Hospitals are unsafe (truth may be painful; but, it is the shortest distance between two points).
- Patients are becoming increasingly complex and vulnerable.
- Resources are increasingly diminishing.
- Hospitals are the final common denominator to resolve these irresolvable issues.

Within this context, I wish to make **three points**:

1. After review, a blunt tool (a huge, complex, poorly negotiated unfunded mandate MD HSC/PPC emanating from methodology that no one has confidence) is not what is required to assist already struggling hospitals to meet their privilege and responsibility to serve their increasingly complex and vulnerable communities. As with any blunt tool, there is **too much peril for harm through unintended consequences**.

   Note: This mandate is unfunded in three ways:

   - It threatens to take resources away from hospitals' critical bottom lines;
   - It requires huge unfunded resources to understand and react to MD HSC/PPC;

- It distracts Care/Quality/Patient Safety/Risk Management professionals from their already well-prioritized, overabundant tasks at hand: thereby threatening extant quality/patient safety efforts.

2. An understanding of clinical complexity and sound complex decision-making may assist with an understanding of how **well- intentioned incentives for improvement may actually cause harm:**

- ***C. difficile*** has morphed to a highly virulent, epidemic scourge. Enlightened hospitals are identifying it as often and as early as possible to: isolate patients to prevent spread to other patients and staff; to start therapy ASAP to prevent the life-altering consequences of colectomy and colostomy; and, prevent mortality from this aggressive organism. Note: hospitals "doing it right", may have a higher prevalence. Note: there is no connection between the disease and cause by the hospital. Note: any disincentive to aggressive early recognition **(the more the better)** may have severe unintended consequences. Note: I would advocate the statewide tracking of *C. difficile* associated colectomies and deaths.
- A patient who has elective **hip replacement surgery** often is judged to require a perioperative Foley catheter to protect the wound from infection. The Foley must be removed ASAP. Upon removal of the catheter, the urine may grow an organism and must be sterilized to avoid the devastating consequence of an infected hip prosthesis. Any incentive to alter this thoughtful process may lead to the devastating consequence of an infected hip prosthesis.
- The number one safety issue in hospitals is patient falls. The number one cause of falls is confusion. Because of their admitting condition, patients who come into the hospital often become confused. Therefore, we must identify **"acute mental health changes"** as early and as often as possible: to diagnose and treat the cause of confusion (acute delirium is a potentially life-threatening condition); and, to keep the patient safe from falls. Note: hospitals "doing it right", may have a higher prevalence. Note: there is no connection between the disease and cause by the hospital. Note: any disincentive to aggressive early recognition **(the more the better)** may have severe unintended consequences.

3. After review, I am not confident that the HSCRC is adequately oriented to the Administration, Board, Medical Staff, Nursing, and Department Head processes that are in play each day at each hospital:

- Prevention processes (e.g. perinatal collaborative);
- Reporting of incidents and near misses;
- Root Cause Analysis;
- Action Plans/Responsible Parties (Champions);
- Accountability/Peer Review processes;
- Medical Executive Committee; Board Quality Committee; and, Board oversight.

I have great fear that the MD HAC/PPC proposal will, **as a most severe unintended consequence, distract, disrupt and divert scarce hospital resources from these quality/patient safety processes.**

In closing, I respectfully make the following recommendation for consideration by the HSCRC:

1. Hospitals need to be safer.
2. HSCRC should partner towards this end.
3. The logical partners are the HSCRC, the hospitals, MHA, and the MPSC.
4. The 3M information should identify a finite (e.g., five) number of PPCs to be eliminated in Maryland.
5. Five collaboratives (Hospitals, HSCRC, MHA, and MPSC) should be funded.
6. Hospitals participating and demonstrating gains will benefit from lower costs (as will HSCRC).
7. Strategies will be needed to address non-performing hospitals (a complex conversation for another day).
8. Over time, (perhaps one year hence) 3M data may again assist with finding another finite group (e.g., two) of PPCs to add to the collaboratives.

Central to this suggestion: the hospitals are being assisted with identification of logical opportunities and centralized efficient, effective solutions (collaboratives) --- bolstering precious hospital quality/patient safety resources to logically implement and continuously improve collaborative processes at the bedside.

In summary, I am advocating a statewide partnership to bolster quality outcomes and patient safety; and, at the same time, I am advocating against the MD HAC/PPC it has the unintended consequence, of distracting, disrupting and diverting already scarce hospital resources from quality/patient safety processes.

Again, I wish to commend the HSCRC's commitment to partnering to advance safe, efficient, effective, timely, just/equitable patient-centered care as Maryland aspires to become the safest state for patient care in the country. Again, our hospital is in full partnership with you. Thank you for this opportunity to provide input into this important process.

Respectfully submitted,

T. Michael White, MD, FACP
Chief Medical Officer

Hospital Industry Comments and HSCRC Responses to Clinical Assignment and Exclusion Logic of the Maryland Hospital Acquired Conditions/ 3M Potentially Preventable Complications

As of July 30, 2009

This document provides an overview of the comments received by HSCRC to date as well as general and specific responses to the issues raised as of July 30, 2009.

GENERAL OVERVIEW OF COMMENTS AND RESPONSE

A common theme in the comments received is the argument that patients with significant underlying diseases such as COPD, acute renal failure, heart failure and septicemia, among others, are at higher risk of developing specific complications such as respiratory failure, congestive heart failure, or ventricular fibrillation and, therefore, the presence of these significant underlying diseases should exclude a number of different complications from being considered as a PPC. PPCs identify potentially preventable inpatient harmful events or negative outcomes that can result from the processes of care and treatment rather than from the natural progression of underlying disease. Merely being at higher risk for a specific complication does not justify the complication being excluded as a PPC. However, the relative risk of a specific complication posed by a patient's underlying illness and severity of those conditions at admission must be taken into account when comparing the complication rates of different hospitals. As extensively examined in prior research, APR DRGs can provide a means of risk adjusting hospital complication rates (Hughes, et al, *Health Care Financing Review*, 2006). APR DRGs classify patients based on their reason for admission (the base APR DRG, as determined by the principal diagnosis or the most important surgical procedure) and the severity of illness (classified as severity level 1 through 4) within each base APR DRG. Across base APR DRGs and across the severity levels within each base APR DRG, the rate of each PPC will vary. For example, the table below contains the Maryland PPC rates for some of the PPC and base APR DRG combinations in which the MHA comments proposed excluding the complication as a PPC for the base APR DRG.

Admission APR DRG	Admission SOI	PPC 3 Respiratory Failure
140 COPD	1	0.590%
140 COPD	2	0.785%
140 COPD	3	2.603%
140 COPD	4	3.181%
Admission APR DRG	Admission SOI	PPC 3 Respiratory Failure
460 Renal Fail	1	0.000%
460 Renal Fail	2	0.198%
460 Renal Fail	3	0.868%
460 Renal Fail	4	4.314%

As of July 30, 2009

Admission APR DRG	Admission SOI	PPC14 V-Tach
194 Heart Failure	1	0.167%
194 Heart Failure	2	0.302%
194 Heart Failure	3	0.601%
194 Heart Failure	4	1.546%
Admission APR DRG	Admission SOI	PPC14 V-Tach
720 Septicemia	1	0.000%
720 Septicemia	2	0.434%
720 Septicemia	3	1.194%
720 Septicemia	4	2.875%

As these examples illustrate the PPC rate varies across base APR DRGs and severity levels within APR DRG. By using statewide PPC rates by APR DRG to compute an expected PPC rate for each PPC for each hospital, the relative risk of a PPC can taken into account.

With the case-mix and severity of illness risk adjustment allowed by APR DRGs, patients that are at comparable risk for complications based on their underlying conditions can be compared across hospitals. There is therefore no need to exclude most categories of patients simply because they are at higher risk of certain complications.

The comments have suggested the addition of a number of additional exclusions to the PPC logic. The PPC clinical exclusion criteria are used for identifying admissions where a specific PPC may not be preventable and therefore is not assigned. The clinical exclusions most commonly identify complications that are redundant, or a natural consequence of one of the diagnoses present on admission, and therefore not preventable.

ADDITIONAL GENERAL COMMENTS

General- Ongoing Input to HSCRC and 3M on PPCs -Karen Jerome, MD, Holy Cross Hosp 7/8/09
We hope to have the opportunity to perform in depth analysis of the other PPCs as well. We suspect that issues similar to those identified already may exist for a number of the PPCs. There may also be inappropriately broad exclusions that warrant removal from some of the PPCs. Hopefully, other hospitals will have had the chance to delve into the other PPCs so that HSCRC and 3M will thus receive constructive feedback on many, if not all, of the PPCs.

Response:

Hospital Industry Comments and HSCRC Responses to Clinical Assignment and Exclusion Logic of the Maryland Hospital Acquired Conditions/ 3M Potentially Preventable Complications

As of July 30, 2009

Following the 7/24/09 vetting session, HSCRC is planning to convene a clinical advisory group in the Fall of this year to support an ongoing process of receiving and responding to input that informs the refinement of the PPCs used as the basis of our payment adjustments for Maryland Hospital Acquired Conditions.

General- Inconsistencies in exclusions across PPCs - Karen Jerome, MD, Holy Cross Hosp 7/8/09

There appears to be some inconsistency in the application of exclusions. Certain PPCs have exclusions that clearly predispose the patient to the PPC, while other similar PPCs do not allow for the same exclusions. For example, Group 29 (Acute MI) is an exclusion for PPC 11 (Acute MI). Group 29 is not, however, an exclusion for PPC 13 (Other Cardiac Complications) or PPC 14 (Ventricular Fibrillation/Cardiac Arrest). We recommend consistent application of exclusions to clinically related PPCs.

Response:

We have reviewed many of the exclusion groups for PPCs with an eye to consistency, and will make a few modifications to the PPC methodology that will be noted through the remainder of this document.

With specific regard to PPC 13, we agree that exclusion group 29 (Acute MI) should be added. Our original intent was to have no exclusions for PPC 14, and at this point we prefer to continue that policy. While it is true that longer ischemic times for patients with acute MI, which could occur in patients who delay seeking care after the onset of chest pain, could increase the risk of ventricular fibrilation or cardiac arrest, this should not introduce bias unless certain hospitals are more likely to receive patients who delay seeking care. If these types of patients are randomly distributed, there should be no bias.

Here is data from Maryland for exclusion group 29:

> 61 out of the 537 assigned to PPC 13 met the criteria for exclusion group 29. PPC 13 rate is 0.11% and for the cases that met the criteria for exclusion group 29, the PPC 13 rate is 0.63% compared to an expected rate of 0.65%
>
> 183 out of the 1,554 assigned to PPC 14 met the criteria for exclusion group 29. PPC 14 rate is 0.29% and for the cases that met the criteria for exclusion group 29, the PPC 14 rate is 1.77% compared to an expected rate of 1.49%

General- Inconsistencies in exclusions across PPCs- MHA PPC Clinical Workgroup- 7/8/09

The following PPCs provide examples of exclusion application concerns:

PPC 36- Acute Mental Health Changes- An example of exclusion groups not being consistent between clinically similar PPCs is exclusion group 76 - Sepsis and Disseminated Infections. This is an exclusion for both PPC 2 - Extreme CNS conditions and PPC 47 - Encephalopathy, yet it is not an exclusion for PPC 36 - Acute Mental

Health Changes. If the logic is that exclusions are present because the PPC might be a "natural consequence" of the exclusion diagnoses, then it is questionable why sepsis would naturally progress to extreme CNS conditions, such as anoxic brain damage or coma or to encephalopathy, but not acute mental health changes.

Response:
On review, we agree with the suggestion to add exclusion group 76 to PPC 36.

PPC6- Aspiration pneumonia- An example of exclusion groups that may be inappropriate. If the logic that exclusions are present because the PPC might be a "natural consequence" of the exclusion diagnoses, it is questionable why aspiration pneumonia is considered a natural consequence of the following exclusion groups: 71 - Hematologic Immunocompromise; 76 - Sepsis and Disseminated Infections; 85 - Neuromuscular Disorders; 86 - Alzheimer disease and other dementia. Is the PPC logic then stating the aspiration is not preventable in any patient admitted for example with sepsis or with multiple sclerosis or with aplastic anemia?

Response:
We agree with the suggestion to remove all of the exclusion groups listed above (71, 76, 85, 86) in order to be consistent. In general, the APR DRG case-mix risk adjustment should deal effectively with the differences in risk among these various group. There are only 3 cases assigned to PPC 6 that met the criteria for exclusion group 71, zero cases for exclusion group 76 and 1 case for exclusion group 85.

Here is supporting data from Maryland for exclusion group 71:

> 3 out of the 1,059 assigned to PPC 6 met the criteria for exclusion group 71. PPC 6 rate is 0.23% and for the cases that met the criteria for exclusion group 71, the PPC 6 rate is 0.16%

Here is supporting data from Maryland for exclusion group 85:

> 1 out of the 1,059 assigned to PPC 6 met the criteria for exclusion group 85. PPC 6 rate is 0.23% and for the cases that met the criteria for exclusion group 85, the PPC 6 rate is 0.37%

PPC 45-Retained foreign body postoperatively- This PPC is also a NQF never event. There should be no exclusions for this PPC. The PPC logic appears to be stating that in an admission for an OR procedure for a device infection, it is not preventable to leave a foreign body in that patient during the surgical procedure.

Response:
We agree that PPC 45 should be considered preventable in all circumstances, and therefore have eliminated the application of the global exclusion logic for PPC 45.

PPC 54- Infections due to central venous cathaters- The exclusions for this PPC include infections, malfunctions of other devices and implants. How is a central line infection a

natural consequence of these diagnoses yet a systemic serious infection like sepsis is not an exclusion that would predispose the patient to have a line infection?

Response:
We agree with the suggestion to remove all of the exclusion groups in order to be consistent. The APR DRG case-mix risk adjustment should deal effectively with the differences in risk among these various group.

Here is supporting data from Maryland for removing exclusion group 40:

> 5 additional cases would be assigned to PPC 54 that met the criteria for exclusion group 40. PPC 54 rate is 0.04%, for the cases that met the criteria for exclusion group 40, the PPC 54 rate is 0.06% compared to an expected rate of 0.17%

Here is supporting data from Maryland for removing exclusion group 69:

> 10 additional cases would be assigned to PPC 54 that met the criteria for exclusion group 69. PPC 54 rate is 0.04%, for the cases that met the criteria for exclusion group 69, the PPC 54 rate is 0.13% compared to an expected rate of 0.17%

Here is supporting data from Maryland for removing exclusion group 101:

> 3 additional cases would be assigned to PPC 54 that met the criteria for exclusion group 101. PPC 54 rate is 0.04%, for the cases that met the criteria for exclusion group 101, the PPC 54 rate is 0.06% compared to an expected rate of 0.22%

General- Exclusion groups missing pertinent diagnoses -Karen Jerome, MD, Holy Cross Hosp, 7/8/09
Some exclusion groups are missing pertinent diagnoses and should be expanded. For example, Group 85 (Neuromuscular Disorders) is an exclusion group for PPC 6 (Aspiration Pneumonia). Group 85 does not include the following neuromuscular disorders, all of which predispose patients to aspiration: polymyositis, dermatomyositis, Guillain-Barre syndrome, Parkinson disease. Under the APR-DRG system, the hospital is encouraged to be as specific as possible in coding secondary diagnoses. And the patient's clinical story is more completely told when this is done. However, in the case of a patient with polymyositis, a hospital might be better served coding less specifically to myopathy NOS, which is in Group 85, in order to avoid PPC 6.

Response:
We agree that the existing list of neuromuscular disorders is incomplete, and will be adding additional codes to exclusion group 85. Further, we have already added diagnosis code 7104 Polymyositis to exclusion group 85 for the PPC v26 July 2009 release.

General- Application of exclusions whether POA or not-Karen Jerome, MD, Holy Cross Hosp, 7/8/09

As of July 30, 2009

Some exclusions should apply whether or not conditions are present on admission (POA). Certain conditions (e.g. seizures, thrombocytopenia) may develop during a hospital stay and can result in unpreventable complications that will then be assigned as PPCs. However, if those conditions had been POA and had resulted in the same complications, the PPCs would be excluded. This appears to be an inconsistent application of the exclusion logic. Specific examples are listed below in discussion of PPCs 6 and 27.

Response:

The ability to create logic that would account for complications that arise as unpreventable complications of other in-hospital complications is a good comment, however is beyond the scope of this current PPC update. We believe these circumstances are rare and therefore have limited impact on the overall MHAC payment policy adjustments.

General- Concern about patient transfers who develop PPCs -Karen Jerome, MD, Holy Cross Hosp, 7/8/09

Hospitals accepting patients transferred from other facilities may run the risk of being assigned PPCs for which they are not truly responsible. For example, a patient may come from another facility with a foley catheter in place and then receive a UTI diagnosis after arrival at the new hospital. This will result in assignment of PPC 22. Another scenario is the transfer patient who arrives on antibiotics and is subsequently diagnosed with C. difficile. PPC 21 will then be assigned.

Response:

A person who arrives with a foley in place who is found to have a UTI shortly after admission could reasonably be coded as having the UTI POA if documented from the physician as being present on admission. According to coding clinic:

> "These guidelines are not a substitute for the provider's clinical judgment as to the determination of whether a condition was/was not present on admission. The provider should be queried regarding issues related to the linking of signs/symptoms, timing of test results, and the timing of findings. "

General- Unintended consequence of avoiding complex patients- Karen Jerome, MD, Holy Cross Hosp 7/8/09

As we consider that the intent of the MHAC program is to improve overall quality of hospital care in the state, we are left to wonder if just the opposite will occur in certain circumstances. Will hospitals be disinclined to accept transfers of patients with complex conditions for fear that they'll then be penalized through assignment of PPCs over which they have no control? Will hospitals be encouraged to "game" the system by coding less specifically in order to avoid PPCs? We hope that these questions will be pondered and addressed as the program is implemented.

As of July 30, 2009

Response:

The current rate setting policy uses APR DRGs as the risk adjustment method so that hospitals will be compensated appropriately when treating a more complex mix of patients. Further, the rate setting system incentivizes hospitals to code as completely as possible in order to maximize their case mix index and revenue target. The cost of the complication is also built into the relative weights. So, while more complex patient have a higher risk of complications, they also have a high profitability opportunity should the hospital be able to effectively manage, treat and avoid the potentially preventable complications compared to the statewide average.

General- J. Kevin Lynch MD, Upper Chesapeake Health, 7/8/09

Comments are directed towards the PPC proposal in general. When CMS introduced their list of preventable complications, there was adequate published data that supported CMS's assertion that these diagnoses were in fact preventable. Furthermore, there were published articles detailing best practices which any institution could mimic and prevent these targeted complications. The list of PPC's being proposed for use by the HSCRC (excluding the CMS diagnoses already targeted) is not supported by any such published data nor are there articles that propose some interventions to prevent these so-called "preventable" complications. To use "stroke" as an example, how am I supposed to anticipate that a pt admitted for Pneumonia with Sepsis is about to have a stroke on hospital day #3? Should I now do carotid studies, lipid profiles, general cardiovascular risk assessment for every pt admitted? Is there really data that suggests this cost effective health care with better outcomes? Is the large bank of raw data gleaned from the California hospitals payer data base somehow applicable to the nation? Is this how we now want to make health care decisions? How do the demographics of these California hospitals compare with the population of Harford County, Md.? What is a statistically significant deviation from the mean for each of these PPC's? Who determines that and on what published data is this based? If under-performing hospitals are finacially penalized,how can they recover to a more acceptable standard of care? I could go on for a long time with questions because this PPC concept is not rooted in EVIDENCED-BASED MEDICINE. It is an interesting concept for which clinical data is severely lacking. If there really are reams of data and evidence based guidelines that would help us prevent in-hospital strokes and all of the other PPC diagnoses, you will have support of the entire medical community. We are all interested in optimizing patient safety in our hospitals. However, at this time, there is not evidence to support a model of financial rewards or penalties based on PPC variations which may well be random and not at all related to practice patterns or quality of care. Unfortunately, I am unable to attend the meeting at HSCRC this week. I'll be taking care of inpatients, doing my best to make sure each patient benefits from the best possible level of care utilizing evidence-based medicine.

Response:

Dr Lynch raises a number of questions. Regarding the issue of post-admission stroke: strokes that are unlikely to have been preventable should be expected to occur at a

constant risk-adjusted rate across hospitals; only if a hospital has a risk-adjusted rate that is higher than its peer hospitals does an issue arise.

The question about how poorly performing hospitals can be expected to improve if they receive financial penalties is a legitimate policy question. The current rate setting system already includes the average cost associated with preventable complications into the relative weights are therefore, revenue targets. Hospitals already have every incentive to reduce potentially preventable complications and associated cost in order to impact their overall profit margins while improving patient quality.

General- James E. Nagel, MD, CCS, Upper Chesapeake Health System, 7/14/09
The ICD-9 on which PPC is based is 'on the clock'. CMS and NCHS have made very clear that the implementation date for ICD-10-CM and ICD-10-PCS is October 1, 2013 for all covered entities and those ICD-9 codes will not be accepted for any encounters after that date. This means that if the 3M PPC proposal is accepted by HSCRC, it will be 'sun setting' in 2013.

Response:
3M HIS will be converting the PPC logic into ICD-10-CM and ICD-10-PCS by early 2013. As the developers of the ICD-10-PCS, 3M HIS has already provided CMS and CDC tools to map ICD-9-CM to ICD-10CM diagnosis and ICD-9-CM to ICD-10-PCS. These tools are called General Equivalent Maps "GEMS" and are available on the CMS web site. 3M HIS plans on having an initial set of MS-DRGs converted this fall for CMS.

General- Peggy Vaughan, M.D., Upper Chesapeake Health, 7/13/09
The hospital case mix is too complex to use frequency of occurrence to determine gain or loss. Case mix is affected by hospital location, types of pts admitted, number of admissions, etc.

Response:
The MHAC payment policy compares a hospital frequency of occurrence for individual PPCs against a risk adjusted expected occurrence. The risk adjustment methodology is the same APR DRGs used for the hospital case mix system. The MHAC payment policy adjust for a hospitals CPC, patients severity at the time of admission, type of patients admitted, and the number of admission.

General- Peggy Vaughan, M.D., Upper Chesapeake Health, 7/13/09
Problems not addressed by the current MHAC proposal:

- There is no provision to deal with multiple PPC's as a result of the patient becoming increasingly ill during the hospitalization. Examination of our HSCRC FY2008 PPC data revealed that significant number of our cases have multiple PPCs (as many as 8 in one case) which resulted in multiple penalties being assessed for the same case inflating the hospital total number of PPCs and decreasing our overall performance rating. This also translates to excessive financial penalty for medically complex patients, typically with a long LOS. We

believe there should be an outlier methodology to moderate the effects of these patients?

- Review of ~ 200 PPC cases @ Upper Chesapeake and Harford Memorial revealed:
  - Average LOS = 11.2 days or over 3X our hospital averages. There were also 31 deaths in this group. Should there be exclusions for long LOS and death? Long LOS seems almost a guarantee of a PPC.
  - HSCRC data limited by 30 codes. In many cases, the PPC &/or exclusion ICD-9 codes occur after code 30 and would therefore not be reported.

- We believe POA=N diagnoses should be excluded from APR-DRG SOI and ROM calculations as was proposed by Hughes et al. in their original description of PPC and was in the original HSCRC proposal.
- Proposed exclusions based on LOS cannot be done, as there is no information sent to HSCRC to determine which day the condition occurred if it was not POA.
- Are non-exempt E codes, globally excluded from PPC?

Response:
Just like the charges and cost associated for a case with multiple PPCs are used in relative weights and revenue targets, the cost associated with multiple PPCs are also taken into consideration in the MHAC payment policy. The MHAC payment policy takes into account the impact of cases having multiple PPCs assigned through the regression approach in order to estimate the cost of each individual PPC. While cases that have one potentially preventable complication are more likely to have multiple complications and increase risk of dying, tracking cases early during the admission and using PPCs as trigger tool to identify high risk cases can assist hospitals in preventing the second and third PPC and avoiding the associated cost and long lengths of stay due to the additional potentially preventable complications.

The PPCs are a clinically based methodology and limit the use of outcome measures such as LOS, death or charges in the definition of the logic. LOS is used with clinical information to further refine the PPC assignment and/or exclusion logic.

The APR DRG and SOI assignment used in the MHAC methodology is based on the admission APR DRG logic. The admission APR DRG logic is described in the PPC definition manual and the APR DRG v26 definition manual. Only under very specific limited circumstances are diagnosis codes with a POA value of N used in the admission APR DRG and SOI assignment.

The exclusion and PPC assignment logic that incorporates LOS is the LOS for the patient, not a specific diagnosis. The date of the procedure is provided in the information submitted to the HSCRC and is used in the PPC logic on a procedure by procedure basis.

As of July 30, 2009

Non-exempt E codes are currently used on a limited basis in the PPC assignment logic. For example PPC 64 Other In-hospital Adverse Events includes E-code for falls as well as a few other "never event" codes.

PPC-SPECIFIC COMMENTS AND RESPONSES

PPC 1 – Stroke or Intracranial Hemorrhage- MHA PPC Clinical Workgroup 7/7/09

- Recommended Additional Exclusions
  - Add exclusion – TIA (435.9)
    - Rationale: If a patient is admitted with a TIA, natural progression of the condition may be to evolve into a CVA, which follows the same logic of exclusion group 3 and 4 for patients admitted with a CVA or intracranial hemorrhage are excluded from this PPC

Response:

Our Neurology consultants point out that if an individual is diagnosed as having a TIA POA and is subsequently reported as having stroke after admission (not POA), it means that the individual had resolution of their presenting CNS symptoms within no more than 24 hours (usually much less than that) and then went on to develop CNS deficits again with evidence of a completed stroke. Although not always preventable, this course of events is undesirable, and we would be concerned about the processes of care in a hospital that had higher rates of such a sequence compared to similar hospitals.

Here is supporting data from Maryland for exclusion code TIA 435.9:

4 out of the 741 assigned to PPC 1 met the criteria for exclusion code TIA. PPC 1 rate is 0.14%, however for the cases that met the criteria for exclusion code TIA, the PPC 1 rate is 0.08% compared to an expected rate of 0.07%

PPC 2 – Extreme CNS Complications- MHA PPC Clinical Workgroup 7/7/09

- Recommended Additional Exclusions
  - Add exclusion group 12 (Concussion, Closed Skull Fx, etc)
  - Add exclusion – concussion with moderate LOC (850,2,3,4)
  - Add exclusion group 18 (Pulmonary Edema & Respiratory Failure)
    - Rationale: CNS complication may be late effect/sequellae of respiratory failure, head injury and concussion and therefore may not appear immediately on admission
  - Add exclusion group 9 (Severe Non-Traumatic Brain Injury, Coma and Encephalopathy
    - Rationale: If a patient is admitted with anoxic brain damage, and goes into coma after admission, this will still trigger the PPC

Response:

We believe that an individual with a concussion or closed skull fracture, even with moderate loss of consciousness, would be unlikely to develop one of the serious CNS events in this PPC as natural consequence of the initial injury. In the circumstance of a

person with a skull fracture who also had an intracranial hemorrhage that caused cerebral edema or brain compression that became apparent after admission, the hemorrhage should be coded POA and prevent the patient from being assigned this PPC. In the case of an individual with respiratory failure or pulmonary edema, we would expect that if these conditions led to a major CNS complication, it would have been because the individual also was in shock. Shock is a global exclusion that would make the individual exempt from any PPC assignment.

In the Maryland data, there are zero cases assigned to PPC 2 that met the criteria for exclusion group 12. There are zero cases assigned to PPC 2 with a concussion with moderate LOC diagnosis codes 8502, 8503 and 8504.

Here is supporting data from Maryland for exclusion group 18:

> 33 out of the 267 assigned to PPC 2 met the criteria for exclusion group 18. PPC 2 rate is 0.06%, however for the cases that met the criteria for exclusion group 18, the PPC 2 rate is 0.37% compared to an expected rate of 0.35%

We do agree that exclusion group 9 should be added to this PPC.

PPC 3 – Acute Pulmonary Edema and Respiratory Failure without Ventilation- MHA PPC Clinical Workgroup 5/25/09

- Recommended Additional Exclusions
  - Add exclusion group 62 (Acute or Chronic Renal Failure)
  - Add exclusion group 23 (COPD) & 24 (Asthma)
  - Add exclusion of code V46.2 (oxygen dependence)
    - Rationale: Patients with any of the above diagnoses present on admission are presenting with existing respiratory compromise and are at much higher risk to develop respiratory failure when in a compromised inpatient state

Response:

Regarding the proposed addition of exclusion groups 62, 23 and 24 for PPC 3, see the overview section at the beginning of our response regarding risk adjustment using APR DRGs.

Here is supporting data from Maryland for exclusion group 62:

> 573 out of the 3,831 assigned to PPC 3 met the criteria for exclusion group 62. PPC 3 rate is 0.78%, however for the cases that met the criteria for exclusion group 62, the PPC 3 rate is 1.31% compared to an expected rate of 1.38%

Here is supporting data from Maryland for exclusion group 23:

> 1,332 out of the 3,831 assigned to PPC 3 met the criteria for exclusion group 23. PPC 3 rate is 0.78%, however for the cases that met the criteria for exclusion group 23, the PPC 3 rate is 2.0% compared to an expected rate of 1.5%

Here is supporting data from Maryland for exclusion group 24:

166 out of the 3,831 assigned to PPC 3 met the criteria for exclusion group 24. PPC 3 rate is 0.78%, however for the cases that met the criteria for exclusion group 24, the PPC 3 rate is 0.47% compared to an expected rate of 0.58%

We have limited our exclusion groups to conditions for which pulmonary edema or respiratory failure may not be preventable, such as acute CHF, where, more importantly, the clinical distinction between acute CHF and pulmonary edema could legitimately be unclear, and sepsis, which may lead to adult respiratory distress syndrome within a day or 2 after admission.

We agree that patients with code V46.2 oxygen dependence present on admission may identify patients at particularly high risk of respiratory failure that may not be addressed by our highest severity level, and plan to add this code to the exclusion logic.

PPC 4 – Acute Pulmonary Edema and Respiratory Failure with Ventilation - MHA PPC Clinical Workgroup 5/25/09

- Recommended Inclusion Change
  - Add inclusion requirement of same diagnosis codes as PPC3 for respiratory failure and pulmonary edema for all scenarios
  - Add requirement of an 'AND' relationship between insertion of ET tube and mechanical ventilation and diagnosis codes
    - Rationale: Without the additional requirement of a respiratory failure or pulmonary edema diagnosis code, patients who have had head/neck or other surgery where airway protection is critical post-operatively and have planned mechanical ventilation and airway support for over 48 hours post-operatively will be erroneously assigned this PPC. Also patients that have had cardiac arrest and are intubated and ventilated but do not have a diagnosis of respiratory failure or pulmonary edema will be inappropriately assigned this PPC.

Response:

The definition manual is missing the "OR" operator in the PPC 4 assignment criteria between the 2nd and 3rd sections (following procedure code 96.72, Continuous mechanical ventilation greater than 96 hours). To clarify, patients who require more than 96 hours of ventilation post-op are considered to have had respiratory failure. We believe that any planned prolonged post-op ventilation greater than 96 hours, for airway protection or any other reason, must be exceedingly rare. Any patient who is continuously ventilated for any duration less than 96 hours (codes 96.70 and 96.71) will not be assigned PPC 4.

Patients with codes 96.70 and 96.71 will only be assigned PPC 4 if the procedure takes place at least one day after the O.R. procedure, because this implies re-initiation of

mechanical ventilation after the patient had been extubated post-operatively. Repeat intubation and mechanical ventilation implies post-op respiratory failure.

The logic for PPC 4 is:

MV (9670 or 9671) criteria

or

LTMV (9672) criteria

or

sdx diag AND proc endotracheal tube 9604

Regarding the proposed addition of exclusion groups 62 and 23 for PPC 4, see the overview section at the beginning of our response regarding risk adjustment using APR DRGs.

Here is supporting data from Maryland for exclusion group 62:

> 343 out of the 1,521 assigned to PPC 4 met the criteria for exclusion group 62. PPC 4 rate is 0.31%, however for the cases that met the criteria for exclusion group 62, the PPC 4 rate is 0.79% compared to an expected rate of 0.76%

Here is supporting data from Maryland for exclusion group 23:

> 490 out of the 1,521 assigned to PPC 4 met the criteria for exclusion group 23. PPC 4 rate is 0.31%, however for the cases that met the criteria for exclusion group 23, the PPC 4 rate is 0.74% compared to an expected rate of 0.55%

Here is supporting data from Maryland for exclusion group 24:

> 73 out of the 1,521 assigned to PPC 4 met the criteria for exclusion group 24. PPC 4 rate is 0.31%, however for the cases that met the criteria for exclusion group 24, the PPC 4 rate is 0.21% compared to an expected rate of 0.23%

We have limited our exclusion groups to conditions for which pulmonary edema or respiratory failure may not be preventable, such as acute CHF, where the clinical distinction between acute CHF and pulmonary edema could legitimately be unclear, and sepsis, which may lead to adult respiratory distress syndrome within a day or 2 after admission.

We agree that patients with code V46.2 oxygen dependence present on admission may identify patients at particularly high risk of respiratory failure that may not be addressed by our highest severity level, and plan to add this code to the exclusion logic.

As of July 30, 2009

PPC 6- Aspiration Pneumonia- Karen Jerome, MD, Holy Cross Hosp 7/8/09

In addition to exclusion Group 85 being incomplete, as mentioned above, a number of categories of conditions that frequently result in aspiration have been completely overlooked. Conditions causing altered levels of consciousness (e.g. hepatic and metabolic encephalopathies, alcoholism, drug overdose, cerebrovascular accident) are not exclusions. Equally common, and also not excluded, are situations causing mechanical disruption of the usual defense barriers (e.g. nasogastric tube, EGD, bronchoscopy, tracheostomy, endotracheal intubation). Nor are esophageal disorders such as stricture, neoplasm, tracheoesophageal fistula, and scleroderma. These conditions and circumstances should be added as exclusion groups.

A further issue, mentioned in the general concerns above, is that seizures, present on admission, are an exclusion. If, however, a patient first manifests seizures during his hospital stay and then develops aspiration pneumonia, PPC 6 is assigned.

Response:

We agree with the earlier suggestion to remove all of the exclusion groups in order to be consistent. The APR DRG case-mix risk adjustment should deal effectively with the differences in risk among these various group.

PPC 6 – Aspiration Pneumonia- MHA PPC Clinical Workgroup 7/7/09

- Recommended Additional Exclusions
  - Add exclusion group 3 (Intracranial Hemorrhage)
  - Add exclusion group 4 (CVA)
    - Rationale: Stroke and intracranial hemorrhage are very similar to other already included exclusions, such as concussion, brain contusion, and neuromuscular disorders, and by nature of the diagnosis, aspiration may be an expected event during the hospitalization
    - If these exclusion groups are not added, would recommend then to remove exclusion group 71, 76, 85 and 86 since the logic does not follow why those groups would be excluded and CVA/Intracranial Hemorrhage would not.

Response:

We agree with the suggestion to remove all of the exclusion groups in order to be consistent. The APR DRG case-mix risk adjustment should deal effectively with the differences in risk among these various group.

Here is data from Maryland for exclusion group 3:

> 29 out of the 1,059 assigned to PPC 6 met the criteria for exclusion group 3. PPC 6 rate is 0.23% and for the cases that met the criteria for exclusion group 3, the PPC 6 rate is 2.38% compared to an expected rate of 1.85%

As of July 30, 2009

Here is data from Maryland for exclusion group 4:

105 out of the 1,059 assigned to PPC 6 met the criteria for exclusion group 4. PPC 6 rate is 0.23% and for the cases that met the criteria for exclusion group 4, the PPC 6 rate is 1.65% compared to an expected rate of 1.49%

PPC 7 – Pulmonary Embolism- MHA PPC Clinical Workgroup 7/7/09

- Recommended Additional Exclusions
  - Add exclusion group 73 (Coagulation and Platelet Disorders)
    - Rationale: While any patient can develop a pulmonary embolism even with optimal anticoagulation, patients in this category are at a much higher risk to develop a pulmonary embolism with proper anticoagulation efforts because of their clotting disorders. Patients with bleeding disorders are also included in this exclusion group – these patients are usually unable/inappropriate to anticoagulate due to their inability to appropriately clot, yet may still develop a pulmonary embolism

Response:

APR DRG risk adjustment deals with the problem of varying susceptibility and higher risk groups per the overview section at the beginning of our response regarding risk adjustment using APR DRGs. Here is supporting data from Maryland for exclusion group 73:

34 out of the 548 assigned to PPC 7 met the criteria for exclusion group 73. PPC 7 rate is 0.11%, however for the cases that met the criteria for exclusion group 73, the PPC 16 rate is 0.19% compared to an expected rate of 0.19%

PPC 8 – Other Pulmonary Complications- MHA PPC Clinical Workgroup 7/7/09

- Recommended Inclusion Change
  - Remove spontaneous pneumothorax (512.0,8)
    - Rationale: These pneumothoraces are spontaneous in nature and therefore are not as a result of an iatrogenic event or injury and are not clearly or necessarily preventable

Response:

We agree that diagnosis code 5120 Spontaneous Pneumothorax is not as preventable and have removed it from PPC 8

PPC 10 – Congestive Heart Failure- MHA PPC Clinical Workgroup 5/25/09

- Recommended Additional Exclusions
  - Add exclusion group 30 (Acute & Subacute Endocarditis)
  - Add exclusion group 24 (COPD)
  - Add exclusion - Pulmonary Hypertension (416.0, 8,9)
  - Add diagnosis codes for specified chronic heart failure that are not included in exclusion group 33 (428.22, 32, 42)

- Rationale: Patients with any of the above diagnoses present on admission will have a higher risk of developing an acute episode of CHF while in the hospital. Heart failure is also an exclusion for PPC 8 - Other Pulmonary Complications, for which acute COPD exacerbation is an inclusion. It would seem logical that if one was an exclusion for the other, that the opposite would hold true.

Response:
We agree that exclusion group 30 is a useful addition to the PPC exclusion logic and will add it.

Regarding the proposed addition of exclusion group 24 and the diagnosis codes for pulmonary hypertension for PPC 10, see the overview section at the beginning of our response regarding risk adjustment using APR DRGs. Here is supporting data from Maryland for exclusion group 24:

> 62 out of the 1,988 assigned to PPC 10 met the criteria for exclusion group 24. PPC 10 rate is 0.44%, however for the cases that met the criteria for exclusion group 24, the PPC 10 rate is 0.19% compared to an expected rate of 0.34%

Here is data from Maryland for exclusion of Pulmonary Hypertension codes:

> 24 out of the 1,988 assigned to PPC 10 met the criteria for exclusion codes. PPC 10 rate is 0.44%, however for the cases that met the criteria for exclusion codes, the PPC 10 rate is 4.82% compared to an expected rate of 1.51%

Since the PPC 10 rate for Pulmonary Hypertension is higher than expected, we are considering updating the APR DRGs and promote PH to a higher severity level when it occurs with CHF.

With specific regard to the proposal to add chronic CHF codes to Exclusion Group 33: Patients with acute CHF on admission are excluded, but patients with only chronic CHF are not. We believe it is important to identify the rates at which patients with underlying chronic but stable CHF deteriorate to acute CHF in hospital.

PPC 11 – Acute Myocardial Infarction, General- Peggy Vaughan, M.D., Upper Chesapeake Health, 7/13/09

- Recommended Additional Exclusions
  - Diagnosis code for healed myocardial infarction (412)
  - Diagnosis codes for coronary atherosclerosis (414.00-414.07)
  - Diagnosis code chronic total occlusion of the coronary artery (414.2)
  - Diagnosis code for coronary artery bypass status (V45.81) and Percutaneous transluminal coronary angioplasty status(V45.82)
- Patients with any of the above diagnoses present on admission have a higher risk of developing an acute myocardial infarction while in the hospital

As of July 30, 2009

Response:

We agree that there should be additional exclusions that pertain to acute cardiac events that directly relate to an MI. Thus the APR-DRGs that include unstable angina at admission will be added to the exclusions. The following codes are recommended to be added to the exclusion for PPC 11 when they are coded as PDx or Sdx POA. Twenty cases in the Maryland data met the exclusion criteria below that were assigned to PPC 11.

4110 Postmyocardial infarction syndrome
4111 Intermediate coronary syndrome
41181 Other acute and subacute forms of ischemic heart disease, acute ischemic heart disease without myocardial infarction
41189 Other acute and subacute forms of ischemic heart disease, other
4131 Prinzmetal angina

Further, codes 41402-41407 non-native vessels for coronary atherosclerosis will be added to the exclusions. However, we do not recommend exclusion for code 41400 or 41401. These are more common conditions and the criteria for admission can be highly variable in which one would be concerned about a higher rate AMI for those patients post admission. Further, we encourage documenting and coding one of the codes that are excluded (indicating unstable angina of some type) as there is a wide range of clinical presentation for the coronary atherosclerosis codes.

Here is data from Maryland for exclusion Diagnosis code for healed myocardial infarction (412):

115 out of the 1,544 assigned to PPC 11 met the criteria for exclusion codes. PPC 11 rate is 0.30%, however for the cases that met the criteria for exclusion codes, the PPC 11 rate is 0.73% compared to an expected rate of 0.45%

Here is data from Maryland for exclusion Diagnosis codes for coronary atherosclerosis (414.00-414.07):

892 out of the 1,544 assigned to PPC 11 met the criteria for exclusion codes. PPC 11 rate is 0.30%, however for the cases that met the criteria for exclusion codes, the PPC 11 rate is 0.87% compared to an expected rate of 0.50%

Here is data from Maryland for exclusion Diagnosis codes for coronary atherosclerosis 414.00-414.01):

886 out of the 1,544 assigned to PPC 11 met the criteria for exclusion codes. PPC 11 rate is 0.30%, however for the cases that met the criteria for exclusion codes, the PPC 11 rate is 0.86% compared to an expected rate of 0.5%

Here is data from Maryland for exclusion Diagnosis codes for coronary atherosclerosis (414.02-414.07):

29 out of the 1,544 assigned to PPC 11 met the criteria for exclusion codes. PPC 11 rate is 0.30%, however for the cases that met the criteria for exclusion codes, the PPC 11 rate is 2.17% compared to an expected rate of 0.69%

Here is data from Maryland for exclusion Diagnosis code chronic total occlusion of the coronary artery (414.2):

17 out of the 1,544 assigned to PPC 11 met the criteria for exclusion codes. PPC 11 rate is 0.30%, however for the cases that met the criteria for exclusion codes, the PPC 11 rate is 1.79% compared to an expected rate of 0.73%

Here is data from Maryland for exclusion Diagnosis code for coronary artery bypass status (V45.81) and Percutaneous transluminal coronary angioplasty status (V45.82):

16 out of the 1,544 assigned to PPC 11 met the criteria for exclusion codes. PPC 11 rate is 0.30%, however for the cases that met the criteria for exclusion codes, the PPC 11 rate is 0.58% compared to an expected rate of 0.46%

PPC 12 – Cardiac Arrhythmias and Conduction Disturbances- MHA PPC Clinical Workgroup 5/25/09

- Recommended Additional Exclusions
  - Add exclusion for procedure of electrophysiological studies – invasive and non-invasive
  - Add exclusion for procedure of AICD implantation
    - Rationale: These procedures likely include induced arrhythmia, which is a codable event (Coding Clinic 1Q 2008). It is not appropriate for these patients to be assigned a PPC, when the arrhythmia is an induced event, not a hospital complication
    - If it is inappropriate to have an exclusion for all patients with EP studies or AICD implantation, can we consider a coding rule for Maryland that any induceable arrhythmia is POA=Y, since if the rhythm was induceable, it was likely POA.

Response:

Clarification: This PPC only applies to patients who were admitted for Cardiothoracic surgery (the PPC definition refers to "Cardiac Surgical admission DRGs" but the correct name of the section is "Thoracic DRGs" in appendix M).

Regarding the proposed additional exclusion of the diagnosis codes for pulmonary hypertension for PPC 12, see the overview section at the beginning of our response regarding risk adjustment using APR DRGs.

Here is data from Maryland for exclusion of Pulmonary Hypertension codes:

1 out of the 774 assigned to PPC 12 met the criteria for exclusion codes. PPC 12 rate is 30.21%, however for the cases that met the criteria for exclusion codes, the PPC 12 rate is 16.67% compared to an expected rate of 34.70%

As indicated in the Coding Clinic reference, the induced arrhythmia is a codeable because it is used to diagnosis/confirm the presence of an underlying arrhythmia. Thus, the induced arrhythmia verifies the patient has an existing arrhythmia and therefore the

arrhythmia should be coded as present on admission, and would not be a PPC. From the supplement to the *ICD-9-CM Official Guidelines for Coding and Reporting* on the guidelines for coding of the present on admission indicator:

"Diagnoses subsequently confirmed after admission are considered present on admission if at the time of admission they are documented as suspected, possible, rule out, differential diagnosis, or constitute an underlying cause of a symptom that is present at the time of admission."

"In some clinical situations, it may not be possible for a provider to make a definitive diagnosis (or a condition may not be recognized or reported by the patient) for a period of time after admission. In some cases it may be several days before the provider arrives at a definitive diagnosis. This does not mean that the condition was not present on admission."

Since the arrhythmia should be coded as present on admission there is no need for an exclusion for electrophysiological studies and AICD implantation for PPC 12.

PPC 13 – Other Cardiac Complications- MHA PPC Clinical Workgroup 7/7/09

- Recommended Inclusion Change
  - Remove Post MI Syndrome (411.0)
    - Rationale: There is no evidence on prevention of Post MI Syndrome

Response:
We agree and will remove this code from the PPC 13 assignment logic.

PPC 14 – Ventricular Fibrillation/ Cardiac Arrest - MHA PPC Clinical Workgroup 5/25/09

- Recommended Additional Exclusions
  - Add exclusion for procedure of electrophysiological studies – invasive and non-invasive
  - Add exclusion for procedure of AICD implantation
    - Rationale: These procedures likely include induced arrhythmia, which is a codable event (Coding Clinic 1Q 2008). It is not appropriate for these patients to be assigned a PPC, when the arrhythmia is an induced event, not a hospital complication
    - If it is inappropriate to have an exclusion for all patients with EP studies or AICD implantation, can we consider a coding rule for Maryland that any induceable arrhythmia is POA=Y, since if the rhythm was induceable, it was likely POA.

Response:
An induced arrhythmia solely for the purpose of testing a device is not codeable. The Coding Clinic reference applies only to the situation where the induced arrhythmia

confirms the existence of underlying disease. Since the induced arrhythmia should not be coded there is no need for an exclusion for electrophysiological studies and AICD implantation for PPC 14.

Regarding the proposed additional exclusion of the diagnosis codes for pulmonary hypertension for PPC 14, see the overview section at the beginning of our response regarding risk adjustment using APR DRGs.

Here is data from Maryland for exclusion of Pulmonary Hypertension codes:

> 15 out of the 1,554 assigned to PPC 14 met the criteria for exclusion codes. PPC 14 rate is 0.29%, however for the cases that met the criteria for exclusion codes, the PPC 14 rate is 1.05% compared to an expected rate of 0.92%

One of the primary objectives of the treatment of a patient with an AMI is to prevent the development of potentially fatal arrhythmias, such as v-fib and cardiac arrest. Hospitals with higher risk adjusted rates of v-fib and cardiac arrest for AMI patient should raise concerns for the quality of their post-MI care. Therefore, an exclusion for AMI patients for PPC 14 is not justified. Also see overview section at the beginning of our response regarding risk adjustment using APR DRGs.

PPC 15 – Peripheral Vascular Complications Except Venous Thrombosis - MHA PPC Clinical Workgroup 7/7/09

- Recommended Inclusion Change
  - Remove septic arterial embolism
    - Rationale: There is no evidence on prevention of Septic arterial emboli

Response:
Septic arterial embolism is a rare in-hospital complication and will usually occur in patients admitted with an acute endovascular infection, and will be more likely to occur in injecting drug users. It is reasonable to remove diagnosis code 449 septic arterial embolism from PPC 15.

PPC 16 – Venous Thrombosis- MHA PPC Clinical Workgroup 7/7/09

- Recommended Additional Exclusions
  - Add exclusion group 73 (Coagulation and Platelet Disorders)
    - Rationale: While any patient can develop a DVT even with optimal anticoagulation, patients in this category are at a much higher risk to develop a DVT with proper anticoagulation efforts because of their clotting disorders. Patients with bleeding disorders are also included in this exclusion group – these patients are usually unable/inappropriate to anticoagulate due to their inability to appropriately clot, yet may still develop a DVT
  - Add exclusion group 92 (Sickle Cell Disease and Thalassemia)

- Rationale: This exclusion group is included in PPC 8 – Pulmonary Embolism

Response:
APR DRG risk adjustment deals with the problem of varying susceptibility and higher risk groups per the overview section at the beginning of our response regarding risk adjustment using APR DRGs. Here is supporting data from Maryland for exclusion group 73:

68 out of the 1,277 assigned to PPC 16 met the criteria for exclusion group 73. PPC 16 rate is 0.24%, however for the cases that met the criteria for exclusion group 73, the PPC 16 rate is 0.39% compared to an expected rate of 0.45%

Our pediatrics consultants point out that although arterial events (infarction) are certainly more frequent in sickle cell patients, there is little reason to believe that they would be any more susceptible to venous events. Further, venous events are not prominent in sicklers, mostly arterial (pulmonary infarcts).

Here is supporting data from Maryland for exclusion group 92:

8 out of the 1,277 assigned to PPC 16 met the criteria for exclusion group 92. PPC 16 rate is 0.24%, however for the cases that met the criteria for exclusion group 92, the PPC 16 rate is 0.25% compared to an expected rate of 0.24%

PPC 17 – Major Gastrointestinal Complications without Transfusion or Significant Bleeding- MHA PPC Clinical Workgroup 7/7/09

- Recommended Additional Exclusions
  - Add exclusion group 73 (Coagulation and Platelet Disorders)
    - Rationale: Patients with platelet disorders are at much higher risk to develop a complication with a bleed. Patients with coagulation disorders are likely anticoagulated and therefore at higher risk to bleed even with appropriate anticoagulation.

Response:
APR DRG risk adjustment deals with the problem of varying susceptibility and higher risk groups per the overview section at the beginning of our response regarding risk adjustment using APR DRGs. Here is supporting data from Maryland for exclusion group 73:

35 out of the 724 assigned to PPC 17 met the criteria for exclusion group 73. PPC 17 rate is 0.14% overall, however for the cases that met the criteria for exclusion group 73, the PPC 17 rate is 0.22% compared to an expected rate of 0.25%

PPC 18 – Major Gastrointestinal Complications with Transfusion or Significant Bleeding- MHA PPC Clinical Workgroup 7/7/09

- Recommended Additional Exclusions
  - Add exclusion group 73 (Coagulation and Platelet Disorders)

- Rationale: Patients with platelet disorders are at much higher risk to develop a complication with a bleed. Patients with coagulation disorders are likely anticoagulated and therefore at higher risk to bleed even with appropriate anticoagulation.

Response:
APR DRG risk adjustment deals with the problem of varying susceptibility and higher risk groups per the overview section at the beginning of our response regarding risk adjustment using APR DRGs. Here is supporting data from Maryland for exclusion group 73:

23 out of the 240 assigned to PPC 18 met the criteria for exclusion group 73. PPC 18 rate is 0.05% overall, however for the cases that met the criteria for exclusion group 73, the PPC 18 rate is 0.14% compared to an expected rate of 0.11%

PPC 20 – Other Gastrointestinal Complications without Transfusion or Significant Bleeding- MHA PPC Clinical Workgroup 7/7/09

- Recommended Inclusion Change
  - Remove Volvulus (560.2)
    - Rationale: There is no evidence on how to prevent a volvulus.

Response:
On review, we agree that diagnosis code 5602 Volvulus is not as preventable and should be removed from this PPC.

PPC 20- Other GI Complications...: - Karen Jerome, MD, Holy Cross Hosp 7/8/09
Postoperative ileus is a very common occurrence after a laparotomy has been performed. Coding guidelines specify that a postoperative ileus be coded as 5609 (unspecified intestinal obstruction). In such circumstances PPC 20 is then applied. This makes little sense if the condition is unavoidable, particularly if it doesn't extend the patient's hospitalization. In one of our cases (Ghost ID 80018059) the patient underwent a uterine/adnexa procedure and then developed a postoperative ileus and so was assigned PPC 20. The patient recovered well and was discharged after an expected 3-day stay.

Diverticulitis and Diverticulosis with Hemorrhage (Group 44) is an exclusion group for PPC 20. However, diverticulitis without hemorrhage is not. In the following case (Ghost ID 80215159) the patient was admitted with diverticulitis and microperforation of the bowel. He subsequently developed a distal small bowel obstruction, but was not excluded from PPC 20 because he did not initially have diverticulitis with hemorrhage. We believe that diverticulitis without hemorrhage should also be an exclusion for this PPC.

Response:
On review, coding guidelines specify that 997.4 digestive system complications along with 5601 for a postoperative ileus. Therefore, the case coded with 5601 would not be

assigned PPC 20 due to the post op ileus. Coding guidelines also state that post-operative ileus is only a codeable event after surgery when it is documented by the physician as outside the expected post-surgical norm and must be treated.

We do agree with the suggestion to add exclusion group 44 Diverticulitis and Diverticulosis without Hemorrhage for PPC 20.

PPC 21- Clostridium Difficile- Karen Jerome, MD, Holy Cross Hosp 7/8/09
We understand that ppc 21 was rejected by CMS because of a lack of evidence-based practices to prevent its occurrence. This leaves us wondering about the basis for choosing to apply this PPC in the state of Maryland.

Response:
Most (although not all) of the infectious disease consultants we discussed this topic with, while acknowledging that C. difficile cannot be considered preventable much or most of the time, also believed that higher rates of C. diff could indicate that a hospital's precautions were suboptimal or that the hospital staff was using antibiotics excessively – in any event suggesting the need for review.

PPC 21 – Clostridium Difficile Colitis- MHA PPC Clinical Workgroup 7/7/09

- Recommend removal of PPC
- Rationale:
    - Patients may be colonized with clostridium Difficile without symptoms on admission. This type of patient may be given antibiotics during admission for an unrelated infection and the clostridium Difficile may manifest as an intestinal infection
    - There is no clear evidence on how to prevent initial clostridium Difficile infection
    - Is there evidence to support the >6-day LOS requirement?

Response:
See response above.

PPC 22- UTI- Karen Jerome, MD, Holy Cross Hosp 7/8/09
Colovesical and urogenital tract fistulas predispose patients to UTIs, but are not listed as exclusions. Nor does the presence of a chronic indwelling catheter appear to be an exclusion. Both should be added as exclusions for PPC 22.

Response:
On review, we agree that the following codes for Colovesical and urogenital tract fistulas should be added as exclusions for PPC 22.

5961 Intestinovesical fistula
5962 Vesical fistula, not elsewhere classified
5991 Urethral fistula
59382 Ureteral fistula

60889 Other specified disorders of male genital organs
6190 Urinary-genital tract fistula, female
6192 Genital tract-skin fistula, female
6198 Other specified fistulas involving female genital tract

However, we are not confident in the consistent use and coding of the V4589 "Other postsurgical status" to identify the presence of an indwelling foley.

PPC 22 – Urinary Tract Infection- MHA PPC Clinical Workgroup 5/25/09

- Recommended Inclusion Change
  - Include just catheter-associated urinary tract infection (996.64)
    - Rationale: There are no clear evidence-based guidelines on prevention of non-catheter associated UTIs
    - A broad-based PPC that includes all UTIs (not just catheter-associated), may lead to an unintended consequence of culturing all patients on admission for UTI and then potentially inappropriately treating patients who were only colonized, not infected, with antibiotics

Response:
Although routine urine cultures on admission might be an unfortunate response to a PPC for UTI, the presence of bacteruria alone, in the absence of pyuria or urinary symptoms should not automatically justify a diagnosis of UTI, and certainly should not provoke treatment with antibiotics, which would be poor quality medical care. Our belief is that if a hospital has higher case-mix and risk-adjusted rate of hospital-acquired UTIs it should be a cause for concern. Further, because code 99664 is a relative new code in ICD-9-CM and physician documentation often fails to explicitly identify a UTI as catheter-associated, many catheter-associated UTIs are likely reported by hospitals with one of the other UTI codes. A review of the literature on this topic also demonstrates that interventions reinforcing a narrow spectrum antibiotic policy on antibiotic prescription can result in a fall in C. diff rates.

PPC 22 – Urinary Tract Infection- Sheeba Venugopal, Quality Management Coordinator, Suburban Hospital - Johns Hopkins Medicine 7/13/09
You have already identified number 67 - Urinary Tract Stones and Obstruction as one of the exclusions for PPC 22. This was probably selected as obstructions lead to urinary retention with UTI as a leading complication. I wanted to draw your attention to the other codes that also create obstruction, and result in the same pathophysiology as a stone obstruction. These could be obstructions due to a prostate enlargement, structural /functional anomalies, as well as a couple of codes for any type of urinary obstruction and urinary retention. I am hoping you have a chance to review these and determine whether they should be added to the exclusion list.

In addition to the above, I also wanted to draw your attention to Chronic Kidney disease and End stage renal failure (which is usually the final stage of the chronic renal failure) I

would like to hear back from you on whether you feel these may be included onto your list, and if not entirely eliminated, be at least incorporated as "a percentage of likelihood of occurrence" into the calculation of the expected number of UTIs at a facility, as these conditions are linked with a high rate of the development of an UTI, especially in the geriatric population.

I am also attaching to this email, a few articles related to these topics for your reference, and also find below the links to the abstracts of articles on chronic renal failure for your review.
http://www.springerlink.com/content/m463138140216534/
http://medind.nic.in/imvw/imvw9426.html

Response:
Regarding the concern about obstruction with UTI, see the overview section at the beginning of our response regarding risk adjustment using APR DRGs. APR DRG risk adjustment deals with the problem of varying susceptibility and higher risk groups.

Here is data from Maryland for UTI related obstruction codes:

31 out of the 5834 assigned to PPC 22 met the criteria for having obstruction codes. PPC 22 rate is 1.18% overall, however for the cases that met the criteria for having obstruction codes, the PPC 22 rate is 2.53% compared to an expected rate of 1.88%

PPC 24/25 – Renal Failure with/without Dialysis- MHA PPC Clinical Workgroup 7/7/09

- Recommend Exclusion Change
  - Add exclusion group 76 (Septicemia and Disseminated Infections)
  - Add exclusion group 81 (Allergic Reactions)
  - Add exclusion group 82 (Poisoning of Medicinal Agents)
  - Add exclusion group 90 (Acute and Stage V Renal Failure) (already exclusion for PPC 25)
    - Rationale: ARF commonly occurs in association with sepsis, allergic reactions (if accompanied by hypotension) or due to drugs and may be late effect rather than immediately diagnosed on admission
  - Add exclusion – chronic kidney disease – unspecified (585.9)
    - Rationale: Renal failure NOS (586) is included in the existing exclusion group 62, but chronic, therefore the more specific condition of chronic renal failure should be included in that exclusion group
  - PPC 25 only: Add exclusion groups 62 and 63 since these are exclusions for PPC 24

Response:

On review, exclusion group 90 will be added to PPC 24; exclusion groups 62 and 63 will be added to PPC 25. Renal failure NOS (586) will be removed from exclusion group 52.

Regarding the proposed addition of exclusion group 76, 81, and 82 for PPC 24 and 25, see the overview section at the beginning of our response regarding risk adjustment using APR DRGs. APR DRG risk adjustment deals with the problem of varying susceptibility and higher risk groups.

Here is supporting data from Maryland for exclusion group 76:

463 out of the 4,882 assigned to PPC 24 met the criteria for exclusion group 76. PPC 24 rate is 1.04% overall, however for the cases that met the criteria for exclusion group 76, the PPC 24 rate is 4.60% compared to an expected rate of 4.46%

24 out of the 152 assigned to PPC 25 met the criteria for exclusion group 76. PPC 25 rate is 0.03% overall, however for the cases that met the criteria for exclusion group 76, the PPC 25 rate is 0.23% compared to an expected rate of 0.20%

Here is supporting data from Maryland for exclusion group 81:

9 out of the 4,882 assigned to PPC 24 met the criteria for exclusion group 81. PPC 24 rate is 1.04% overall, however for the cases that met the criteria for exclusion group 81, the PPC 24 rate is 1.02% compared to an expected rate of 0.66%

0 out of the 152 assigned to PPC 25 met the criteria for exclusion group 81.

Here is supporting data from Maryland for exclusion group 82:

27 out of the 4,882 assigned to PPC 24 met the criteria for exclusion group 82. PPC 24 rate is 1.04% overall, however for the cases that met the criteria for exclusion group 82, the PPC 24 rate is 0.63% compared to an expected rate of 0.67%

0 out of the 152 assigned to PPC 25 met the criteria for exclusion group 82.

PPC 27- Post-hemorrhagic and Other Acute Anemia with Transfusion- Karen Jerome, MD, Holy Cross Hosp 7/8/09

Hemolytic anemia and thrombocytopenia present on admission are exclusions. However, patients may develop acquired hemolysis or thrombocytopenia (e.g. drug-induced) during the stay, experience precipitous blood loss and then require transfusion. We believe that these conditions should be exclusions, whether or not present on admission.

There appears to be no exclusion for procedures that often result in significant decreases in hematocrit (e.g. hip/knee arthroplasty, chemotherapy). Physicians may choose to postpone a transfusion to see if the patient's bone marrow can rally. PPC 27 is then applied though the transfusion is performed after an appropriate clinical delay.

Response:
We have built in a 4 day delay before a post-operative transfusion will be trigger the assignment of PPC 27. We believe this should exceed the appropriate clinical delay in the great majority of cases. We will research this issue further as it is a good comment, however is beyond the scope of this current PPC update. We believe these circumstances are rare and therefore have limited impact on the overall MHAC payment policy adjustments.

PPC 31 – Pressure Ulcers- MHA PPC Clinical Workgroup 7/7/09

- Remove all exclusions
- Rationale: A patient with an existing ulcer should have the same prevention interventions as other high risk patients and should not be excluded from this PPC
- Is there evidence to support the > 4-day LOS?

Response:
We agree with the suggestion to remove all of the exclusion groups in order to be consistent. The APR DRG case-mix risk adjustment should deal effectively with the differences in risk among these various group.

There is significant scientific evidence documenting (e.g. work done at the University of Maryland) documenting the development of decubitus ulcers in the first two days of hospitalization in patients who did not have a decubitus ulcer at admission. We chose to provide a longer time window for hospitals with this version of the PPCs.

PPC 35 – Septicemia and Severe Infections- MHA PPC Clinical Workgroup 5/25/09

- Recommended Additional Exclusions
  - Exclusion group 69 (All Complications of Vascular, Renal and GU Catheters, Grafts and Implants) – patients with these complications on admission are at much higher risk of developing a severe systemic infection. It would follow that these other invasive catheter/graft complications (which includes infections) would be excluded as well.
  - Exclusion for V45.2 (VP shunt status) - presence of a VP shunt on admission will place patient at higher risk for meningitis
  - Exclusion for V56.8 (peritoneal dialysis status) – patients who receive peritoneal dialysis are at higher risk for peritonitis

Response:
We agree that vascular complications that are part of exclusion group 69, specifically 996.73, Complications of renal dialysis device or graft, and 997.72, Vascular Complications of renal artery, should be added to the exclusion logic for PPC 35. Patients with endovascular complications are more likely to develop non-preventable blood stream infections that were already present but not detectable at the time of admission, than patients with the other diagnoses in this exclusion group.

Regarding the proposed additional exclusion patients who undergo VP shunts and peritoneal dialysis for PPC 35, see the overview section at the beginning of our response regarding risk adjustment using APR DRGs and low volume.

Here is data from Maryland for exclusion code V452 VP shunt status:

3 out of the 3,087 assigned to PPC 35 met the criteria for exclusion code V452. PPC 35 rate is 0.61% overall, however for the cases that met the criteria for exclusion code V452, the PPC 35 rate is 4.29% compared to an expected rate of 1.21%

Here is data from Maryland for exclusion code V568 peritoneal dialysis status:

0 out of the 3,087 assigned to PPC 35 met the criteria for exclusion code V568.

PPC 35 logic change-Divide exclusion group 69 into two exclusion groups, one for vascular complications, containing codes 996.73 and 997.72, and the other group for the remaining codes in exclusion group 69. Add the vascular complication exclusion sub-group to PPC 35.

PPC 35 - Septicemia and Severe Infections - Karen Jerome, MD, Holy Cross Hosp 7/8/09
Certain non-excluded conditions predispose patients to sepsis. Chronic glucocorticoid therapy suppresses the immune system. End stage renal disease (ESRD) does as well, as these patients are often diabetic. In addition, they may be immunosuppressed because of the retention of uremic toxins. In fact, patients with chronic kidney disease have major infection rates 3 – 4 times that of the general population. Advanced cirrhosis increases the risk of spontaneous bacterial peritonitis. Asplenia (surgical or functional) puts patients at particular risk for severe infections with encapsulated bacteria. The presence of indwelling catheters (e.g. HD access, PD catheters, Mediports, V-P shunts) also significantly increases infection risk. None of these is an exclusion for the PPC, though each should be.

Response:
The increased risk for sepsis for diabetic patients and those with ESRD and cirrhosis should be accounted for with the APR DRG risk adjustment. Patients with indwelling catheters will usually have other significant chronic conditions that will increase their expected rates of complications.

Here is supporting data from Maryland for diabetes codes 250.xx:

1,043 out of the 3,087 assigned to PPC 35 have diabetes codes 250.xx. PPC 35 rate is 0.61% overall, however for the cases that have diabetes codes 250.xx, the PPC 35 rate is 0.87% compared to an expected rate of 0.89%

Here is supporting data from Maryland for Stage III-V and ENRD codes:

460 out of the 3,087 assigned to PPC 35 have Stage III-V and ENRD codes 250.xx. PPC 35 rate is 0.61% overall, however for the cases that have Stage III-V and ENRD codes, the PPC 35 rate is 1.91% compared to an expected rate of 1.53%

PPC 36 - Acute Mental Health Changes- Karen Jerome, MD, Holy Cross Hosp 7/8/09
We understand that PPC 36 was rejected by CMS because of a lack of evidence-based practices to prevent its occurrence. This leaves us wondering about the basis for choosing to apply this PPC in the state of Maryland.

Response:
See next section for response

PPC 36 – Acute Mental Health Changes - MHA PPC Clinical Workgroup 7/7/09

- Recommend removal of PPC
  - Rationale: There are no clear evidence-based guidelines on prevention of these acute mental health changes
  - Patients may have intermittent delirium, dementia or hallucinations which may or may not have clear and definable triggers, such as time of day (sundowning) or lack of natural home setting. These types of mental health symptoms are not a true complication of medical care and it may not be clear whether these conditions were present on admission or not
  - If not removed, add exclusion group 76 (Septicemia and disseminated infections) - This is an exclusion for both PPC 2 - Extreme CNS conditions and PPC 47 - Encephalopathy. If sepsis is considered to have a natural consequence of extreme CNS conditions and encephalopathy, then acute mental health changes would also be a natural progression.

Response:
As has been increasingly documented, delirium type symptoms or what we term Acute Mental Health Changes occur frequently post hospital admission. In addition, a number of interventions (notably the Hospital Elder Life Program or HELP) have documented a decrease in in Acute Mental Health Changes with these interventions.

However, to be completely precise from an evidence based perspective we have restricted the ICD-9-CM codes eligible for this PPC for this version of the PPC logic to the following ICD-9-CM codes which pertain to delirium:

29011 Presenile delirium
29281 Drug-induced delirium

However, we will continue to maintain the title of this PPC as we expect to add additional codes in subsequent versions of the PPC logic when they occur in combination with other ICD-9-CM codes.

With respect to exclusions, as stated on page 3, we agree with the suggestion to add exclusion group 76 to PPC 36.

PPC 39- Reopening the Surgical Site- MHA PPC Clinical Workgroup 7/7/09

- The procedure exclusion groups of 88 and 89 are listed as an exclusion but also as an inclusion.
- Also, the code V66.7 – encounter for palliative care is listed as a global exclusion that is required to have POA=Y, but "V66" is listed as a code that is exempt from POA. It is assumed that "V66" included all of the V66.x codes since it requires the 3rd digit.

Response:
The procedure exclusion groups 88 and 89 should be removed from the exclusion logic. Since V 66.7 is on the POA exempt list and is not consistently coded, we are going to remove this code from the global exclusion list. See distribution of V66.7 across the Maryland hospitals in the following table:

Hospital Industry Comments and HSCRC Responses to Clinical Assignment and Exclusion Logic of the Maryland Hospital Acquired Conditions/ 3M Potentially Preventable Complications

As of July 30, 2009

Provider	Cases with V667	Percent Cases with V667
210001	6	0.032
210002	4	0.011
210003	0	0.000
210004	71	0.198
210005	0	0.000
210006	0	0.000
210007	0	0.000
210008	0	0.000
210009	7	0.016
210010	0	0.000
210011	0	0.000
210012	0	0.000
210013	0	0.000
210015	23	0.076
210016	0	0.000
210017	0	0.000
210018	0	0.000
210019	0	0.000
210022	0	0.000
210023	5	0.017
210024	5	0.024
210025	0	0.000
210027	1	0.011
210028	2	0.018
210029	2	0.009
210030	0	0.000
210032	6	0.064
210033	2	0.012
210034	10	0.065
210035	1	0.012
210037	2	0.018
210038	0	0.000
210039	0	0.000
210040	1	0.008
210043	5	0.026
210044	11	0.042
210045	0	0.000
210048	0	0.000
210049	0	0.000
210051	1	0.009
210054	0	0.000
210055	4	0.055
210056	1	0.006
210057	0	0.000
210058	0	0.000
210060	0	0.000
210061	0	0.000
210904	2	0.042
Total	172	0.022

As of July 30, 2009

PPC 44- Other Surgical Complications- Moderate- MHA PPC Clinical Workgroup 5/25/09

Recommend exclusion for diabetes mellitus (250.x) – these patients are at much higher risk for the specific surgical complications in this PPC, such as stump complications and hypoglycemia, non-healing surgical wounds

Response:

Regarding the proposed additional exclusion of the diagnosis codes for diabetic patients for PPC 44, see the overview section at the beginning of our response regarding risk adjustment using APR DRGs.

Here is supporting data from Maryland for exclusion codes for diabetes mellitus:

93 out of the 323 assigned to PPC 44 met the criteria for exclusion codes. PPC 44 rate is 0.22% overall, however for the cases that met the criteria for exclusion codes, the PPC 44 rate is 0.31% compared to an expected rate of 0.31%

PPC 52 – Inflammation and Other Complications of Devices, Implants or Grafts Except Vascular Infection - MHA PPC Clinical Workgroup 7/7/09

- Recommended Additional exclusions
  - Add exclusion group 76 (Septicemia)
  - Add exclusion group 79 (Other Infectious and Parasitic Diseases)
  - Add exclusion – necrotizing fasciitis (728.86)
    - Rationale: patients admitted with a severe infection are at much higher risk of developing an infection or inflammation related to a device or implant

Response:

APR DRG risk adjustment deals with the problem of varying susceptibility and higher risk groups per the overview section at the beginning of our response regarding risk adjustment using APR DRGs.

Here is supporting data from Maryland for exclusion group 76:

69 out of the 962 assigned to PPC 52 met the criteria for exclusion group 76. PPC 52 rate is 0.19% overall, however for the cases that met the criteria for exclusion group 76, the PPC 52 rate is 0.49% compared to an expected rate of 0.54%

Here is supporting data from Maryland for exclusion group 79:

150 out of the 962 assigned to PPC 52 met the criteria for exclusion group 79. PPC 52 rate is 0.19% overall, however for the cases that met the criteria for exclusion group 79, the PPC 52 rate is 0.32% compared to an expected rate of 0.34%

Here is supporting data from Maryland for exclusion code 72886:

5 out of the 962 assigned to PPC 52 met the criteria for exclusion code. PPC 52 rate is 0.19% overall, however for the cases that met the criteria for exclusion code, the PPC 52 rate is 1.44% compared to an expected rate of 1.21%

PPC 54 – Infections due to Central Venous Catheter- MHA PPC Clinical Workgroup 7/7/09

- Recommended Additional Exclusions
  - Add Exclusion group 76 (Septicemia)
  - Add Exclusion group 79 (Other Infectious and Parasitic Diseases)
  - Add exclusion – necrotizing fasciitis (728.86)
    - Rationale: patients admitted with a severe infection are at much higher risk of developing an infection or inflammation related to a device or implant

Response:
APR DRG risk adjustment deals with the problem of varying susceptibility and higher risk groups per the overview section at the beginning of our response regarding risk adjustment using APR DRGs.

Here is supporting data from Maryland for exclusion group 76:

23 out of the 222 assigned to PPC 54 met the criteria for exclusion group 76. PPC 54 rate is 0.04% overall, however for the cases that met the criteria for exclusion group 76, the PPC 54 rate is 0.14% compared to an expected rate of 0.15%

Here is supporting data from Maryland for exclusion group 79:

54 out of the 222 assigned to PPC 54 met the criteria for exclusion group 79. PPC 54 rate is 0.04% overall, however for the cases that met the criteria for exclusion group 79, the PPC 54 rate is 0.11% compared to an expected rate of 0.10%

Here is supporting data from Maryland for exclusion code 72886:

1 out of the 222 assigned to PPC 54 met the criteria for exclusion code.

PPC 64 – Other In-Hospital Adverse Events - MHA PPC Clinical Workgroup 7/7/09

- Recommended Inclusion Change
  - Remove falls from this PPC – consider creating separate PPC for falls
    - Less specific fall codes are included in PPC 48 – Other Complications of Medical Care. These less specific fall codes are often used for un-witnessed falls or when the physician does not document the details of the fall. It does not indicate a less severe fall or a fall with or without injury
    - Fall codes are not appropriate to be included in a PPC which also includes rape, suicide and assault. These are grossly different events can lead to misleading interpretations of the data

Response:

As of July 30, 2009

We agree that the following three falls codes should be moved from PPC 48 to PPC 64.
E8800 Falls on escalator
E8888 Falls NEC
E8889 Falls NOS

Further, we acknowledge that there is significant variation within this group. Thus we have begin to look at splitting this PPC into the following groups. Group A constitutes falls while Group B while still heterogenous is drawn from NQF's and Pennsylvania's never event lists. Group C will is the remaining and would recommend be eliminated. 86% of the cases assigned to PPC 64 are from group A, the remaining 14% are from group B and zero cases are from group C. We will continue to look into this option and others as well, but for the next update of the PPC logic, we do not propose making a new PPC this late in the update process.

Group A
E8809 Fall on stair/step NEC
E882 Fall from building
E8842 Fall from chair
E8843 Fall from wheelchair
E8844 Fall from bed
E8845 Fall from furniture NEC
E8846 Fall from commode
E8849 Fall-1 level to oth NEC
E8859 Fall from slipping NEC
E8869 Fall on level NEC/NOS
E887 Fracture, cause NOS
E8880 Fall striking sharp obj
E8881 Fall striking object NEC

Group B
E9539 Injury-strang/suff NOS
E9550 Injury-handgun
E9551 Injury-shotgun
E9552 Injury-hu nting rifle
E9553 Injury-military firearm
E9554 Injury-firearm NEC
E9555 Injury-explosives
E9559 Injury-firearm/expl NOS
E956 Injury-cut instrument
E9570 Injury-jump fm residence
E9571 Injury-jump fm struc NEC
E9572 Injury-jump fm natur sit
E9579 Injury-jump NEC
E9581 Injury-burn, fire
E9587 Injury-caustic substance

As of July 30, 2009

E9588 Injury-NEC
E9589 Injury-NOS
E9601 Rape
E961 Assault-corrosiv/caust
E9620 Assault-pois w medic agt
E9621 Assault-pois w solid/liq
E9622 Assault-pois w gas/vapor
E9629 Assault-poisoning NOS
E963 Assault-hanging/strangul
E9650 Assault-handgun
E9651 Assault-shotgun
E9652 Assault-hunting rifle
E9653 Assault-military weapon
E9654 Assault-firearm NEC
E9263 X-ray/gamma ray exposure
E9264 Laser exposure
E9265 Radioact isotope exposur
E9268 Radiation exposure NEC
E9269 Radiation exposure NOS
E9500 Poison-analgesics
E9501 Poison-barbiturates
E9502 P oison-sedat/hypnotic
E9503 Poison-psychotropic agt
E9504 Poison-drug/medicin NEC
E9505 Poison-drug/medicin NOS
E9507 Poison-corrosiv/caustic
E9508 Poison-arsenic
E9509 Poison-solid/liquid NEC
E9528 Poison-gas/vapor NEC
E9529 Poison-gas/vapor NOS
E9530 Injury-hanging
E9531 Injury-suff w plas bag

Group C
E9582 Injury-scald
E9261 Infra-red appl rad exos
E9580 Injury-moving object

As of July 30, 2009

PPC 9 - Shock and 35 – Sepsis - Kristen Geissler 7/16/09

When a patient has septic shock, they will be appropriately coded with 785.52 – septic shock and the appropriate sepsis codes. The septic shock code drives the assignment of PPC 9 (shock) and the sepsis codes drive the assignment of PPC 35 (sepsis). This is generally one clinical event of septic shock, yet the case is assigned 2 different PPCs.

Response:

On review, the PPC logic will be changed such that when patient is coded with 785.52 septic shock not POA, the patient will only be assigned to PPC 9 Shock and the patient would not be assigned to PPC 35 Sepsis.

PPC 36 Acute Mental Health Change - Steve Daviss 7/30/09

Dr Norbert, you have repeatedly stated that any Exclusions to these PPCs would be reasonably based on clinical grounds. I present below what appear to be overlooked clinical exclusions which should be added to PPC 36 and to PPC 47.

As for my background, I am a Clinical Assistant Professor at the University of Maryland, Chairman of the Dept of Psychiatry at Baltimore Washington Medical Center, and am Board-Certified in Psychosomatic Medicine, which is the branch of Psychiatry that deals with people with acute and chronic medical conditions. I have worked in this field for over 15 years and have taught on coding and diagnosis in this population.

==========

PPC 36 (Acute Mental Health Change) is currently used for what are primarily considered acute medical or neurological conditions, which can generally be referred to as "delirium". You indicate that you will only initially include 290.11 (presenile dementia with delirium) and 292.12 (drug-induced hallucinations) as PPCs, though the original category includes other drug-induced psychoses or mental status changes, psychosis secondary to other medical conditions (293.81, 82), such as hyponatremia or hyperthyroidism, and dementia with agitation. It does not appear to include other types of delirium, including 293.0, which is plain vanilla delirium, or various types of encephalopathy, some of which are coded in PPC 47.

None of these conditions are considered to be psychiatric in nature, nor are they paid for by psychiatric payors. A minority of these conditions are considered "preventable". You quoted Mass General's HELP program, pioneered by Sharon Inouye, as evidence that delirium conditions are preventable. You quote her 1999 NEJM article, in which she applied a multi-component program to reduce the incidence of delirium in the hospital by 33%. What you failed to point out is that her study EXCLUDED patients under 70 and those on a ventilator, in a coma, with aphasia, with a terminal condition, or having combativeness, psychosis, or respiratory isolation. This was performed in a teaching hospital, as well. A 2006 follow-up study in Quality & Safety in Health Care surveyed 63 hospitals attempting to implement this program. While only 21% of the hospitals were community hospitals, more than half were unable to implement at least half of the six core interventions, while one-third were not able to implement any of it.

Furthermore, her own studies caution that this program can only help patients at intermediate risk, not those with high risk.

You have added Exclusionary Groups 6, 7, 51, 76, and 80 (Mental Illness and Substance Abuse), you have left out many other significant causes of delirium.

I recommend making the following changes:
1. change the age from "less than 18" to "less than 70" to be consistent with the research you quote.
2. exclude individuals from Exclusion Group 82, which is Poisoning, because these individuals will often come in with Poisoning and be obtunded (often after an overdose), and only after they later awaken will the delirium due to drugs become evident.
3. additionally, for similar reasons, the following POA Exclusion Groups should be added:
-1 Degenerative neurologic conditions
-8 Brain injury & coma
-9 Encephalopathy
-10 Seizures
-12 Brain Injury
-52 Alcoholic hepatitis
-62 Acute Renal Failure
-64 & 65 UTI
-86 Alzheimers dementia

4. It should also be noted that there is a logical issue with the current Exclusion for DT's, which currently states:
The following diagnosis is present on admission or not present on admission
2910 Delirium tremens
And
The following complication diagnosis is coded and not present on admission
7801 Hallucinations
The problem with this is that 780.1 is a general symptom code for hallucinations, which should not be used if a more specific code can explain the symptom. Since the definition for Delirium Tremens (291.0) INCLUDES hallucinations, these should never be together. Thus, a simple diagnosis of 291.0 (without any mention of 780.1) should be an adequate Exclusion.

5. Also, the following POA diagnoses should be Exclusionary, since these are all more general diagnoses which would typically be diagnosed on admission: 780.97 (altered mental status), 780.01-09 (altered level of consciousness), and 780.09 delirium NOS.

==========
PPC 47 (Encephalopathy) is clinically very similar to PPC 36, as it includes various causes of metabolic (348.30, .31, .39) and toxic (ie, drug-induced, 349.82) encephalopathy,

or delirium. The same comments which I apply to PPC 36 would apply equally here to PPC 47, including the comments about the HELP program.

PPC 47 should thus contain the same Exclusion Groups as PPC 36. These currently include 1, 2, 6, 7, 8, 9, 11, 51, 76, and 84. The following should be added: 10, 12, 52, 62, 64, 65, 80, 82, and 86.

Also, the following POA diagnoses should be Exclusionary, since these are all more general diagnoses which would typically be diagnosed on admission: 780.97 (altered mental status), 780.01-09 (altered level of consciousness), and 780.09 delirium NOS.

==========

Finally, since it is only in the absolute best of circumstances that only one-third of delirium cases appear to be "preventable", I would hope that whatever formula that is used to calculate the financial penalty (or reverse incentive, if you prefer) takes this statistic into consideration.

Response:

On Review for PPC 36, the following exclusion groups will be added:

1 Degenerative neurologic conditions
8 Brain injury & coma
9 Encephalopathy
10 Seizures
12 Brain Injury
52 Alcoholic hepatitis
62 Acute Renal Failure
86 Alzheimers dementia

On Review for PPC 47, the following exclusion groups will be added:

10 Seizures
12 Brain Injury
52 Alcoholic hepatitis
62 Acute Renal Failure
86 Alzheimers dementia

Table 1: PPC Regression (based on FY 2008 data)

Updated 8/5/09

PPC #	PPC Description	Adm $	Adm T Value	Cases
	Shaded PPCs will not be used for the MHAC Initiative			
1	Stroke & Intracranial Hemorrhage	$13,066	38.603236	828
2	Extreme CNS Complications	$12,051	30.374969	644
3	Acute Pulmonary Edema and Respiratory Failure without Ventilation	$5,721	40.425129	5257
4	Acute Pulmonary Edema and Respiratory Failure with Ventilation	$20,064	60.367208	898
5	Pneumonia & Other Lung Infections	$13,561	93.165292	4850
6	Aspiration Pneumonia	$10,500	43.489609	1667
7	Pulmonary Embolism	$10,735	26.962321	601
8	Other Pulmonary Complications	$7,791	53.427777	4764
9	Shock	$11,109	42.074928	1512
10	Congestive Heart Failure	$3,895	19.431952	2386
11	Acute Myocardial Infarction	$5,643	20.335337	1232
12	Cardiac Arrythmias & Conduction Disturbances	$2,418	6.8716698	1017
13	Other Cardiac Complications	$3,197	7.6846559	537
14	Ventricular Fibrillation/Cardiac Arrest	$15,459	41.038245	680
15	Peripheral Vascular Complications Except Venous Thrombosis	$12,992	24.113279	325
16	Venous Thrombosis	$10,758	44.449833	1670
17	Major Gastrointestinal Complications without Transfusion or Significant Bleeding	$11,231	34.432863	882
18	Major Gastrointestinal Complications with Transfusion or Significant Bleeding	$14,354	23.898709	258
19	Major Liver Complications	$10,045	19.089809	341
20	Other Gastrointestinal Complications without Transfusion or Significant Bleeding	$8,672	19.123975	459
21	**Clostridium Difficile Colitis**	$16,495	61.368894	1323
22	Urinary Tract Infection	$6,462	55.126985	7186
23	GU Complications Except UTI	$4,692	11.488989	559
24	Renal Failure without Dialysis	$7,920	64.262455	6516
25	Renal Failure with Dialysis	$41,186	58.790771	191
26	**Diabetic Ketoacidosis & Coma**	$1,445	1.2998569	75
27	Post-Hemorrhagic & Other Acute Anemia with Transfusion	$4,256	14.864072	1151
28	In-Hospital Trauma and Fractures	$4,816	8.8928586	321
29	Poisonings Except from Anesthesia	$1,415	2.5293641	297
30	**Poisonings due to Anesthesia**	-$214	-0.044442	4
31	Decubitus Ulcer	$18,231	60.306088	1054
32	Transfusion Incompatibility Reaction	$48,575	13.275425	7
33	Cellulitis	$2,864	11.067491	1502
34	Moderate Infectious	$12,922	46.015837	1224
35	Septicemia & Severe Infections	$14,088	82.951889	3957
36	Acute Mental Health Changes	$3,631	13.302443	1252
37	Post-Operative Infection & Deep Wound Disruption Without Procedure	$15,778	55.698834	1313
38	Post-Operative Wound Infection & Deep Wound Disruption with Procedure	$30,875	24.884632	61
39	Reopening Surgical Site	$13,777	14.66669	106
40	Post-Operative Hemorrhage & Hematoma without Hemorrhage Control Procedure or I&D Pr	$6,536	39.763252	3575
41	Post-Operative Hemorrhage & Hematoma with Hemorrhage Control Procedure or I&D Proc	$11,158	17.164797	222
42	Accidental Puncture/Laceration During Invasive Procedure	$3,836	16.569302	1858
43	**Accidental Cut or Hemorrhage During Other Medical Care**	$722	0.7864481	114
44	Other Surgical Complication - Mod	$12,509	28.382066	483
45	Post-procedure Foreign Bodies	$5,203	2.6470991	26
46	**Post-Operative Substance Reaction & Non-O.R. Procedure for Foreign Body**	$6,574	0.9290811	2
47	Encephalopathy	$10,182	38.081795	1343
48	Other Complications of Medical Care	$10,588	41.930328	1479
49	Iatrogenic Pneumothrax	$7,283	22.107326	900
50	Mechanical Complication of Device, Implant & Graft	$14,138	35.609177	593

Table 1: PPC Regression (based on FY 2008 data)

Updated 8/5/09

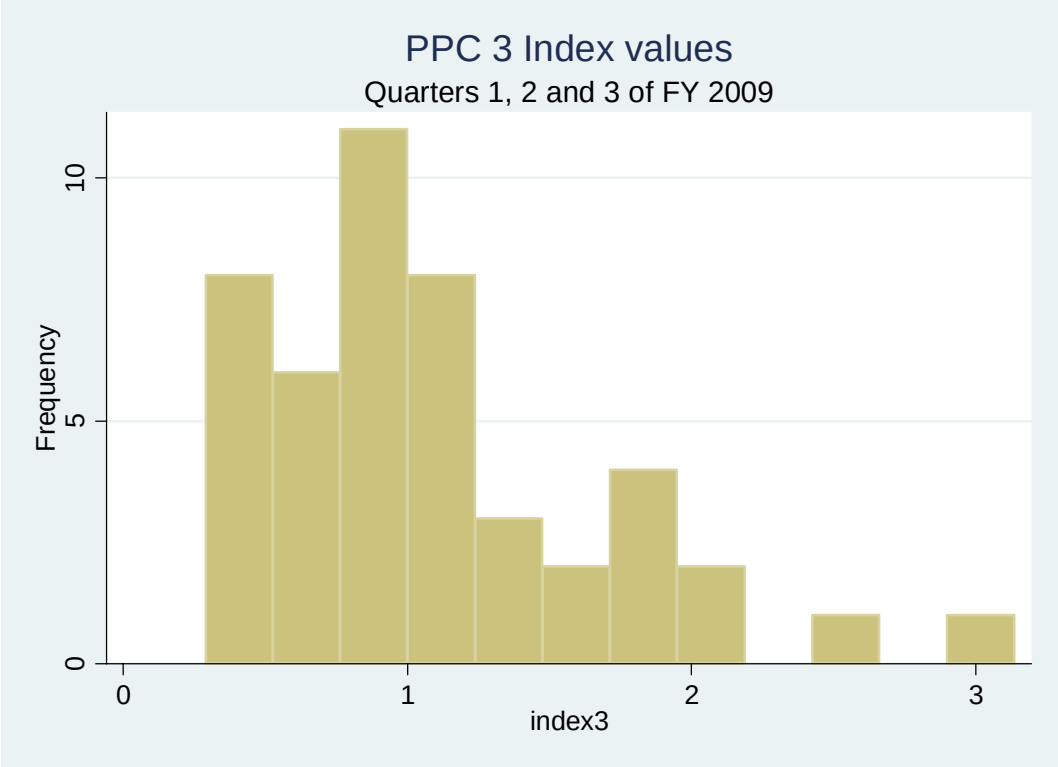
PPC #	PPC Description	Adm $	Adm T Value	Cases
	Shaded PPCs will not be used for the MHAC Initiative			
51	Gastrointestinal Ostomy Complications	$20,608	40.248239	358
52	Inflammation & Other Complications of Devices, Implants or Grafts Except Vascular Infection	$8,776	31.270093	1214
53	Infection, Inflammation & Clotting Complications of Peripheral Vascular Catheters & Infusions	$15,073	42.530628	770
54	Infections due to Central Venous Catheters	$22,295	40.356236	312
55	**Obstetrical Hemorrhage without Transfusion**	$159	0.9533953	3556
56	**Obstetrical Hemorrhage wtih Transfusion**	$2,137	4.2845441	385
57	**Obstetric Lacerations & Other Trauma Without Instrumentation**	$273	1.0950693	1532
58	**Obstetric Lacerations & Other Trauma With Instrumentation**	$646	1.6310622	597
59	**Medical & Anesthesia Obstetric Complications**	$487	1.2749917	654
60	**Major Puerperal Infection and Other Major Obstetric Complications**	$94	0.164819	289
61	**Other Complications of Obstetrical Surgical & Perineal Wounds**	$69	0.1035152	209
62	**Delivery with Placental Complications**	$525	0.8839125	265
63	**Post-Operative Respiratory Failure with Tracheostomy**	$115,361	91.791189	60
64	**Other In-Hospital Adverse Events**	$2,147	6.0351379	739

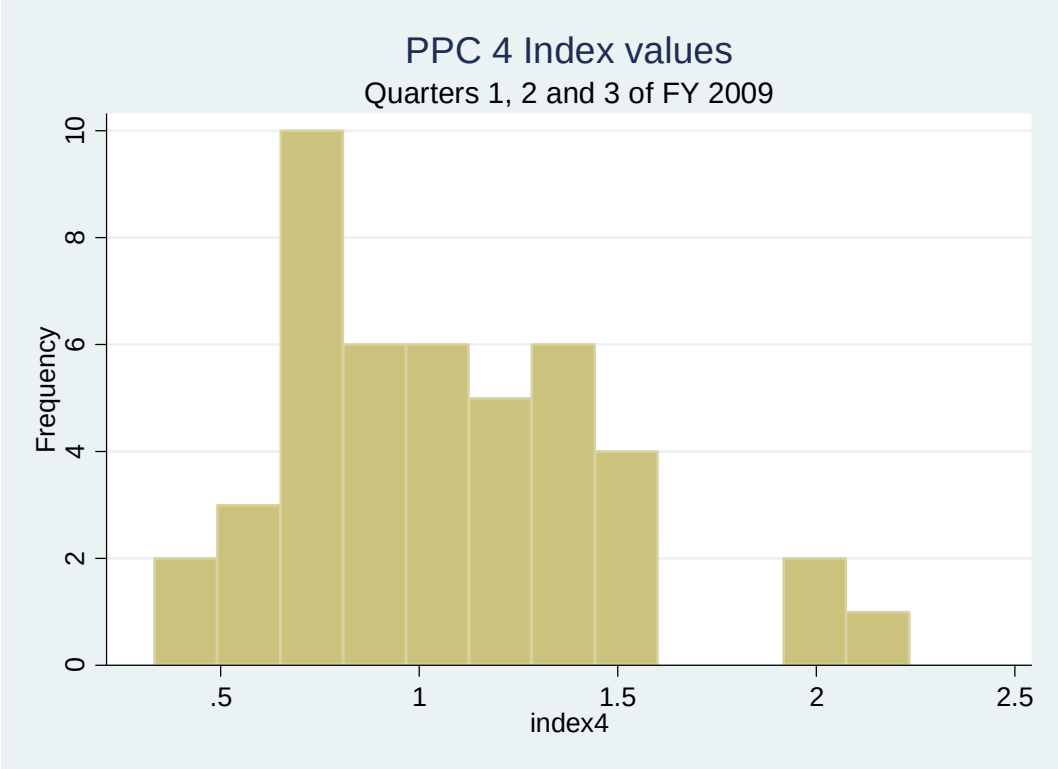
Note: Shaded PPCs are excluded

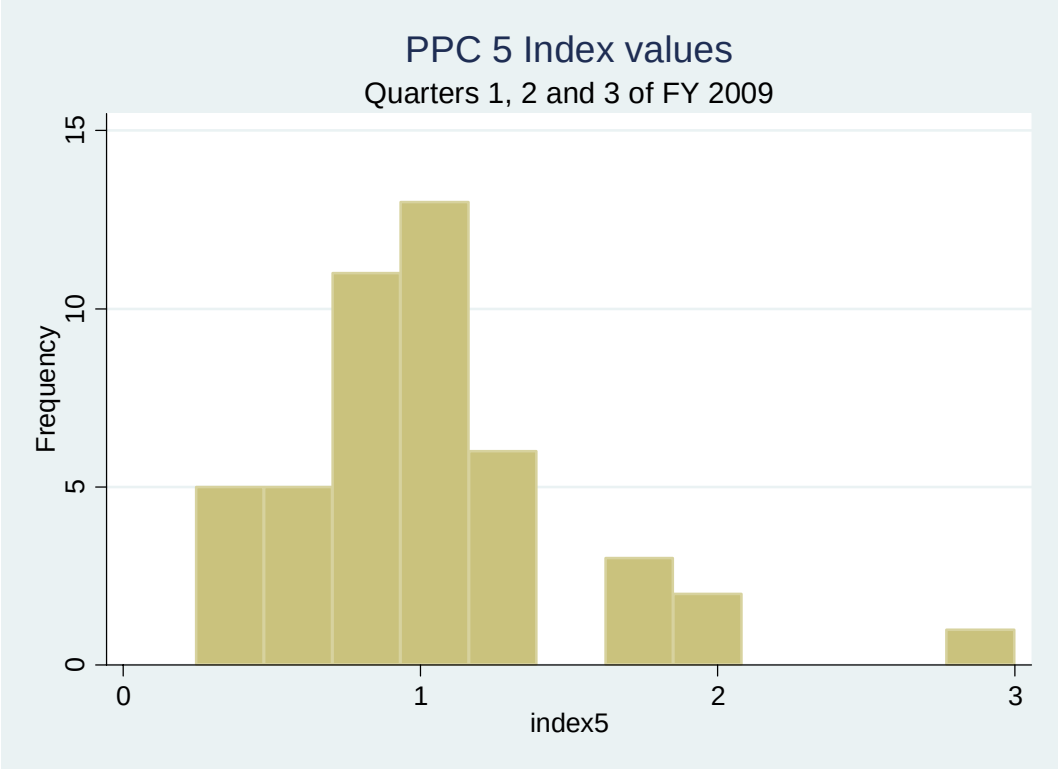
Histograms of PPC Index, Quarters 1, 2 and 3 of FY 2009 – Selected PPCs

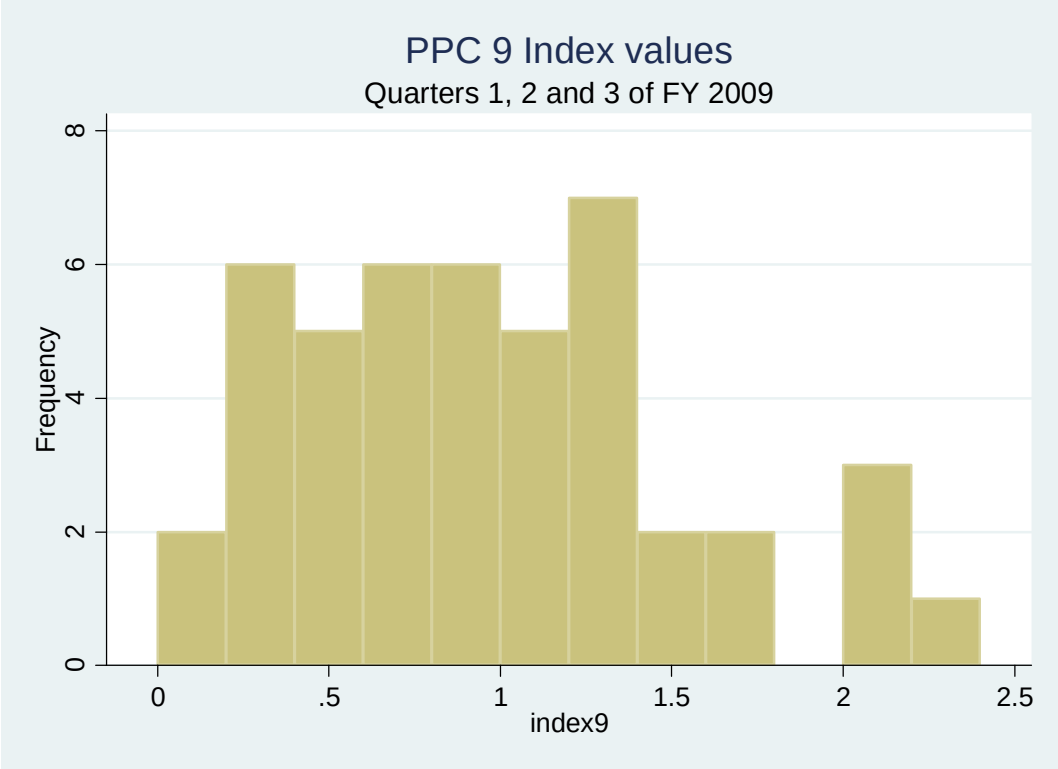
The index is the actual number of cases with the PPC divided by the expected number of cases.

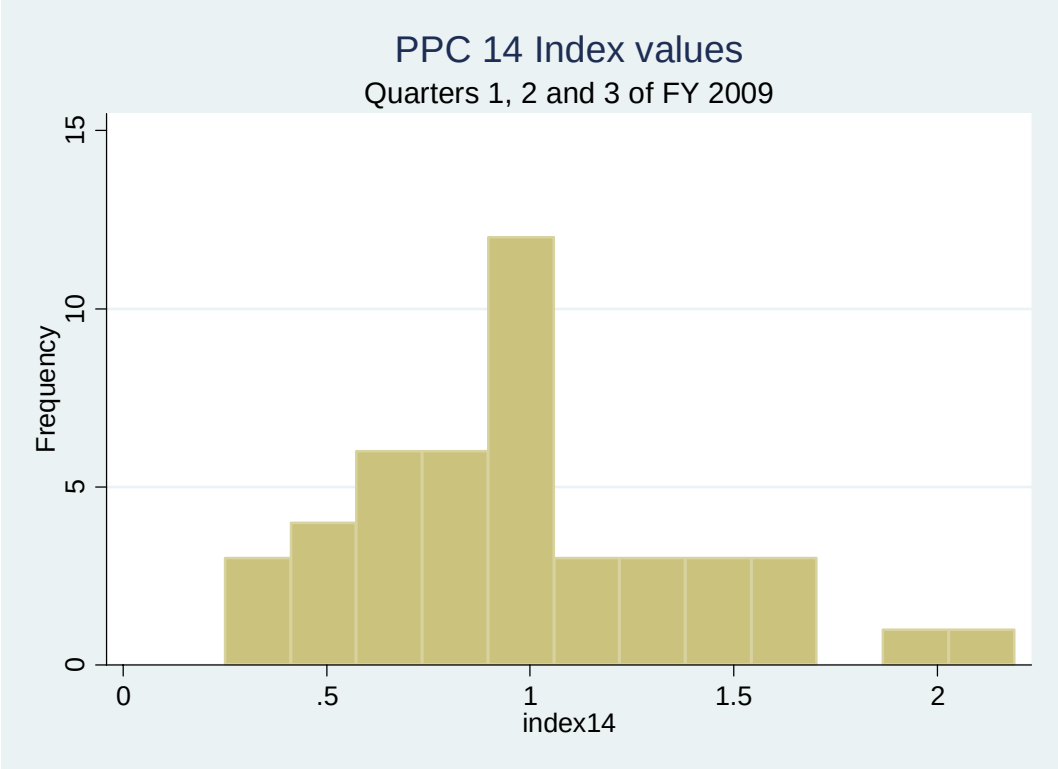
This paper shows histograms of the indices for selected PPCs. The selected PPCs generally have a high volume and a high cost associated with them.

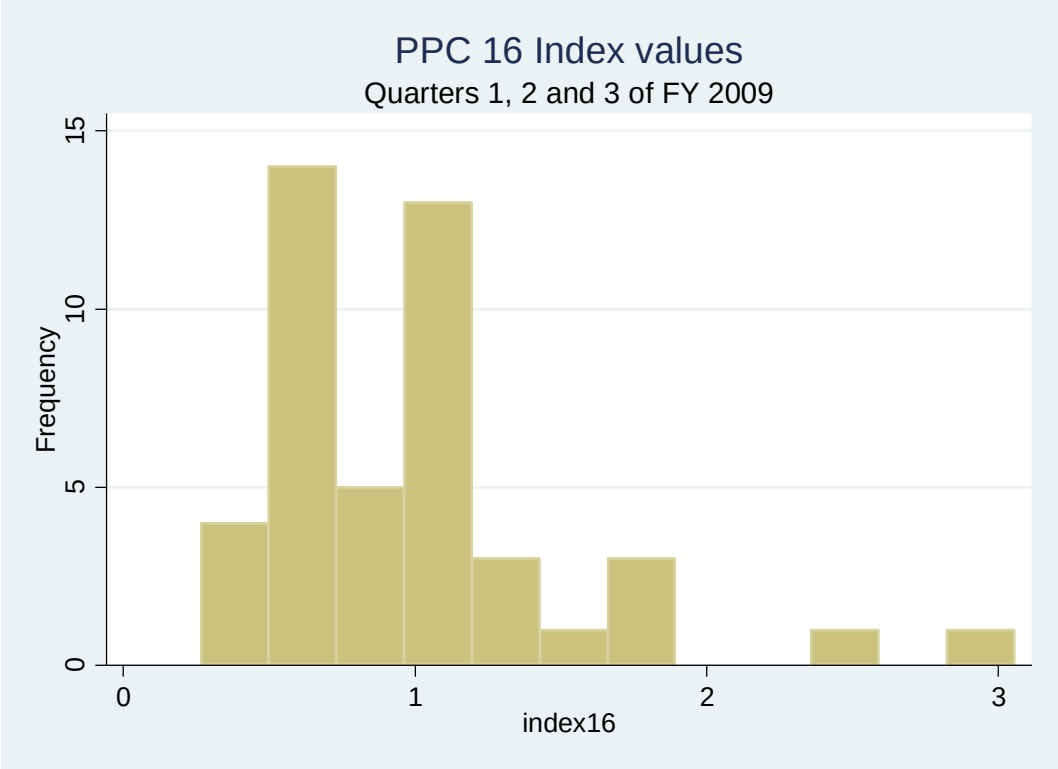


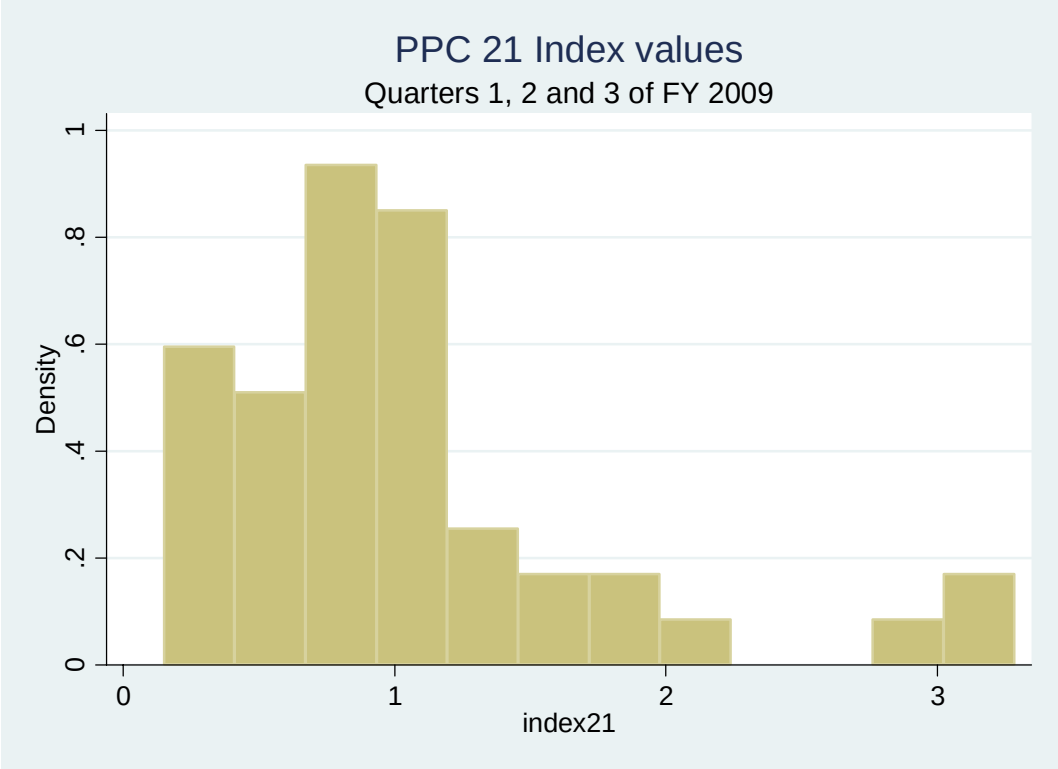

PPC 4 Index values
Quarters 1, 2 and 3 of FY 2009
Frequency
0
2
4
6
8
10
.5
1
1.5
2
2.5
index4

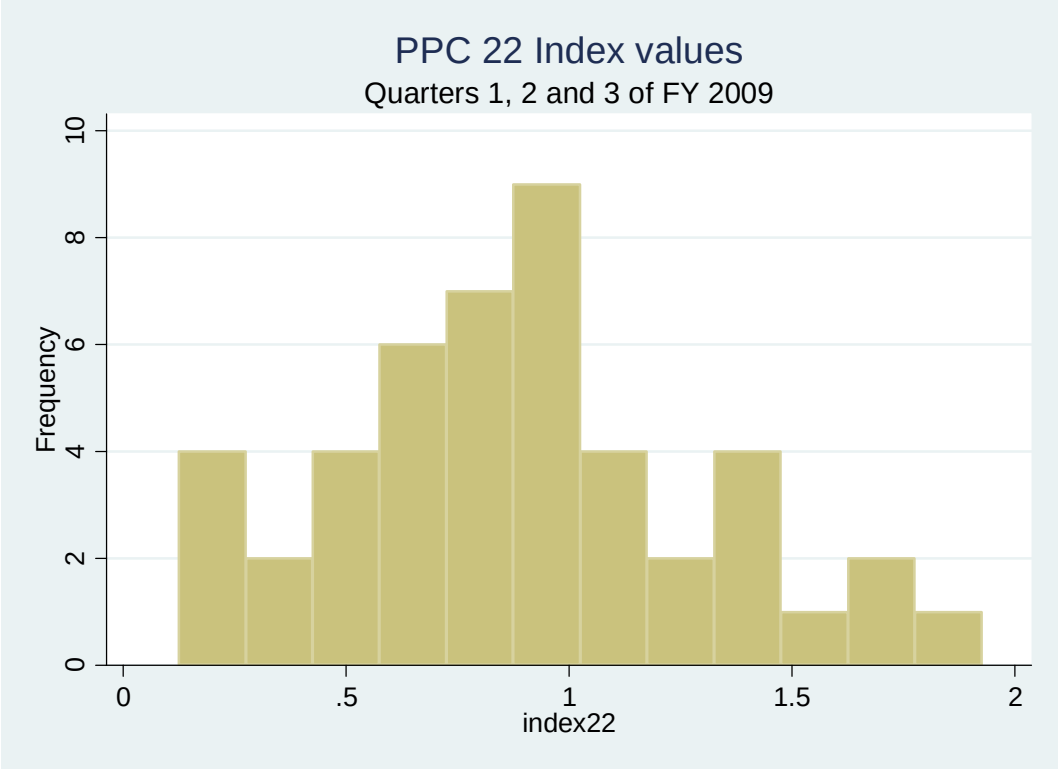

PPC 5 Index values
Quarters 1, 2 and 3 of FY 2009
Frequency
0
5
10
15
0
1
2
3
index5

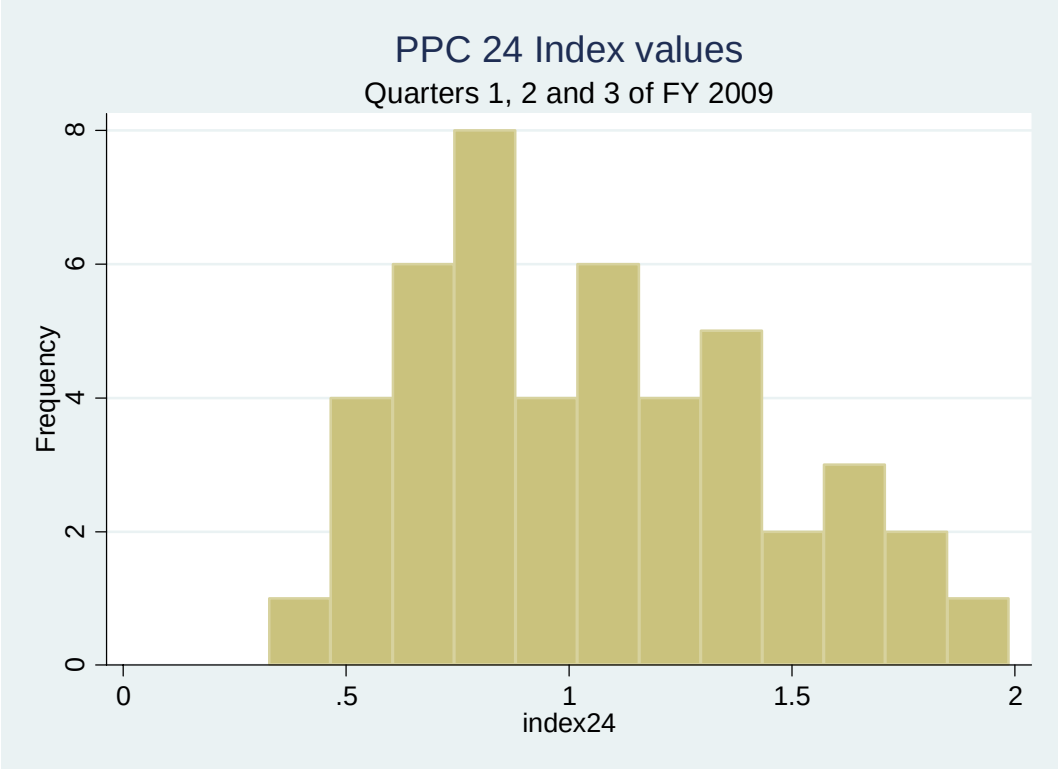

PPC 9 Index values
Quarters 1, 2 and 3 of FY 2009
Frequency
0
2
4
6
8
0
.5
1
1.5
2
2.5
index9

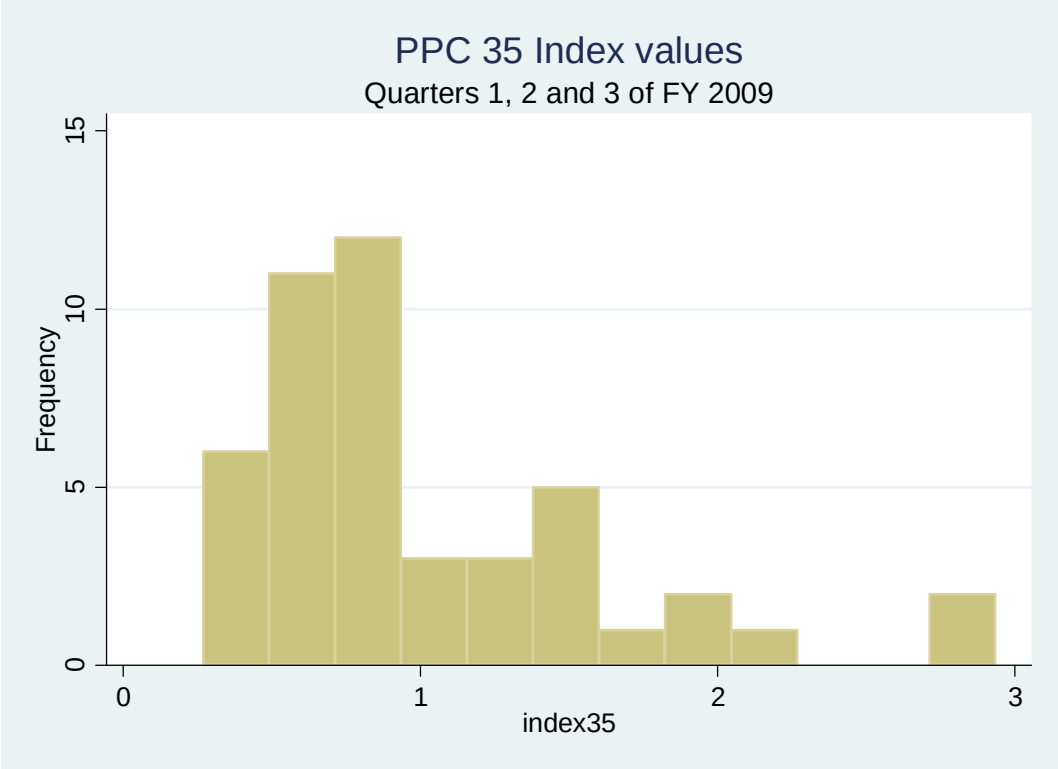

PPC 14 Index values
Quarters 1, 2 and 3 of FY 2009
Frequency
0
5
10
15
0
.5
1
1.5
2
index14


PPC 16 Index values
Quarters 1, 2 and 3 of FY 2009
Frequency
0
5
10
15
0
1
2
3
index16


PPC 21 Index values
Quarters 1, 2 and 3 of FY 2009
Density
0
.2
.4
.6
.8
1
0
1
2
3
index21


PPC 22 Index values
Quarters 1, 2 and 3 of FY 2009
Frequency
0
2
4
6
8
10
0
.5
1
1.5
2
index22


PPC 24 Index values
Quarters 1, 2 and 3 of FY 2009
Frequency
0
2
4
6
8
0
.5
1
1.5
2
index24


PPC 35 Index values
Quarters 1, 2 and 3 of FY 2009
Frequency
0
5
10
15
0
1
2
3
index35