MASSACHUSETTS
HEALTH POLICY COMMISSION

2017 Pre-Filed Testimony

Hospitals

Health Policy Commission
50 Milk Street, 8th Floor
Boston, MA 02109

Boston Children's Hospital
Until every child is well

HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

September 8, 2017

David Seltz
Executive Director
Health Policy Commission
50 Milk Street
8th Floor
Boston, MA 02109

Dear Mr. Seltz,

Attached, please find the testimony of Boston Children's Hospital, signed under pains and penalties of perjury, in response to questions provided by the Health Policy Commission and the Office of the Attorney General.

As the President and Chief Executive Officer of Boston Children's Hospital, I am legally authorized and empowered to represent the organization for the purposes of this testimony.

If you have any questions, please contact Joshua Greenberg, Vice President of Government Relations, at (617) 919-3055.

Sincerely,

Sandra L. Fenwick
President and CEO
Boston Children's Hospital

Exhibit A: Notice of Public Hearing

Pursuant to M.G.L. c. 6D, § 8, the Massachusetts Health Policy Commission, in collaboration with the Office of the Attorney General and the Center for Health Information and Analysis, will hold a public hearing on health care cost trends. The Hearing will examine health care provider, provider organization and private and public health care payer costs, prices and cost trends, with particular attention to factors that contribute to cost growth within the Commonwealth's health care system.

Scheduled Hearing dates and location:

Monday, October 2, 2017, 9:00 AM
Tuesday, October 3, 2017, 9:00 AM
Suffolk University Law School
First Floor Function Room
120 Tremont Street, Boston, MA 02108

Time-permitting, the HPC will accept oral testimony from members of the public beginning at 3:30 PM on Monday, October 2. Any person who wishes to testify may sign up on a first-come, first-served basis when the Hearing commences on October 2.

Members of the public may also submit written testimony. Written comments will be accepted until October 6, 2017, and should be submitted electronically to HPC-Testimony@state.ma.us, or, if comments cannot be submitted electronically, sent by mail, post-marked no later than October 6, 2017, to the Massachusetts Health Policy Commission, 50 Milk Street, 8th Floor, Boston, MA 02109, attention Lois H. Johnson, General Counsel.

Please note that all written and oral testimony provided by witnesses or the public may be posted on the HPC's website: www.mass.gov/hpc.

The HPC encourages all interested parties to attend the Hearing. For driving and public transportation directions, please visit: http://www.suffolk.edu/law/explore/6629.php. Suffolk University Law School is located diagonally across from the Park Street MBTA station (Red and Green lines). Parking is not available at Suffolk, but information about nearby garages is listed at the link provided. The event will also be livestreamed on the HPC's homepage and available on the HPC's YouTube channel following the Hearing.

If you require disability-related accommodations for this Hearing, please contact Andrew Carleen at (617) 757-1621 or by email Andrew.Carleen@state.ma.us a minimum of two (2) weeks prior to the Hearing so that we can accommodate your request.

For more information, including details about the agenda, expert and market participant panelists, testimony and presentations, please check the Annual Cost Trends Hearing section of the HPC's website, www.mass.gov/hpc. Materials will be posted regularly as the Hearing dates approach.

Exhibits B and C: Instructions for Written Testimony

On or before the close of business on **September 8, 2017**, please electronically submit written testimony signed under the pains and penalties of perjury to: HPC-Testimony@state.ma.us.

You may expect to receive the questions and exhibits as an attachment from HPC-Testimony@state.ma.us. Please complete relevant responses in the provided template. If necessary, you may include additional supporting testimony or documentation in an Appendix. Please submit any data tables included in your response in Microsoft Excel or Access format.

We encourage you to refer to and build upon your organization's 2013, 2014, 2015, and/or 2016 Pre-Filed Testimony responses, if applicable. Additionally, if there is a point that is relevant to more than one question, please state it only once and make an internal reference. **If a question is not applicable to your organization, please indicate so in your response.**

The testimony must contain a statement from a signatory that is legally authorized and empowered to represent the named organization for the purposes of this testimony. The statement must note that the testimony is signed under the pains and penalties of perjury. An electronic signature will be sufficient for this submission.

If you have any difficulty with the Microsoft Word template, did not receive the email, or have any other questions regarding the Pre-Filed Testimony process or the questions, please contact HPC staff at HPC-Testimony@state.ma.us or (617) 979-1400. For inquires related to questions required by the Office of the Attorney General in Exhibit C, please contact Assistant Attorney General Sandra Wolitzky at Sandra.Wolitzky@state.ma.us or (617) 963-2030.

Exhibit B: HPC Questions

On or before the close of business on **September 8, 2017**, please electronically submit written testimony to: HPC-Testimony@state.ma.us. Please complete relevant responses in the provided template. If necessary, you may include additional supporting testimony or documentation in an Appendix. Please submit any data tables included in your response in Microsoft Excel or Access format. If there is a point that is relevant to more than one question, please state it only once and make an internal reference.
If a question is not applicable to your organization, please indicate so in your response.

1. Strategies to Address Health Care Spending Growth

Chapter 224 of the Acts of 2012 (Chapter 224) sets a health care cost growth benchmark for the Commonwealth based on the long-term growth in the state's economy. For 2013-2016, the benchmark was set at 3.6%. Following a public hearing, the Health Policy Commission set the benchmark at 3.1% for 2018. To illustrate how the benchmark could be achieved, the HPC presented at the public hearing several exemplar opportunities for improving care and reducing costs, with savings estimates of between $279 to $794 million annually.

a. From the drop down menus below, please select your organization's top two priorities to reduce health care expenditures.
   i. **Priority 1**: Reduce provider practice pattern variation
   ii. **Priority 2**: Reduce unnecessary hospital utilization (e.g., avoidable emergency department use, admissions, readmissions)
iii. If you selected "other," please specify:

b. Please complete the following questions for **Priority 1** (listed above).
   i. What is your organization doing to advance this priority and how have you been successful?

Decreasing unnecessary provider practice variation has been a major goal of hospital-wide and program-specific initiatives at Boston Children's Hospital in 2017. In pursuit of this goal, we have emphasized the following efforts:

1. Using the best available clinical evidence in recommendations, care pathways, and other algorithms
2. Continually collecting data to inform further refinement of treatment recommendations, particularly since clear evidence is often lacking for the care of children
3. Ensuring that care is tailored to the needs of each patient, particularly those with rare or complex conditions for whom guideline-based recommendations should be adjusted

All guidelines and pathways reflect available evidence and expert opinions and are useful educational tools, but treatment decisions are always made by clinicians based on individual patient factors. The examples provided below reflect the engagement of many clinicians and leaders across Boston Children's Hospital, as well as substantial institutional investment in the infrastructure to support both development and implementation of care pathways and other initiatives.

Standardized Assessment and Clinical Management Plans

In 2009, Boston Children's Hospital began an innovative program of Standardized Assessment and Clinical Management Plans (SCAMPs) which has achieved positive results across a broad portfolio. SCAMPs are care pathways that not only guide care, but also capture data about clinical reasoning for care decisions that can be leveraged for continuous learning. They are particularly useful where evidence for optimal treatment is lacking for children overall, or subgroups with particular characteristics. Whenever a SCAMPs pathway is implemented, data is collected prospectively to determine whether clinicians incorporate recommended care into practice, and, if so, whether those changes have a positive impact on patient care and outcomes. This data also allows learning from deviations from care pathways and refinement of clinical recommendations over several iterations to incrementally approach a more optimized algorithm that limits uncertainty and waste. Since its inception, SCAMPs has reached over 20,000 patients in 23 specialty areas.

Examples of successful SCAMPs include:

- Critical Asthma SCAMP. The Critical Asthma SCAMP aims to optimize the use of therapies for hospitalized severely ill asthma patients within the Medicine Critical Care unit. Over the period of SCAMP implementation, length of stay for these patients decreased from 2.7 days (64 hours) to 1.5 days (37 hours). This resulted in an average cost savings of $2,958 per patient.
- Distal Radius Fracture SCAMP. This SCAMP guided treatment in the Orthopedic Surgery Department for distal radius fractures (common wrist fractures in children) from short arm casts to splints for appropriate fractures (torus and Salter Harris I fractures). Implementation resulted in a reduction from 80% of children receiving short arm casts to 27%. By shifting to splint use as appropriate, the SCAMP also reduced the need for clinic visits and associated x-rays. This resulted in an average cost savings of $524 per patient.
- Chest Pain SCAMP. This Cardiology Department SCAMP standardized testing for cardiac causes of chest pain based on risk criteria. The project reduced overall use of stress tests, MRIs, CT scans, ambulatory EKGs, and echocardiograms by 30%. This resulted in an average cost savings of $378 per patient.
- ECMO SCAMP. The Cardiology Department's SCAMP for Extracorporeal Membrane Oxygenation (ECMO) significantly shifted anticoagulant use to a less expensive, yet equally effective, option. The project reduced use of more expensive (but not superior) anticoagulants for ECMO patients by 71%.

Evidence Based Guidelines

At Boston Children's Hospital, we have also introduced Evidence-Based Guidelines (EBGs) for clinical situations in which current evidence (or consensus) is sufficient to recommend a standard approach to care. While key processes and outcomes are measured in the same way as SCAMPs, data collection and analysis is less intensive. The topics of EBGs range from straightforward algorithms for common, low acuity clinical scenarios (e.g. acute otitis media) to more complex conditions. The program was pioneered in the Emergency Department (ED) where 26 EBGs are now active; an additional 26 have been implemented in other areas. Many have resulted in decreased unnecessary utilization and demonstrably improved care.

Examples include:

- Acute Otitis Media (ear infection). An EBG, based on the recommendations of the American Academy of Pediatrics, decreased use of azithromycin (a broad spectrum antibiotic, usually unnecessary and less effective) from 11% to less than 3%.
- Bronchiolitis. An EBG that sought to standardize care of patients with bronchiolitis in the ED decreased the use of chest x-rays from 37% to 11%, and also decreased other unnecessary treatments.
- Minor Head Trauma. An EBG decreased the use of CT scans in cases of minor head trauma meeting specific criteria from 21% to 10%.
- Fluoride Varnish Application. EBGs have also been used to decrease provider practice variation in the implementation of preventive care recommendations in our primary care clinics. Fluoride varnish application to prevent dental caries in young children increased from 38% to over 60%.

We are currently making these guidelines more accessible to clinicians at the point of care and continuing to measure their uptake and impact.

Additional Efforts to Decrease Provider Practice Variation in Pediatric Specialty Care

Pediatric subspecialty providers at Boston Children's Hospital work closely with the referring primary care practice community to standardize treatment of common conditions through training and access to facilitated real-time consultation.

For example:

- The Department of Orthopedics has completed training for primary care physicians in the Pediatric Physicians Organization at Children's (PPOC) and other referring groups on treatment of common orthopedic conditions, including sports-related concussion, and shoulder, knee, ankle, and wrist injury. In addition, they have set up new HIPPA compliant processes for direct phone, text, and email communication with Boston Children's orthopedic specialists. In 2016, there were 474 telephone contacts, of which <1% resulted in referral to the ED.
- A practice guideline for children with headache seen in primary care settings was developed in consultation with the Department of Neurology, in combination with implementation of a Neurologist of the Week (NOW) consultation process. This pathway is designed to guide treatment of the majority of children with headache who can be safely and effectively managed in primary care settings, and identify those that require consultation with a pediatric neurologist.
- Boston Children's participates in more than 20 national registries and quality improvement collaboratives related to pediatric conditions. These include those sponsored by longstanding professional groups such as the Cystic Fibrosis Foundation, and newer collaboratives such as Improve Care Now (for inflammatory bowel disease). These groups all seek to standardize care nationally based on the latest evidence and professional consensus. Standards and guidelines are implemented locally, always based on individual patient considerations, and data is shared across all participating institutions to drive optimal performance and outcomes.

Standardizing Care to Promote Patient Safety

Our efforts to decrease unnecessary provider practice variation are rooted not only in seeking efficiency, but also in our goal to be a national leader in pediatric patient safety. Boston Children's has a wide variety of policies, standards, and protocols focused primarily on ensuring safe care for every patient. We participate actively in Solutions for Patient Safety, a national collaboration of more than 100 institutions providing pediatric care focused on harm reduction in specific areas. Hospital acquired conditions (HAC) that are the focus of intensive standardization and improvement efforts include central-line associated blood stream infections (CLABSI), catheter-associated urinary tract infections (CAUTI), and surgical site infections. In each of these examples, and others, we use policies and guidelines, standardization of technology, and training of our workforce to decrease variation and improve safety.

ii. What barriers does your organization face in advancing this priority?
See above.

iii. What are the top changes in policy, payment, regulation, or statute you would recommend to advance this priority?

For the purposes of this written testimony, much of what we have highlighted is internal work that does not require regulatory or statutory changes. That being said, when making such health policy related changes, policymakers should resist the temptation to assume that standards in adult care are appropriate for utilization in pediatric care. Additionally, for institutions in the Commonwealth that have an ability to provide care for medically complex pediatric patients, the state may wish to develop more explicit pediatric quality standards around provider variation relative to patient safety and outcomes.

c. Please complete the following questions for **Priority 2** (listed above).
    i. What is your organization doing to advance this priority and how have you been successful?

Reduction of unnecessary hospital utilization requires a multi-pronged approach and careful attention to ongoing operational details. As implied by your question, there are multiple leverage points available (avoidance of readmissions and "bounce backs," utilization of alternative/lower costs settings, and primary prevention strategies). As with all quality improvement projects, having clear targets and a defined operational approach are key to success. To be truly successful, reducing utilization also requires a significant ability to refine our predictive ability to understand which patients require care in a hospital based setting and when that care is no longer required (e.g. it is safe to discharge). Finally, some of the strategies employed have pediatric nuances worth consideration by the HPC.

Readmissions Example: National Solutions for Patient Safety efforts

One out of seven patients is readmitted to a U.S. hospital annually at an estimated cost of $26 billion dollars. This has been recognized by policymakers as both an indication of sub-optimal hospital care and a financial cost driver; payors and purchasers have increasingly sought to impose payment penalties for preventable readmissions. Healthcare leaders must reevaluate current practices and develop interventions that prevent avoidable readmissions and optimize the patient and family experience while reducing healthcare costs.

One of the challenges in pediatric care is that the standard measures for evaluating readmissions (and by extension "preventability") has not been validated for children, and does not, for example, account for readmissions associated with staged procedures. Boston Children's has played a significant role in addressing this gap through the development of a National Quality Forum endorsed pediatric readmission measure (a detailed and lengthy process from measure development, to validation, to endorsement). See: http://www.qualityforum.org/QPS/2393. This has enabled us to begin assessing and benchmarking our own readmission performance in a much more rigorous way.

Many issues — including hospital, community, patient, and family factors —contribute to unplanned readmissions. In pediatrics, two of the most challenging areas are:

- Availability of pediatric home care service and continuous skilled nursing
- Medication reconciliation for pediatric patients and medication education for patients and parents

Other examples that are not limited to pediatrics are:

- Scheduling of follow-up appointments prior to discharge
- Support for parents and caregivers of pediatric patients with a new diagnosis

As part of the National Solutions for Patient Safety (NSPS) collaborative to improve pediatric patient safety (http://www.solutionsforpatientsafety.org/), Boston Children's Hospital developed a quality improvement initiative to reduce seven-day readmissions by 20%. Two discharge interventions to reduce readmissions were implemented: a discharge bundle and a teach-back method of discharge education. The teach-back method emphasized that every nurse on every shift partners with the patient and/or family and the oncoming nurse to review discharge plans throughout the entire hospitalization and address knowledge gaps.

In collaboration with multiple services to identify complex patients at high risk for readmissions, Boston Children's has attempted to address several of the factors noted above:

- We have implemented Discharge Communication (DisCo), an innovative real-time post-discharge digital communication tool, to follow up with patients at high risk for readmissions. DisCo utilizes electronic mechanisms (text message, email, etc.) to assess and track patient barriers to accessing or adhering to follow up care.
- On one of the inpatient surgical floors, Boston Children's conducted a three month Access Pilot Initiative on follow-up appointments prior to discharge. Baseline data showed only 86% of patients were scheduled for

follow-up appointments, with no information on whether the appointments were scheduled prior to discharge. As a result of the pilot, 99.5% of patients were scheduled for follow-up appointments, and 88% of those appointments were scheduled within 72 hours of discharge. While 69% of follow-up appointments were scheduled prior to discharge, 31% of patients were discharged on weekends; this required that patients discharged on weekends be contacted on Monday to coordinate follow-up appointments.

- Boston Children's created targeted interventions for high risk medications in an effort to reduce readmission.
- We have partnered with our Family Advisory Committee and Patient Access Department to enhance the scheduling process for post-discharge follow-up appointments in the inpatient setting.

Less Costly Care Example: Orthopedics Department Urgent Care Consultation and Services

Our Orthopedics Department has been deploying and expanding urgent and office-based trauma care programs at our Longwood and Waltham campuses, and its Peabody and Weymouth satellite offices, over the past two years. These services are designed to increase patient access and satisfaction, reduce unnecessary ED visits, and better coordinate care with primary care physicians.

These services specifically support immediate telephonic consultation with a pediatric orthopedic attending for referring physicians dealing with urgent or emergent concerns. Of the calls received in the most recent period, less than 1% were sent to the ED (because they required relatively high intensity resources) while 66% were handled through immediate scheduling of an urgent care visit, resulting in a substantial redirection of care out of the ED. The remaining inquiries involved questions about overall orthopedic management of the patient's condition.

In the most recent fiscal year, nearly 12,000 urgent visits were scheduled as broken down below, with over 1,100 surgical procedures completed:

Urgent Boston	4,646
Urgent Peabody	1,131
Urgent Waltham	4,824
Urgent Weymouth	1,392
Total Urgent	**11,993**

Prevention Example: Behavioral Health Integration in Primary Care

The Pediatric Physicians' Organization at Children's Hospital (PPOC) Behavioral Health Integration Program (BHIP) is a system-wide approach to transforming the delivery of pediatric primary care to include fully-integrated behavioral health services as a core competency. Currently, 60 pediatric primary care practices across the Commonwealth participate in this program, which embeds on-site clinicians (typically LICSWs) to enable timely, co-located delivery of behavioral health services. The program aims to improve a myriad of clinical, quality, and cost outcomes, and has developed substantial enabling infrastructure to support these "distributed" clinicians such as the following:

- Providing access to a rapid-response consultation service to connect primary care providers with child psychiatrists at Boston Children's (averaging 12 hours of service/month)
- Conducting two major pilot projects to integrate specialized substance abuse services and telepsychiatry services in primary care
- Providing 35+ hours/year of Continuing Medical Education/Continuing Education (CME/CE)-accredited programming focused on integrated care to providers and staff employed by participating practices
- Providing direct operational and clinical consulting to practices as they fully-integrate behavioral health providers into the medical home (approximately 5 hours/month/practice)

- Conducting twice-monthly grand rounds, focused on behavioral health integration, via web-video conferencing. The consulting team includes representatives from the departments/divisions of psychiatry, psychology, social work, and developmental medicine
- Conducting rigorous evaluation to refine and improve the program and enhance engagement

Since reporting on this program last year, we have continued to expand its geographic footprint. The program is a major initiative of our evolving Medicaid Accountable Care Organization (ACO) work and will be enhanced and expanded through targeted delivery system reform incentive payments (DSRIP).

Improved Identification Example: Pilot to Identify a Data Driven approach to understanding Expected Length of Stay

This project aims to develop a sustainable approach to identifying a pediatric patient's industry expected length of stay (LOS), using a data driven strategy, and operationalize a communication path to care teams. Our desired outcomes include reduction of unnecessary length of stay for pediatric patients while improving available capacity at the hospital. We are effectively trying to develop the necessary utilization management analytic tools available to adult providers, and make them available to the heterogeneous patient populations and specialized care teams seen in our pediatric setting. **(See response to the HPC's 2014 Cost Trends Written Testimony, Attachment 1.)**

Empirical evidence suggests there is opportunity to improve our bed utilization given benchmarks in LOS. In FY16, observed LOS compared to Truven Pediatric weights indicated 7.5% of our total bed days might be avoidable (as noted in prior answers to Commission questions on risk adjustment and outcomes measurement, our patient population tends to be atypical in terms of underlying medical complexity). Furthermore, the Centers for Medicare and Medicaid Services (CMS) and private payers have forced a higher level of scrutiny on clinical documentation to support inpatient LOS and medical necessity.

In order to address this challenge, we have begun to explore removing the most common barrier to LOS expectations - the lack of real-time insights into potential discrepancies between actual and expected LOS. Early on, we recognized that relying only on retrospective analyses precludes the ability of clinical teams to make immediate interventions to improve discharge timing.

Boston Children's is working on identifying an expected LOS for in house bedded patients, using multiple methodologies, to provide actionable insights. [The benchmarks need to accommodate both clinical and diagnostic information (e.g. why was the patient admitted) with patient-specific information (e.g. are there things that are special or different about this patient that might cause us to deviate from the norm).] Having access to a reliable benchmarks for the expected trajectory will not only improve throughput on the clinical side but will also improve bed planning and proactive elective scheduling in real time. The Pilot will aim to assess three methodologies for predicting LOS. If we can reliably predict LOS, we can provide real-time insights to clinicians to improve throughput.

What barriers is your organization facing in advancing this priority?
Please see above.

ii. What are the top changes in policy, payment, regulation, or statute you would recommend to advance this priority?

It is the recommendation of Boston Children's that only nationally recognized and endorsed pediatric readmissions measures be utilized by the Commonwealth. In addition, given the unique nature of providing inpatient pediatric care, there should be no penalties associated with hospital readmissions as the utilization of pediatric measures in this space is itself still in its infancy.

With regards to behavioral health, policymakers should seek to facilitate cross-payer, prevention-focused integration of behavioral health into primary care and expansion of the behavioral health workforce. Innovations such as telemedicine can also play a role in this space by increasing access to providers and reaching underserved communities.

2. STRATEGIES TO REDIRECT CARE TO COMMUNITY SETTINGS

The HPC has identified significant opportunities for savings if more patients were treated in the community for community-appropriate conditions, rather than higher-priced academic medical centers.

a. What are the top barriers that you face in directing your patients to efficient settings for community-appropriate care rather than to more-expensive settings, such as academic medical centers? (select all that apply)
   - ☐Patient perception of quality
   - ☐Physician perception of quality
   - ☐Patient preference
   - ☐Physician preference
   - ☐Insufficient cost-sharing incentives
   - ☐Limitations of EMR system
   - ☐Geographic proximity of more-expensive setting
   - ☐Capacity constraints of efficient setting(s)
   - ☐Referral policies or other policies to limit "leakage" of risk patients
   - ☒Other (please specify):

b. How has your organization addressed these barriers during the last year?

As a general statement, Boston Children's disagrees with the Health Policy Commission's apparent assumption that pediatric hospital care is widely available in the community. Commissioners and staff may wish to reference the recent JAMA Pediatrics article **"Availability of Definitive Hospital Care for Children" (published online July 10, 2017, Attachment 2)**, which provides a ten-year overview of the pediatric capabilities of all Massachusetts hospitals through analysis of more than thirty-five million encounters utilizing data from the Center for Health Information and Analysis (CHIA). With the exception of four outlier hospitals, most hospitals in Massachusetts were able to provide care for less than 40% of all pediatric patients that presented in their emergency departments. These capabilities have been substantially declining over time, contrasting significantly with the ability to provide adult care, which has remained relatively stable.

Boston Children's has previously reported on its efforts to provide care in both community hospital settings and in other academic medical centers through physician staffing approaches as a means of maintaining such capabilities in the community **(See response to the HPC's 2014 and 2015 Cost Trends Written Testimony, which describe our efforts in some detail, Attachments 1 and 3)**. We currently provide a mix of newborn nursery (Level I - III), emergency department, and pediatric inpatient care in seven community hospitals in Massachusetts. We also have longstanding clinical service agreements with other academic medical centers for specific subspecialty services. As noted previously, our intention is to support, where possible, care that is more cost-effective and community based while maintaining high safety and quality standards. We believe that these arrangements have addressed many of the "checkboxes" enumerated above, recognizing that the availability of pediatric care, especially for more critically ill children, is not evenly distributed or even available in many lower cost settings despite such staffing arrangements.

We thought we would address two specific items that the HPC has shown interest in in some of its other publications and reports because these items have pediatric nuances:

- The use of post-acute care (relative to Boston Children's a potentially lower-cost setting)
- Boarding of behavioral patients on our inpatient unit (by definition a higher cost intervention than finding an appropriate behavioral health bed)

Post-Acute Care: Franciscan Children's & Boston Children's Hospital Relationship

As a general statement, post-acute care utilization for pediatric patients is relatively uncommon. In contrast to some of the previous findings of the HPC, we believe that better utilization of habilitative services can sometimes provide lower

cost, better care for those patients requiring them. **(See our response to the HPC's 2015 Cost Trends Written Testimony 2015, Attachment 3).** However, effective use of this resource requires that referrals and transfers are made on a timely basis, that payors approve the care, and that families have been educated in advance of the recommended transition so that it is seen as a recommended step in the continuum of care. The most comprehensive service available for children is located at Franciscan Children's Hospital, which is an independent, non-profit, pediatric hospital in Brighton offering post-acute care to children with complex medical conditions.

Boston Children's and Franciscan Children's have a long-standing clinical collaboration in caring for shared patients, many of whom have complex chronic illnesses and/or require post-acute habilitation services prior to transitioning home. Jointly, we identified an opportunity to strengthen our long-standing collaboration by creating a more formal structure to proactively engage in identifying and addressing opportunities for us to leverage available, lower cost bed capacity at Franciscan Children's, improve transitions of care for families and clinicians alike and standardize our approach to caring for shared patients.

In fall 2016, we implemented a new structure to support our clinical collaboration that includes a joint leadership committee comprised of senior level Boston Children's and Franciscan Children's clinical and administrative leaders and a clinical operations group of clinical and administrative leaders who are involved in the daily operations. Together we have identified and prioritized our improvement opportunities and established joint annual goals to drive our work.

Some of the highlights of our efforts to date include:

- The development of dashboards to track key performance metrics such as timeliness of the transfer process
- Internal education and tours for Boston Children's providers of Franciscan Children's clinical capabilities and service offerings and meetings between Boston Children's and Franciscan Children's clinical leaders to identify new populations of patients who may be appropriate for referral to Franciscan Children's
- The establishment of a joint LEAN Six Sigma team to evaluate 'pain points' in the transition of care process from point of identification of patients potentially appropriate for referral to Franciscan Children's to point of transfer to Franciscan Children's

A wide array of challenges have been identified including, but not limited to, insurance barriers, patient/family preference, clinical status changes, and transportation. The joint team is working to develop and implement changes to reduce these barriers so that we can transition more clinically appropriate patients to Franciscan Children's in a safe, coordinated and timely manner. For example, we are collaboratively working on:

- The development of standard approaches to tracheostomy management including shared policies, consistent discharge instructions and family education and standard equipment/supplies.
- The provision of Boston Children's sub-specialists who travel to Franciscan Children's on a periodic basis (generally 1 - 2 times per month) to see patients in order to avoid unnecessary and costly transfers back to Boston Children's for sub-specialty care.
- The exploration of IT solutions to improve the exchange of information for shared patients to improve communication and support patient care transitions.

As a result of our efforts, more clinically appropriate patients are being identified as potential candidates for referral to Franciscan Children's for post-acute care and we are improving the timeliness and quality of the transition of care process. That said, insurance barriers, most notably with government payers, are still problematic and require countless hours of effort by the staff of Boston Children's and Franciscan Children's to facilitate timely transitions.

Behavioral Health Boarding: Bradley Hospital Relationship

In contrast to our successful joint efforts with Franciscan Children's, we have continued to experience significant challenges in the behavioral health space. While Boston Children's maintains 28 inpatient and Community Based Acute

Treatment (CBAT) beds, we are frequently overwhelmed with the demand for high-quality inpatient psychiatric care. Patients come to our emergency department from all over Massachusetts, making geographically proximate solutions important.

In response to the lack of sufficient pediatric inpatient psychiatric bed capacity in Massachusetts, Boston Children's pursued bed capacity options at other regional hospitals. These efforts resulted in Boston Children's entering into a relationship with Bradley Hospital, a child psychiatric facility with a full array of psychiatric services, in Rhode Island in October 2014. Under the terms of the relationship, Boston Children's provided financial support to Bradley Hospital to fund the opening of five additional psychiatric beds and entered into a bed lease arrangement for access to the beds for Boston Children's patients requiring inpatient psychiatric care. We selected Bradley because it has the largest clinical program in New England, has a strong academic partnership with the Brown University Medical School, and was closer to home for many Boston Children's patients from Southeastern Massachusetts.

While we had high hopes that the arrangement would help to address some of our psychiatric bed capacity needs, a major barrier was the unwillingness of Massachusetts Medicaid's vendor and other payors to approve patient placements despite the enormous backlog in stuck and boarded children. Notably, these payor difficulties occurred at the same time patients were routinely being approved for care at the now de-licensed (due to severe concerns about quality and safety standards) Westwood Lodge facility. As a result, we discontinued the arrangement with Bradley after two years of failed attempts to leverage the available capacity.

3. INFORMATION ON PHYSICIAN COMPENSATION MODELS

Please answer the following questions regarding the current compensation models for your *employed* physicians. Indicate N/A if your organization does not employ physicians. ☐N/A

a. For **primary care physicians**, list the approximate percentage of total compensation that is based on the following:

	%
Productivity (e.g., RVUs)	5.2%
Salary	93.0%
Panel size	
Performance metrics (e.g., quality, efficiency)	
Administrative/citizenship	1.8%
Other	

b. For **specialty care physicians**, list the approximate percentage of total compensation that is based on the following:

	%
Productivity (e.g., RVUs)	
Salary	100%
Panel size	
Performance metrics (e.g., quality, efficiency)	
Administrative/citizenship	
Other	

c. Describe any plans to change your organization's compensation models for primary care and/or specialty care physicians that you employ.

BCH does not anticipate any changes to the compensation models for employed primary care and/or specialty care physicians.

Exhibit C: AGO Questions for Written Testimony

The following questions were included by the Office of the Attorney General. For any inquiries regarding these questions, please contact Assistant Attorney General Sandra Wolitzky at Sandra.Wolitzky@state.ma.us or (617) 963-2030. **If a question is not applicable to your organization, please indicate so in your response.**

1. Chapter 224 requires providers to make price information on admissions, procedures, and services available to patients and prospective patients upon request.

    a. Please use the following table to provide available information on the number of individuals that seek this information.

Below please find the Boston Children's estimated health care service price inquiries data, which reflects inquiries from both inside and outside of Massachusetts. Please note, all inquiries, regardless of entry point (e.g. phone call to Customer Service, Online request via Web, etc.), go through the same centralized process for review. This process has been evolving over time to better respond to patient and family needs and, as a result of changes in how we field and track inquiries and provide estimates, our year over year comparison may not be perfectly consistent. However, we believe the data is directionally accurate, without material change.

Also of note, our online web-portal is one of the most frequently accessed methods for price inquiries and for the purposes of this required written testimony, we have documented web requests below along with written inquiries.

Health Care Service Price Inquiries CY2015-2017			
Year		Aggregate Number of Written Inquiries	Aggregate Number of Inquiries via Telephone or In Person
CY2015	**Q1**	222	37
	Q2	235	59
	Q3	195	63
	Q4	186	53
CY2016	**Q1**	156	34
	Q2	178	29
	Q3	275	52
	Q4	261	52
CY2017	**Q1**	292	45
	Q2	285	44
	TOTAL:	2285	468

b. Please describe any monitoring or analysis you conduct concerning the accuracy and/or timeliness of your responses to consumer requests for price information, and the results of any such monitoring or analysis.

Boston Children's records the creation of the estimate using functionality within our Registration and Billing System, Epic, to indicate if an estimate was created. The functionality used is called Smart Texts. Smart Texts also have dates and time stamps associated with them, and allow Boston Children's to monitor time between request and response; 98% of our requests are responded to within 24 hours.

Of note, an **April 2017 publication "Massachusetts Hospitals Score Poorly on Price Transparency…Again", by Pioneer Health (Attachment 4),** surveyed Massachusetts hospitals and found Boston Children's was able to generate estimates for an MRI within 35 minutes, the second fastest time found in the survey. In addition, the estimates provided by Boston Children's were found to be accurate and estimates were available both via phone and via an online request on our website.

c. What barriers do you encounter in accurately/timely responding to consumer inquiries for price information? How have you sought to address each of these barriers?

Creating an estimate can be challenging with patient reported needs. To generate an estimate, we require the procedure codes to build up the total charge. However, procedure codes may vary based on actual services rendered, and become more complex with complex procedures. Obtaining appropriate codes may be difficult, but working with internal coders and physician offices can help reduce the barriers. A patient's understanding of how charges translate into allowable amounts with contracts and individual benefit plans impact the amount a patient will ultimately pay. Helping patients understand how the macro-health care payment environment works is important as price transparency continues to challenge us to be as consumer-centric as possible

2. For each year 2014 to present, please submit a summary table showing your operating margin for each of the following three categories, and the percentage each category represents of your total business: (a) commercial business, (b) government business, and (c) all other business. Include in your response a list of the carriers or programs included in each of these three margins, and explain whether and how your revenue and margins may be different for your HMO business, PPO business, and/or your business reimbursed through contracts that incorporate a per member per month budget against which claims costs are settled.

Boston Children's Hospital						
Exhibit C: AGO Questions for Written Testimony - Question #2						
FY14-FY16 (based on Strata)						
	Current Year Submission				**PY Submission**	
	FY2014	**FY2015**	**FY2016**		**FY2014**	**FY2015**
(A) Commercial Business:						
Operating Margin - Financials	27.5%	25.3%	25.0%		27.5%	25.4%
% Total Expenses	38.4%	38.0%	38.7%		38.4%	38.0%
(B) Government Business:						
Operating Margin - Financials	-41.2%	-45.0%	-52.5%		-41.6%	-44.8%
% Total Expenses	22.0%	22.8%	22.0%		22.0%	22.8%
(C) All Other Business:						
Operating Margin - Financials	-7.9%	-8.6%	-7.3%		-7.8%	-8.7%
% Total Expenses	39.6%	39.2%	39.2%		39.6%	39.2%
Total Business:						
Operating Margin - Financials	5.0%	2.6%	2.6%		5.0%	2.6%
% Total Expenses	100.0%	100.0%	100.0%		100.0%	100.0%
(A) Commercial includes all other payers not listed in (B) and (C) below.						
(B) Government includes BMC, HSN, MA Medicaid, Medicaid Out of State, Medicare, MBHP, Network Health, and NHP.						
(C) All other includes International, and Self Pay, research, and other operating.						
Includes one time expenses.						