Analysis of the Reasonableness of Assumptions Used For and

Feasibility of Projected Financials of:

Children’s Medical Center Corporation

For the Years Ending September 30, 2023

Through September 30, 2033

October 20, 2023

Donna M. Casey

Senior Vice President

Boston Children’s Hospital

300 Longwood Avenue

BY483

Boston, MA 02215

**RE: Analysis of the Reasonableness of Assumptions and Projections Used to Support the Financial Feasibility of the Proposed Project**

Dear Ms. Casey:

Enclosed is a copy of our report on the reasonableness of assumptions used for and feasibility of the financial projections for Children’s Medical Center Corporation. Please contact me to discuss this report once you have had an opportunity to review.

Sincerely,

BDO USA

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October 20, 2023

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Senior Vice President

Boston Children’s Hospital

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Boston, MA 02215

**RE: Project Financial Feasibility Services Associated with DPH DoN Factor 4**

Dear Ms. Casey:

We have performed an analysis related to the reasonableness and feasibility of the financial projections (the “Projections”)[[1]](#footnote-1) of Children’s Medical Center Corporation (“Children’s Medical Center”, “CMCC” or the “Applicant”) related to its Determination of Need (“DON”) filing which will include the projects related to the substantial capital expenditure for the existing buildings and infrastructure of the Applicant (the “Proposed Projects”), described further below. This report details our analysis and findings with regard to the reasonableness of assumptions used in the preparation of the Projections and feasibility of the projected financial results prepared by the management of CMCC (“Management”). This report is to be used by CMCC in connection with its DoN Application – Factor 4(a) and should not be distributed or relied upon for any other purpose.

# EXECUTIVE SUMMARY

The scope of our review was limited to an analysis of the consolidated Children’s Medical Center Corporation’s eleven-year financial projections for the fiscal years ending September 30, 2023, through 2033 prepared by Management and the supporting documentation to render an opinion as to the reasonableness of assumptions used in the preparation and feasibility of the Projections. The Applicant’s fiscal year is defined as October 1 – September 30 throughout the entirety of this memo. Based upon our review of the relevant documents and analysis of the Projections, we determined that the anticipated operating EBIDA[[2]](#footnote-2) surplus is a reasonable expectation and is based upon feasible financial assumptions. Accordingly, we determined that the Projections are reasonable and feasible, and not likely to have a negative impact on the Applicant’s patient panel or result in a liquidation of CMCC’s assets. A detailed explanation regarding the basis for our determination of reasonableness and feasibility is contained within this report.

# RELEVANT BACKGROUND INFORMATION

Children’s Medical Center, d/b/a Boston Children’s Hospital, includes (1) Children’s Hospital (the “Hospital”), which engages in pediatric patient care, research, training, and community service, (2) 15 tax-exempt physician foundations (the “Foundations”), which are organized for charitable, scientific, and educational purposes and operate for the benefit of the Hospital and Harvard Medical School by providing medical, education, and health care services primarily to patients at the Hospital and at the other health care providers at satellite locations, (3) the Physicians’ Organization at Children’s Hospital, Inc. (the “PO”), which provides coordination and general oversight of the clinical and medicine practices and related health care services of the Foundations, (4) CHB Properties, Inc., which owns and operates real property and distributes the net income of such property to CMCC, (5) Longwood Research Institute, Inc., which holds real property for the benefit of the Hospital to further its research mission, (6) Boston Children’s Health Physicians, LLP, a fully integrated health care community that provides pediatric inpatient and outpatient care to patients in New York, Connecticut, and New Jersey, (7) Blood Research Institute, Inc., (8) Boston Children’s Health International, LLC, and (9) Boston Children’s Health Solutions RX LLC.

The Applicant proposes a substantial capital expenditure project to optimize use of current facilities and improve access, particularly the emergency room, at 300 Longwood Avenue, Boston, MA 02115 (“Longwood”). The Longwood campus includes inpatient, outpatient, research, and administrative space and serves approximately 21,669 discharges and 387,000 outpatient visits annually. The Proposed Project includes (1) renovating and outfitting the existing 6,500-square-foot emergency room at Longwood campus, (2) transforming the existing 3,300-square-foot patient entertainment space at Longwood campus into a nurse-run outpatient vaccine clinic, and (3) expanding the imaging modality by incorporating two new ultrasound rooms.

The renovation of the emergency room entails several enhancements, notably the incorporation of one triage room/open bay, the inclusion of eight examination rooms, and the creation of supporting space such as an open nurse station and Americans with Disabilities Act (“ADA”) accessible restrooms for public and staff. This expansion within the existing space will streamline CMCC’s operations, enabling the consolidation of emergency care services into a single dedicated emergency room. The Project is poised to significantly enhance the patient experience by reducing wait times for admission to the emergency department. Given that emergency rooms play a pivotal role in serving vulnerable populations, this initiative will bolster the Applicant’s capacity to provide comprehensive care to a diverse range of patients, encompassing both medical and behavioral health needs.

The Proposed Project's establishment of a nurse-run vaccine program represents a significant step towards enhancing access to routine and travel-required childhood immunizations. The introduction of a nurse-run outpatient vaccine clinic will enable the Applicant to offer convenient access to a wide range of pediatric vaccines, including those for COVID and influenza. This approach empowers patients to receive both routine vaccinations and specialized care on the same day, all within the convenience of a centrally located hospital-based vaccine clinic. Importantly, this program is tailored to cater to medically complex children, eliminating the need for multiple frequent specialist visits and streamlining their healthcare journey, a benefit not typically offered by pediatricians.

The incorporation of two additional ultrasound rooms into Longwood campus's existing imaging modalities represents a significant stride towards reducing patient wait times and enhancing access to care. Specifically, the Proposed Project places a strong emphasis on improving the ultrasound imaging suite to cater to pediatric patients who require low-dose imaging. Pediatric ultrasounds, or sonography, stand as a non-invasive, painless imaging technique, eliminating the need for radiation exposure. This approach relies on high-frequency sound waves to generate detailed images of organs, muscles, soft tissue, and blood vessels. By prioritizing pediatric sonography, we ensure a safer and more effective diagnostic experience for our young patients.

The Proposed Project aligns with the Commonwealth of Massachusetts’ goals for cost containment, timely care, and reduced mortality and morbidity translating to better patient outcomes.

# SCOPE OF REPORT

The scope of this report is limited to an analysis of the eleven-year Projections for the fiscal years ending September 30, 2023 through 2033, prepared by Management, and the supporting documentation to render an opinion as to the reasonableness of assumptions used in the preparation and feasibility of the Projections. Reasonableness is defined within the context of this report as supportable and proper, given the underlying information. Feasibility is defined as based on the assumptions used, the Proposed Projects are not likely to result in a liquidation of the underlying assets or the need for reorganization.

This report is based on prospective financial information provided to us by Management. BDO understands the prospective financial information was developed as of August 2, 2023 and is representative of Management’s expectations as of the drafting of this report. BDO has not audited or performed any other form of attestation services on the projected financial information related to the operations of CMCC.

If BDO had audited the underlying data, matters may have come to our attention that would have resulted in our using amounts that differ from those provided. Accordingly, we do not express an opinion or any other assurances on the underlying data or projections presented or relied upon in this report. We do not provide assurance on the achievability of the results forecasted by the Applicant because events and circumstances frequently do not occur as expected, and the achievement of the forecasted results is dependent on the actions, plans, and assumptions of Management. We reserve the right to update our analysis if in the event that we are provided with additional information.

# SOURCES OF INFORMATION UTILIZED

In formulating our conclusions contained in this report, we reviewed documents produced by Management as well as third party industry data sources. The documents and information upon which we relied are identified below or are otherwise referenced in this report:

1. Projected Financial Model for CMCC for the periods ending September 30, 2023, through September 30, 2033;
2. Draft Children’s Medical Center Corporation Application Form for DoN Application provided on August 30, 2023;
3. Audited Financial Statements for Boston Children’s Hospital and Subsidiaries for Fiscal Years Ended September 30, 2019 through 2022;
4. Unaudited Comparative Statement of Revenues and Expenses for Children’s Medical Center Corporation for the period ended June 30, 2023;
5. Budget Worksheet PRF 4462 ED Observation provided on September 8, 2023;
6. Ultrasound Budget Estimate provided on September 8, 2023;
7. Vaccine Program Estimate provided on September 8, 2023;
8. BCH ED Observation Concept Plan – Architectural Plan provided on September 8, 2023;
9. Vaccine Clinic Concept Plan – Architectural Plan provided on September 8, 2023;
10. Ultrasound Modality Move and Waiting Room Part 1 – 2 Net New Rooms plan provided on September 8, 2023;
11. Project RISE - Management Action Plan as of July 24, 2023;
12. Drivers of Financial Performance (FY 2023 – YTD April) Presentation to the Finance Committee on July 26, 2023;
13. Historical Budget Tracking for CMCC for the periods ending September 30, 2005, through September 30, 2019;
14. Capital Authorization: Expansion of the Emergency Room Presentation to the Finance Committee on May 17, 2023;
15. Capital Authorization: Longwood Radiology Master Facility Plan Presentation to the Finance Committee on March 15, 2023;
16. Capital Authorization: Establishment of a Hospital Based Nurse Administered Vaccine Clinic Presentation to the Finance Committee on May 17, 2023;
17. Definitive Healthcare data;
18. Data obtained from Integra Information, A Division of Microbilt Corporation as of August 4, 2023; and,
19. IBISWorld Industry Report 62211: Hospitals in the US, dated January 2023.

# REVIEW OF THE PROJECTIONS

This section of our report summarizes our review of the reasonableness of the assumptions used and feasibility of the Projections.

The following tables present the Key Metrics, as defined below, which compare the operating results of the Projections to market information from Integra Reports (“Integra”), IBISWorld, and Definitive Healthcare as well as the Applicant’s historical performance, to assess the reasonableness of the projections.

**Projected Key Financial Metrics and Ratios**

| Children’s Medical Center Corporation | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Profitability**: Operating Margin (%) | -3.8% | 0.0% | 2.4% | 2.0% | 2.2% | 2.0% | 1.8% | 2.0% | 2.3% | 2.7% | 3.1% |
| **Profitability**: Excess Margin (%) | 3.2% | 6.5% | 9.3% | 9.4% | 9.6% | 9.7% | 9.7% | 9.8% | 9.8% | 9.9% | 10.0% |
| **Profitability**: Debt Service Coverage Ratio (x) | 2.2x | 4.4x | 6.6x | 7.0x | 7.4x | 7.8x | 8.1x | 8.5x | 8.8x | 9.2x | 9.6x |
| **Liquidity**: Days Available Cash and Investments on Hand (#) | 594 | 560 | 483 | 477 | 464 | 457 | 457 | 458 | 462 | 484 | 509 |
| **Liquidity**: Operating Cash Flow (%) | 2.2% | 5.5% | 8.4% | 8.5% | 8.7% | 8.8% | 8.9% | 9.0% | 9.0% | 9.2% | 9.3% |
| **Solvency:** Current Ratio (x) | 1.4x | 1.4x | 1.4x | 1.3x | 1.3x | 1.4x | 1.3x | 1.3x | 1.3x | 1.3x | 1.3x |
| **Solvency:** Ratio of Long-Term Debt to Total Capitalization (%) | 17.1% | 20.9% | 20.2% | 23.7% | 22.0% | 21.2% | 20.4% | 19.6% | 18.8% | 17.9% | 17.1% |
| **Solvency:** Ratio of Cash Flow to Long Term Debt (%) | 4.9% | 9.9% | 16.1% | 13.8% | 14.9% | 15.9% | 16.9% | 18.0% | 19.1% | 20.4% | 21.8% |
| **Solvency:** Unrestricted Net Assets ($ in million) | $6,561 | $6,861 | $7,066 | $7,185 | $7,857 | $8,104 | $8,395 | $8,703 | $9,020 | $9,400 | $9,826 |
| **Solvency:** Total Net Assets($ in million) | $7,342 | $7,670 | $7,876 | $7,994 | $8,666 | $8,913 | $9,205 | $9,513 | $9,830 | $10,210 | $10,636 |

**Historical Data and Industry Data Key Financial Metrics and Ratios**

| Children’s Medical Center Corporation | 2019 | 2020 | 2021 | 2022 | Integra - General Medical and Surgical Hospitals | IBIS - Hospitals  in the US | Definitive Healthcare |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Profitability**: Operating Margin (%) | 2.6% | -2.6% | -0.1% | -1.0% | 1.6% | 0.8% | -14.5% |
| **Profitability**: Excess Margin (%) | 9.1% | 3.8% | 5.5% | 4.9% | 0.2% | NA | 4.1% |
| **Profitability**: Debt Service Coverage Ratio (x) | 6.0x | 2.9x | 5.2x | 5.0x | 1.4x | 2.5x | NA |
| **Liquidity**: Days Available Cash and Investments on Hand (#) | 786 | 870 | 906 | 729 | NA | NA | 62 |
| **Liquidity**: Operating Cash Flow (%) | 7.6% | 3.7% | 5.0% | 4.5% | 3.6% | 38.4% | NA |
| **Solvency:** Current Ratio (x) | 1.5x | 1.4x | 1.4x | 1.4x | 2.5x | 0.9x | 1.5x |
| **Solvency:** Ratio of Long-Term Debt to Total Capitalization (%) | 16.6% | 18.9% | 16.1% | 17.2% | 43.3% | NA | NA |
| **Solvency:** Ratio of Cash Flow to Long Term Debt (%) | 17.0% | 6.4% | 9.6% | 9.3% | 13.1% | NA | 1.5x |
| **Solvency:** Unrestricted Net Assets ($ in million) | $5,270 | $5,725 | $7,007 | $6,549 | NA | NA | NA |
| **Solvency:** Total Net Assets($ in million) | $6,123 | $6,501 | $7,909 | $7,331 | NA | NA | NA |

Footnote:

* Industry data ratios based on each data source's respective definitions and may differ from the ratio definitions listed below.
* Net income margin from Integra and Definitive Healthcare data treated as an equivalent to excess margin.

The Key Metrics fall into three primary categories: profitability, liquidity, and solvency. Profitability metrics are used to assist in the evaluation of management performance in how efficiently resources are utilized. Liquidity metrics, including common ratios such as “days of available cash and investments on hand”, measure the quality and adequacy of assets to meet current obligations as they come due. Solvency metrics measure the company’s ability to take on and service debt obligations. Additionally, certain metrics can be applicable to multiple categories. The table below shows how each of the Key Metrics are calculated.

**Ratio Definitions for Key Financial Metrics and Ratios**

| Ratio | Definitions |
| --- | --- |
| **Profitability**: Operating Margin (%) | Gain from Operations Divided by Total Operating Revenue |
| **Profitability**: Excess Margin (%) | Excess of Revenue over Expenses Divided by (Total Operating Revenue + Total Nonoperating Gains) |
| **Profitability**: Debt Service Coverage Ratio (x) | (Gains from Operations + Depreciation and Amortization + Interest) Divided by Interest |
| **Liquidity**: Days Available Cash and Investments on Hand (#) | (Cash and Unrestricted as to Use Investments and Board-Designation as to Use) Multiplied by 365 Divided by (Total Operating Expenses Less Depreciation and Amortization) |
| **Liquidity**: Operating Cash Flow (%) | (Gains from Operations Plus Depreciation and Amortization, Costs Related to Asset Dispositions, and Non-Cash Pension Expense) Divided by Total Operating Revenue |
| **Solvency:** Current Ratio (x) | Current Assets Divided by Current Liabilities |
| **Solvency:** Ratio of Long-Term Debt to Total Capitalization (%) | Long Term Debt Divided by Total Capitalization (Long Term Debt and Total Net Assets) |
| **Solvency:** Ratio of Cash Flow to Long Term Debt (%) | (Gains from Operations Plus Depreciation and Amortization, Costs Related to Asset Dispositions, and Non-Cash Pension Expense) Divided by Long Term Debt |
| **Solvency:** Unrestricted Net Assets ($ in million) | Total Unrestricted Net Assets |
| **Solvency: Total Net Assets** ($ in million) | Total Net Assets |

1. **Revenue**

We analyzed the revenue forecast within the Projections. Revenue includes net patient service revenue (“NPSR”), research grants and contracts, recovery of indirect costs on grants and contracts, other operating revenue, unrestricted contributions net of fundraising expenses, and net assets released from restriction used for operations. Approximately 82.0 percent of revenue is derived from net patient service revenue. NPSR is projected to grow between 3.3 percent and 7.4 percent annually over the projection period, with the exception of the growth in FY 2023 of 12.4 percent. The historical growth in NPSR for FY 2021 and FY 2022 ranged from 7.8 percent to 15.0 percent.

On average, approximately 66.0 percent of NPSR is derived from the Hospital, approximately 26.0 percent is from the PO, and the remainder from other subsidiaries.

Management projects NPSR for the Hospital and PO to increase annually as follows:

| Net Patient Service Revenue | Historical Annual Growth  2019 – 2022 | 2023 Growth | Future Annual Growth  2024 - 2033 |
| --- | --- | --- | --- |
| Hospital | -9.1% to 15.6% | 16.9% | 2.6% to 6.1% |
| PO | -11.1% to 13.7% | 3.6% | 4.1% to 4.7% |

As illustrated in the table above, the future annual growth for both the Hospital and the PO from FY 2023 to FY 2033 is consistent with historical annual growth from FY 2019 and FY 2022. The Hospital’s NPSR growth in FY 2023 is anticipated to be higher at 16.9 percent. Based on discussions with Management, we understand the higher growth is driven by several factors, including the overall service pricing increase of approximately 7.0 percent started in early FY 2023 and the Hospital’s ability to service more patients by increasing capacity and volume; Growth in volume primarily relates to the return to pre-COVID 19 operating levels, the full integration of the Hale Building ending in FY 2022, and partly due to the addition of 12 inpatient adolescent and pediatric psychiatric beds at Waltham and 58 incremental beds in Longwood throughout FY 2021 to FY 2023. Additionally, based on the data provided by Management, the year-to-date NPSR ended June 30, 2023, is tracking the FY 2023 budget by 97.9 percent.

In order to determine the reasonableness of the projected revenue, we reviewed the underlying assumptions upon which Management relied. Based upon our review, Management relied upon the historical operations and anticipated market movements. The eleven-year compounded annual growth rate (“CAGR”) for total operating revenue in the Projections of 4.6 percent falls below CMCC’s revenue growth rates in FY 2021 of 10.4 percent and FY 2022 of 8.8 percent. Based upon the foregoing, it is our opinion that the revenue growth projected by Management is based on reasonable assumptions and is feasible for the combined operations of CMCC.

1. **Operating Expenses**

We analyzed each of the categorized operating expenses for reasonableness and feasibility as it related to the Projections.

The operating expenses in the analysis include salaries and benefits, supplies and other expenses, direct research expenses of grants, health safety net assessment, depreciation and amortization, costs related to asset dispositions, and interest and net interest rate swap cash flows. Salaries and benefits account for approximately 60.0 percent of total operating expenses and supplies, and other expenses account for approximately 23.0 percent of total operating expenses throughout the projection period.

Salaries and benefits were projected to increase by 12.6 percent in FY 2023 and annually between 3.3 percent and 8.2 percent for FY 2024 through FY 2033. Approximately 60.0 percent of the total salaries and benefits relate to the Hospital. Growth in salaries and benefits for the Hospital was determined based on growth in full time equivalents (“FTEs”) and change in wages. Growth in FTEs is largely driven by the opening of 70 incremental beds from FY21 to FY23 in Longwood and Waltham locations as well as the integration of the Hale Building FTEs. Per Management, the labor market has remained at an elevated level throughout FY 2023. Wages were grown by a merit increase and varying market adjustments. Management held salaries and benefits flat to historical FY 2021 for eliminations and increased salaries and benefits by at least 2.5 percent annually for the PO, and other.

Supplies were projected to increase annually between 2.5 percent and 10.1 percent for FY 2023 through FY 2033. Approximately 91.2 percent on average of the total supplies and other expenses relate to the Hospital.

Based on data provided by Management, the year-to-date operating expenses for CMCC ended June 30, 2023, is tracking the FY 2023 budget by 102.2 percent.

Based upon the foregoing, it is our opinion that the operating expenses projected by Management reflects are based on reasonable assumptions and are feasible for the Applicant.

1. **Improvement Plan**

Management incorporates an improvement plan within its financial forecast for FY 2024 through FY 2033. This improvement plan reflects future initiatives and strategic plans which have been in development. We understand based on discussions with Management that the Applicant undergoes this process as a part of its regular forecasting. We reviewed the Applicant’s actual gain from operations in comparison to the Applicant’s budget for each of the prior 15 fiscal years (FY 2005 – FY 2019) and noted the Applicant met or exceeded budget in 12 out of 19 years. Based on discussions with Management, FY 2020 through FY 2022 were excluded from the comparison as CMCC, and other healthcare providers were severely impacted by COVID. There was no improvement plan in those years as the focus was to address external and internal needs related to the pandemic. As such, it is feasible that the Applicant will continue to achieve the improvement plan targets included in the Projections.

1. **Capital Expenditures and Proposed Project Financing**

We reviewed the project costs within the Draft DoN Application Form related to the Proposed Projects of which $34.0 million are classified as maximum capital expenditures (“MCE”) per the DoN regulations. Please see the following for a breakdown of maximum capital expenditure by proposed project:

| Emergency Department Renovations | $ 25,020,005 |
| --- | --- |
| Vaccine Program | $ 7,500,000 |
| Pediatric Ultrasound Addition | $ 1,500,000 |

In addition to capital expenditures, we also reviewed the proposed financing of the Proposed Project. It is our understanding that the capital expenditures will be funded through CMCC’s net assets and cash flows. The capital expenditures are included within the Applicant’s cash flows with no additional debt financing anticipated. We note that the Projections include cumulative routine capital expenditures of $521.6 million and major project expenditures of $2,870.7 million for a total cumulative capital expenditure of $3,392.3 million over the next five years (FY 2023 through FY 2027). The capital expenditures subject to the Proposed Projects represent less than 1.0 percent of the total capital expenditures over the next five years. We note the model indicates total cash on the balance sheet of approximately $270.0 million on average in each year, before considering the Applicant’s various investments. Therefore, it appears that the Applicant will be able to finance the Proposed Projects within its normal capital expenditures without the need for debt financing.

# FEASIBILITY

We analyzed the Projections and Key Metrics for the Proposed Project. In preparing our analysis we considered multiple sources of information including industry metrics, historical results, and Management expectations. It is important to note that the Projections do not account for certain anticipated changes in accounting standards. These standards, which may have a material impact on individual future years, are not anticipated to have a material impact on the aggregate Projections.

Within the projected financial information, the Projections exhibit a cumulative operating EBIDA surplus of approximately 9.0 percent of cumulative projected total revenue for the eleven years from FY 2023 through FY 2033. Based upon our review of the relevant documents and analysis of the Projections, we determined the anticipated EBIDA surplus is a reasonable expectation and is based upon feasible financial assumptions. Accordingly, we determined that the Projections are reasonable and feasible, and not likely to have a negative impact on the patient panel or result in a liquidation of assets of CMCC.

Respectively submitted,

Erik Lynch

Partner, BDO USA

1. The financial projections include the combined forecasts of Children’s Medical Center Corporation and Franciscan Hospital for Children (“Franciscan”). CMCC and Franciscan entered into an affiliation agreement, in which CMCC will become the sole corporate member of Franciscan. The agreement was approved by Massachusetts Department of Public Health Council and is pending final approval from relevant Religious Authority as stated in the Affiliation Agreement. [↑](#footnote-ref-1)
2. EBIDA (“Earnings before Interest, Depreciation, and Amortization) [↑](#footnote-ref-2)