REPORT OF THE
STATE CORPORATION COMMISSION ON

OPTIONS AND RECOMMENDATIONS FOR IMPROVING THE ACTUARIAL SOUNDNESS OF FINANCING FOR THE VIRGINIA BIRTH-RELATED NEUROLOGICAL INJURY COMPENSATION PROGRAM

TO THE GOVERNOR OF VIRGINIA
AND CHAIRMEN OF
THE HOUSE APPROPRIATIONS COMMITTEE
AND THE SENATE FINANCE COMMITTEE

COMMONWEALTH OF VIRGINIA
RICHMOND

MARK C. CHRISTIE
COMMISSIONER

JAMES C. DIMITRI
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STATE CORPORATION COMMISSION

November 1, 2017

The Honorable Terrence R. McAuliffe
Governor, Commonwealth of Virginia

The Honorable Thomas K. Norment, Jr.
Co-Chair, Senate Finance Committee

The Honorable Emmett W. Hangar, Jr.
Co-Chair, Senate Finance Committee

The Honorable S. Chris Jones
Chair, House Appropriations Committee

The State Corporation Commission has prepared its report containing options and recommendations for improving the actuarial soundness of financing for the Virginia Birth-Related Neurological Injury Compensation Program, in accordance with the 2016-2018 Biennium Budget Bill (Chapter 836).

Respectfully submitted,

Judith Williams Jagdmann
Chairman

Mark C. Christie
Commissioner

James C. Dimitri
Commissioner

Executive Summary

The State Corporation Commission (SCC) was requested to develop a report containing options and recommendations for improving the actuarial soundness of financing for the Virginia Birth-Related Neurological Injury Compensation Program (Program). The report is to be presented to the Governor and Chairmen of the House Appropriations and Senate Finance Committees no later than November 1, 2017.

In producing this report, the Bureau has reviewed past works in this area and incorporated the work of the Program published in House Document No. 11 (HD 11) in 2006. The Bureau has highlighted that the Program has the financial resources to continue paying the obligations of the Program for 50+ years. Additionally, the Bureau has documented the actuarial soundness history and assessment history of the Program in thoroughly describing its current status.

The Bureau has not produced additional options beyond those reported in HD 11, due to the continued relevance of the findings of that document. Additionally, due to uncertainty regarding the circumstances and future costs regarding the Medicaid reimbursement issue detailed in the Bureau's report, it is the finding of the Bureau that the actuarial deficit projected after the 50-year time frame is not sufficiently clear to make recommendations. The Bureau will be issuing an updated actuarial study as required by Virginia Code Section § 38.2-5021 in the fall of 2018 that will quantify more definitively the impact of the Medicaid issue on the actuarial soundness of the Program and provide the General Assembly with a more precise amount of potential shortfall to which the options contained in HD 11 may be applied.

The Request

The chapterized version of the 2016 - 2018 Biennium Budget Bill - Chapter 836 (HB1500), which was enacted during the 2017 session, requested the State Corporation Commission (SCC) to develop a report containing options and recommendations for improving the actuarial soundness of financing for the Virginia Birth-Related Neurological Injury Compensation Program. The report is to be presented to the Governor and Chairmen of the House Appropriations and Senate Finance Committees no later than November 1, 2017.[1]

Background

The Virginia Birth-Related Neurological Injury Compensation Program (Program) was created with the enactment of Chapter 540, 1987 Acts of Assembly. The Act was passed in response to a medical malpractice insurance availability crisis in the mid-1980s and was intended to be a no-fault alternative to the Virginia tort system available to injured parties. Chapter 50 of Title 38.2 of the Code of Virginia (Va. Code) established the Virginia Birth-Related Neurological Injury Fund (Fund) to be controlled by the Program's Board of Directors. The Program began collecting assessments in late 1987, and the compensation mechanism became effective for births as of January 1, 1988.

Among the stated purposes of the Program is to assure the payment of the financial costs for the lifetime care of infants born with birth-related neurological injuries as defined in the Code. Participation in the Program is optional for both physicians and hospitals. Participating physicians and hospitals receive the benefit of the exclusive remedy provision of the law, and physicians and hospitals that participate are eligible for lower premiums for medical malpractice insurance.

The SCC does not administer the Program, nor does it make decisions concerning Program eligibility or admission. The Workers' Compensation Commission determines who will be admitted into the Program. The SCC's legislative charge is limited to determining if the fund is actuarially sound (see Va. Code § 38.2-5021). At least biennially, the consulting actuaries of the SCC's Bureau of Insurance (Bureau) provide an evaluation and a forecast of the actuarial soundness of the Fund for the next two program years.

The Program's plan of operation is filed with and approved by the SCC. The SCC also has the responsibility to determine how much insurance companies will be assessed. Currently insurance companies licensed to write and engaged in writing liability insurance in Virginia are assessed annually at the maximum rate of one quarter of one percent of their net direct liability premiums written in Virginia (see Va. Code § 38.2-5020). The SCC also has been given the authority to suspend assessments for non-participating physicians if the fund is determined to be actuarially sound. Currently non-participating physicians (i.e., licensed physicians practicing in Virginia) are assessed annually by the Program.

[1] Item § 4-5.01.d.2, 2016 - 2018 Biennium Budget Bill - Chapter 836 (HB1500)

Reporting History

Since the Program's inception, the Bureau has conducted 23 evaluations of the actuarial soundness of the Fund, beginning with the first report issued in 1989. The evaluations are estimates of future costs developed from historical record and are based on analysis of available data from several sources utilizing numerous assumptions. In spite of having operated for nearly 30 years, the statistical credibility of the Program's experience is not sufficient to evaluate completely all of the various assumptions, such as the number of claimants, the amount of future annual claim payments, and the estimated life expectancy of claimants with a high degree of confidence. Information is contained in each report detailing sensitivity testing of various components to give the reader a sense of the reasonableness of the estimates contained in the evaluation of actuarial soundness. Thus, the reports' findings and calculations may be subject to a high degree of uncertainty, and there are no guarantees that the estimates will not prove to be inadequate or excessive.

Table 1 provides a synopsis of the timing of the Bureau's reports and the estimates of actuarial soundness of the Fund:

Year	Actuarial Soundness Finding	Cash Position (Estimate of Sufficiency of Assets to Cover Eligible Claimants)
1989 Report	Intermediate Level of Total Costs Exceeds Total Income	No estimate
1990 Report	Intermediate Level of Total Liabilities Exceeds Total Income	No estimate
1991 Report	Actuarially Sound	Self-sustaining
1992 Report	Actuarially Sound	Self-sustaining
1993 Report	Actuarially Sound	Self-sustaining
1995 Report	Actuarially Sound through 6/30/95	Self-sustaining
1997 Report	Actuarially Sound through 6/30/97	Self-sustaining
1999 Report	Actuarially Sound as of 6/30/99; Forecasted Deficit of $2.4 Million as of 6/30/00	Self-sustaining
2000 Addendum to 1999 Report	Forecasted Deficit of $2.4 Million as of 6/30/00 but still considered actuarially sound	Still considered actuarially sound - no estimate
2001 Report	Forecasted Deficit of $72 Million as of 12/31/00	25 years
2002 Report	Forecasted Deficit of $85 Million as of 12/31/01	25 years
2003 Report	Forecasted Deficit of $80.4 Million as of 12/31/02	14 years
2004 Report	Forecasted Deficit of $96.2 Million as of 12/31/03	20 years
2005 Report	Forecasted Deficit of $117.6 Million as of 12/31/04	18 years
2006 Report	Forecasted Deficit of $132.2 Million as of 12/31/05	17 years
2007 Report	Forecasted Deficit of $128.9 Million as of 12/31/06	20+ years
2008 Report	Forecasted Deficit of $125.4 Million as of 12/31/07	20+ years
2009 Report	Forecasted Deficit of $168.9 Million as of 12/31/08	20+ years
2010 Report	Forecasted Deficit of $154.6 Million as of 12/31/09	30+ years
2011 Report	Forecasted Deficit of $61.9 Million as of 12/31/10	30+ years
2012 Report	Forecasted Deficit of $90.5 Million as of 12/31/11	30+ years
2014 Report	Forecasted Deficit of $32.6 Million as of 12/31/13	30+ years
2016 Report	Forecasted Deficit of $48.6 Million as of 12/31/15	50+ years

The *estimate of sufficiency of assets to cover eligible claimants* column shown in Table 1 is an estimate of the benefits-paying ability of the Program in light of the current and projected Fund cash and invested assets, surplus/ (deficit) position, and expected annual benefits payments.

The Bureau produces actuarial reports at least every other year. Throughout every year, the Bureau monitors closely the number of new participants in the Program, the monthly asset level, and any information available regarding significant changes in payments to participants. Significant changes in any of these three elements would prompt the Bureau to produce the evaluation on an annual basis; otherwise, the evaluation is conducted biennially.

The Bureau's actuarial evaluation provides recommendations within the limits set by statute regarding assessment levels for the Program in light of current operating results and financial conditions. Table 2 provides a synopsis of the assessment levels by year since the inception of the Program:

Program Assess-ment Year	Hospitals Per live birth/Annual Maximum Annual Assessment * indicates maximum statutory assessment	Participating Physicians Annual Assessment * indicates maximum statutory assessment	Non-Participating Physicians Annual Assessment* indicates maximum statutory assessment	Liability Insurers (% of liability Premiums Written) Annual Assessment * indicates maximum statutory assessment
1988	$50/$150,000*	$5,000*	$250 per year*	None
1989	$50/$150,000*	$5,000*	$250 per year*	None
1990	$50/$150,000*	$5,000*	$250 per year*	1/10th of 1%
1991	$50/$150,000*	$5,000*	$250 per year*	None
1992	$50/$150,000*	$5,000*	$250 per year*	None
1993	$50/$150,000*	$5,000*	None	None
1994	$50/$150,000*	$5,000*	None	None
1995	**$5.00 to $50.00 with a maximum cap of $11,250, depending on New to 7 Years Participating**	**$500 to $5,000, depending on New to 7 Years Participating**	None	None
1996	$5.00 to $50.00/$11,250	$500 to $5,000	None	None
1997	$5.00 to $50.00/$11,250	$500 to $5,000	None	None
1998	$5.00 to $50.00/$11,250	$500 to $5,000	None	None
1999	$5.00 to $50.00/$11,250	$500 to $5,000	None	None
2000	$5.00 to $50.00/$11,250	$500 to $5,000	None	None
2001	$50/$150,000*	$5,000*	None	None
2002	$50/$150,000*	$5,000*	$250*	1/4th of 1%*
2003	$50/$150,000*	$5,000*	$250*	1/4th of 1%*
2004	$50/$150,000*	$5,000*	$250*	1/4th of 1%*
2005	$50/$160,000*	$5,100*	$260*	1/4th of 1%*
2006	$50/$170,000*	$5,200*	$270*	1/4th of 1%*
2007	$50/$180,000*	$5,300*	$280*	1/4th of 1%*
2008	$50/$190,000*	$5,400*	$290*	1/4th of 1%*
2009	$52.50/$200,000*	$5,600*	$300*	1/4th of 1%*
2010	$55/$200,000*	$5,900*	$300*	1/4th of 1%*
2011	$55/$200,000*	$6,100*	$300*	1/4th of 1%*
2012	$55/$200,000*	$6,200*	$300*	1/4th of 1%*
2013	$55/$200,000*	$6,200*	$300*	1/4th of 1%*
2014	$55/$200,000*	$6,200*	$300*	1/4th of 1%*
2015	$55/$200,000*	$6,200*	$300*	1/4th of 1%*
2016	$55/$200,000*	$6,200*	$300*	1/4th of 1%*
2017	$55/$200,000*	$6,200*	$300*	1/4th of 1%*

Copies of the Bureau's actuarial reports may be found on the Fund's website at https://www.vabirthinjury.com/publications/.

The Most Recent Report

In the most recent report, issued in December 2016, the Bureau's actuary found that, based upon the estimated unpaid benefits liability and surplus position as of December 31, 2015, the Fund had an outstanding liability of $460.9 million related to future benefits payments for Program participants who have been born as of December 31, 2015, regardless of whether they have been admitted to the Program as of this date. This estimate also includes a provision for future claim administrative expenses. When compared to assets valued at $412.4 million, this results in an estimated Fund deficit of $48.6 million.

As a result of the estimated Fund deficit of $48.6 million as of December 31, 2015, the Bureau's actuary found that the Fund continues to be not "actuarially sound" as of this date. In essence, this means that the current value of the Fund's assets is less than the present value of its liabilities, most notably the present value of the future benefits obligations and related administrative expenses for all Program participants born on or before December 31, 2015, regardless of whether or not they have been admitted to the Program as of this date. This finding is solely related to the legislated standard for continuing the 0.25% premium tax on liability insurance premiums in Virginia.

This report forecasted an estimated Fund deficit as of December 31, 2016, of $47.5 million, based on outstanding liabilities of $483.2 million and assets valued at $435.7 million; an estimated Fund deficit as of December 31, 2017, of $48.2 million, based on outstanding liabilities of $508.3 million and assets valued at $460.0 million; and an estimated Fund deficit as of December 31, 2018, of $51.1 million, based on outstanding liabilities of $535.5 million and assets valued at $484.4 million.[2]

The Bureau's actuary concluded, with regard to the Program's cash position, that:

> *The Fund is in a strong position to continue paying Program benefits for many years into the future. There does not appear to be a material risk of a cash shortfall for decades. This is based on a comparison of the current Fund asset value of $412.4 million compared to forecasted annual benefits payments in the near future, before recognizing the impact of mortality and discounting for the time value of money. Although the Fund is not technically actuarially sound for the purpose of discontinuing the liability insurance premium tax, it has sufficient assets to continue paying expected benefits and related administrative expenses for eligible claimants as of December 31, 2015, both admitted and non-admitted, for over fifty years.*[3]

[2] 2016 Analysis of the Virginia Birth-Related Neurological Injury Compensation Program, Pinnacle Actuarial Resources, Inc., pp. 1-5

[3] 2016 Analysis of the Virginia Birth-Related Neurological Injury Compensation Program, Pinnacle Actuarial Resources, Inc., p. 6.

Medicaid Concerns

As part of the Bureau's monitoring, per information obtained from the Program as of the end of August, 2017 the Program had 213 admitted claimants and $461.3 million in reported assets. These numbers place the Program within a reasonable range of meeting the estimated Fund deficit of $48.2 million predicted at December 31, 2017. Regarding material changes to Program payouts, the Bureau is aware that qualified claimants under the Program are no longer eligible to receive Medicaid benefits and that the Program will have to pay for those services previously paid by Medicaid. As a result of this change, the Program has established a regulatory rule addressing private insurance and is in the process of transitioning claimants with Medicaid to private insurance.

It is the Bureau's understanding that the process of transitioning claimants from Medicaid to private insurance began in July, 2017. Consequently, information on the cost and impact to the Fund of these transitions is not yet available. Even though this change could have a potential future impact on the Fund, there is no information available to enable accurate estimates to be made as to the cost of this change. As such, the Bureau did not commission an interim report and is planning on issuing the next actuarial report as required by the Va. Code in the latter part of 2018.

Development of Current Options for Actuarial Soundness

In complying with the request contained in Item § 4-5.01.d.2, 2016 - 2018 Biennium Budget Bill - Chapter 836 (HB1500), the Bureau relied on reports commissioned shortly after the initial finding of actuarial unsoundness in 2001. The Joint Legislative Audit and Review Commission (JLARC) of the Virginia General Assembly's Review of the Virginia Birth-Related Neurological Injury Compensation Program, dated January 15, 2003, and HD 11, dated 2006, both present exceptionally well conducted analyses, and the findings contained in these reports remain relevant today.

The Bureau did not recreate these studies except to report the extent of the recommendations arising from HD 11 as presented to and enacted by the General Assembly in context of the current actuarial analysis estimates of the Fund's deficit. The executive summary of HD 11 is provided in Appendix 1 of this report.

In 2002, at least in part as a result of questions about the financial stability of the fund, JLARC directed staff to conduct a review of the Program. JLARC staff assessed the program's structure and operations and examined the extent to which the program has served its intended purpose.

In short, the JLARC staff found that the Program appears largely beneficial to the children served by it, as compared to Virginia's capped tort system. In addition, participating physicians, hospitals, and medical malpractice insurers have benefited by the Program through reduced medical malpractice insurance rates, a reduction in birth-injury related lawsuits, and a reduction in subsequent claims costs. However, it is less clear that the Program has achieved the societal benefits intended, such as the availability of obstetrical care in rural areas of the State. In addition, the most recent actuarial report (from the Bureau, at that time) on the Program projected the fund would have an unfunded liability of more than $88 million based on the Fund balance at the end of 2002. Despite this long-term liability (at

that time), there was no threat of a short-term deficit, as the Fund's current balance was approximately $84.7 million. The 2002 report identified some of the decisions that contributed to the Fund's actuarially unsound status, including flaws in the basic assessment structure and inadequate financial oversight of the Fund by the Program Board of Directors (Board). The report presented three policy options regarding the Program: i) maintain the basic structure of the Program; ii) make participation in the Program mandatory; or iii) eliminate the Program. The report further recommended 41 specific recommendations for Program improvements in the event that the General Assembly chose to continue the Program. The full report may be obtained from:

http://jlarc.virginia.gov/pdfs/reports/Rpt284.pdf

In 2005, in response to House Joint Resolution 646, the Board was requested to develop recommendations for adequately funding the Fund and to submit a report of its findings and recommendations for publication. In conducting the 2005 study, the Program was to identify the extent of the Program deficit, assess the causes for the deficit, review the Program structure to determine the necessary amendments to stem the deficit, and assess the effect of such amendments on the number of beneficiaries projected to be assisted by the Program in subsequent years. The Program Board engaged Pinnacle Actuarial Resources (Pinnacle) to conduct the analyses necessitated by the study. Pinnacle was not the actuary for the Bureau prior to 2010. In addition, stakeholders were identified, and input and recommendations were solicited on behalf of their constituents for the study.

The study presumed that the ongoing continuation of the Program was the only viable alternative and is in the best interest of the Commonwealth and the claimants served. At the time of the study, the projected Fund deficit was $117.6 million and was expected to grow to $137.1 million by December 31, 2007. The study identified various options for increasing Program assessment income. The Program recommended five alternatives for particular consideration by the General Assembly. The Board endorsed any combination of approaches that would eliminate the actuarial deficit over a period of no more than 15 years, stating that the utilization of any one of, or combination of, the described alternatives would limit the fee or assessment increases for any one-stakeholder group, yet provide a concrete timeline for returning the Fund to a financially sound position. A full copy of HD 11 may be obtained from:

http://leg2.state.va.us/DLS/H&SDocs.NSF/4d54200d7e28716385256ec1004f3130/f9e399be901f6a3885256fcb006e2f63?OpenDocument.

As a result of the study, bills were introduced in the General Assembly enacting part, but not all, of the recommendations contained in HD 11. Only certain provisions contained in Alternative 1 were enacted, but not as proposed in the report. Alternative 1 proposed to amortize the current fund deficit over 10 years beginning January 1, 2007, as follows:

Alternative 1 Recommendation	Action by General Assembly
Require mandatory participation for hospitals and OB/GYNS;	NOT ENACTED
Increase the assessment fees for participating physicians by $200 per year for 5 years to a maximum level of $6,200;	ENACTED TO THE MAXIMUM OF $6,200 , ALBEIT IN A DIFFERENT STEP FORMULA THAN $200 PER YEAR FOR 5 YEARS;
Increase assessment fees for participating hospitals by $2.50 per live birth per year up to a $60 maximum;	PARTIALLY ENACTED - INCREASED THE MAXIMUM TO $55
Increase the annual assessment for other physicians (non OB/GYNs) by $10 per year up to a maximum of $370; and	NOT ENACTED
Establish a surcharge at a level necessary to amortize the current fund deficit over 15 years, to be applied proportionately to all those who are currently assessed by the Program (physicians, hospitals, liability insurers).	NOT ENACTED

As a result of changes enacted to the assessment amounts as a result of HD 11's publication, combined with other changes in assumptions underlying the Bureau's actuarial reports issued since HD 11's publication, the estimated deficit has fallen from $117.6 million to $47.5 million as of December 31, 2016. The estimate of the adequacy of the Program's cash position rose from 17 years at the time of publication of HD 11 in 2006 to 50+ years at the time of publication of the Bureau's 2016 actuarial report.

Options and Recommendations

HD 11 provides a framework of options for addressing the estimated deficit from the Bureau's 2016 actuarial report of $48.2 million as of December 31, 2017. The SCC is not endorsing or recommending that any of the alternatives presented be considered as the single best method for reducing or eliminating the estimated deficit. However, without recreating this report, the options presented in 2006 may be approximately restated to 2017 terms by applying a ratio of the 2006 estimated deficit to the deficit estimated in the 2016 Bureau actuarial report.

For illustrative purposes, calculating Alternative 5 provides the clearest example of this recalculation.

By dividing $48.2 million by $117.6 million, a multiplier of 41% could be used to restate the time periods and/or the dollar amounts in the deficits. Thus, applying the 41% to the $117.6 million deficit, the recommendation presented in Alternative 5 could be restated as follows:

Alternative 5 recommendation based on HD 11 estimated deficit of $117.6 million	Restated based on December 31, 2017 estimated deficit of $48.2 million
Provide approximately $7.8 million from the General Fund of the Commonwealth each year for 15 years, beginning with 2007 fiscal year. This would retire the $117.6 million deficit without necessitating any significant adjustments to the pattern of fees reflected in the current enabling legislation	Provide approximately $3.2 million from the General Fund of the Commonwealth each year for 15 years, beginning with 2018 fiscal year. This would retire the $48.2 million deficit without necessitating any significant adjustments to the pattern of fees reflected in the current enabling legislation

Conversely, if the dollar amount recommended in Alternative 5 were held at the level recommended in HD 11, the $48.2 million estimated deficit would be retired in less than seven years (estimated). The proposed Alternatives 2-4 recommendations also could be restated in a similar fashion.

It should be noted that the information provided above is based on no changes to the assumptions and estimates underlying the estimated deficit of $48.2 million as of December 31, 2017. Any changes to the assumptions or estimates could increase or decrease either the amount necessary or the number of years required to retire the deficit.

Conclusion

In conclusion, the SCC offers the following:

House Document No. 11 (2006) provides an appropriate framework of options for erasing the Program's estimated deficit of $48.2 million as of December 31, 2017.

The Medicaid transition (see page 6) will impact future actuarial estimates of deficits for the Program. With an estimated cash position of 50+ years of benefit-paying capability at present, the General Assembly could consider delaying any actions with regard to the actuarial soundness of the Fund until (i) the impact of the change regarding Medicaid may be credibly measured, and (ii) the SCC's actuarial analysis of the Fund is published at the end of 2018.

PART I: INTRODUCTION

Preface

In its 2005 session the Virginia General Assembly adopted House Joint Resolution 646 (HJR646) requiring the Virginia Birth-Related Neurological Injury Compensation Program (Program) Board of Directors (Board) to conduct a study to provide an economically balanced approach for adequately funding the Compensation Fund (Fund). A copy of this resolution is provided as Appendix A. The General Assembly directed that, "In conducting its study, the Virginia Birth-Related Neurological Injury Compensation Program shall":

- Identify the extent of Program deficit
- assess causes for such deficit
- review the program structure to determine the necessary amendments to stem deficit; and
- Assess the effect of such amendments on the number of beneficiaries projected to be assisted by the Program in subsequent years

The Executive Director, at the direction of the Board, engaged a professional to coordinate the study through the issuance of an RFP and selected C. Gary Burke to fill this role. Mr. Burke has over 25 years of financial and project management experience in Virginia State government. Mr. Burke was supported by a graduate student from Virginia Commonwealth University, Mr. Sam Ragsdale. Mr. Ragsdale assisted the project by conducting research, preparing analyses as required, and generally assisted the project coordinator with multiple project related tasks.

Additionally, such a study would, out of necessity, include actuarial projections to support its conclusions and recommendations. Accordingly, the Executive Director engaged the actuarial firm of Pinnacle Actuarial Resources, Inc. to conduct the actuarial analyses necessitated by the study. Pinnacle has extensive experience in the preparation of such analysis and has provided assistance to the Program in the past. Mr. Robert J. Walling, III, Principal and Consulting Actuary with the firm, was the primary contact on this project for Pinnacle. Mr. Walling and his firm is a good choice for this role as he has worked with other states and is recognized an "expert" in his field. Mr. Walling's Curriculum Vitae is provided in Attachment G.

As instructed by the House Joint Resolution 646 (HJR646) the Executive Director identified stakeholders that needed to participate in the completion of this study. The stakeholders so identified were contacted and informal interviews were conducted. Appendix B is a listing of those identified by the Executive Director as contacts and the organizations that they represent. Appendix C provides a copy of the questionnaire used in the interviews. Section III, Input from Stakeholders is a summary of the insight provided by the contacts on behalf of their constituents and their recommendations for this study.

The Board wishes to thank all of the participants of the study for their commitment to the task and for the time and effort all have provided to help continue the good work of the Program since its inception in 1987.

Executive Summary

The 2005 Virginia General Assembly House Joint Resolution 646 (HJR646) required the Virginia Birth-Related Neurological Injury Compensation Program Board of Directors to conduct a study to provide an economically balanced approach for adequately funding the Compensation Fund. Beginning in year 2000 and continuing through the 2005 Actuarial Report, issued September 2005, the Compensation Fund has been reported to be actuarially unsound. The 2005 Report issued by Mercer Oliver Wyman Actuarial Consulting, Inc. projects that the Fund would continue to be actuarially unsound through December 31, 2007, which was the time limit of its projections. According to the Mercer report, the Fund had a "Grand Total" deficit of $117.6 million. The Mercer report also states that the deficit is expected to grow to $137.1 by December 31, 2007. Although the Fund is not in immediate danger of defaulting on current obligations, it is clear to all that the Program must institute corrective policy action in order to avoid a continuing, and possibly more serious, adverse financial situation.

This study was structured to evaluate the causes of the current deficit and to recommend actions that would correct the current deficiencies, while at the same time identify opportunities to eliminate the deficit over the next several years. The proposed changes would allow for the continued service levels currently provided to our Program participants. Additionally, it should be noted that the study has presumed that the ongoing continuation of the Program is the only viable alternative and is in the best interest of the Commonwealth and the claimants we serve.

General Approach & Process

In conducting our research for this study we reviewed all of the previous legislatively mandated studies, conducted interviews with Program stakeholder organizations, researched the related programs of other states, and conducted independent actuarial assessments based on our preliminary findings and recommendations. We relied on and did not attempt to duplicate the previous works.

A review of the full study will reveal to the reader insight on how the Program has reached the point of requesting legislation for the sole purpose of eliminating the deficit. This is best provided in the Background section of the report. Further insight is provided in the Input from Stakeholders section of the report. This section reports on the diverse views of the major stakeholders of the Program. A review of the Review of other Patient Compensation Plans section of the full study shows how other states have approached the negative impact of medical malpractice insurance in their respective states. The section on Weighing Opportunities to Reduce Costs or Increase Assessments shows ways in which the Board has reduced costs in the face of the increasing deficit. This section is supported by our actuarial study, which illustrates alternative strategies for increasing or modifying current assessments and/or imposing an additional assessment.

Providing actuarial services for this report was Robert J. Walling, III, of Pinnacle Actuarial Services, Bloomington, Illinois. Mr. Walling was selected for his extensive experience with Patient Compensation Programs. Along with earlier work for the Virginia Birth-Injury Program, he has conducted actuarial research and reviews for Florida Neurological Injury Compensation Association, Ohio, and other states.

Use of Prior Legislative Studies

Since its creation in 1987, there have been several studies of the Program. None of the previous studies specifically focused on the funding of the Program. Therefore the HJR646 study is unique in that regard. The most significant of the previous studies with regard to funding issues was the 2003 JLARC Review. At the time of the JLARC study, the Program was reporting its first significant actuarial deficits. While the JLARC report concluded that the implementation of the Program had achieved its original legislative intent of reducing medical malpractices rate's for Virginia OB/GYN's, reduction of birth-injury lawsuits, and a reduction in subsequent claims costs, the Report said that it was less clear about the societal benefits of OB care in rural areas of the State. The report also found that the Program is more beneficial to the children served by the Program as compared to Virginia's capped tort system.

However, the JLARC study made what was possibly the most significant observation with regard to the Program financial issues. First, it noted flaws in the basic assessment structure and inadequate financial oversight by the Board. The General Assembly has since modified the Code of Virginia to address both of these fundamental issues. However, the JLARC Report goes on to note that due to these weaknesses the Program reduced its assessment income by over 65% between 1995 and 2000. Our conservative estimate of this lost income potential is $109 million. The Code of Virginia has been modified to prevent the Program and the State Corporation Commission from reducing assessments unless the annual actuarial study projects a positive fund balance.

Other changes since the issuance of the JLARC Review have had positive impact on the Program. For example, the 2003 JLARC Review found that the Board needed to place more of its focus on policy development and its fiduciary duties, and less effort on day-to-day operation of the Program. The Board membership has changed in recent years and Board attention has clearly been changed consistent with the JLARC recommendations. Another example of how the Board has adhered to the policy direction from the Commonwealth is in the way in which the housing benefit is now administered. Early on in the Program homes were purchased at great expense. In 2001, the Board changed the policy and will no longer purchase homes, but now provide a one time housing allowance of no more than $175,000.

During our interviews with stakeholder organizations, most agreed the care provided to the children was good. The JLARC Review also concluded that the benefits to the children exceeded the medical malpractice award cap in Virginia. The Program is not unduly burdensome for parents. The JLARC Review also concluded that the most parents believed that the program is a better choice than a medical malpractice lawsuit. With all of the above previous findings in mind, this current study focused on how the Program could be maintained at the current service levels, while increasing income to reduce the accumulated deficit. The Compensation Fund deficit accumulated over a period of time and, as this study demonstrates, a time-based response may be the best solution.

Birth-Injury Board of Directors Recommendations

Therefore, we sought ways to expand the Program's income base on a permanent and/or temporary basis. From this new research, past studies and from internal observations, it was concluded that there were several opportunities to grow our income base from existing sources and even by adding one additional source. This study identifies various options for increasing Program assessment income. All of these options are viable options and worthy of consideration. The actuarial evaluations portion of this study provides the impact for each option on Program revenue and expenses and therefore the impact on Fund balance. After careful consideration of these alternatives, the Birth-Injury Program Board of Directors recommends the following five alternatives for particular consideration by the General Assembly. The Board endorses any combination of approaches that would eliminate the actuarial deficit over a period of no more than15 years. Utilizing any one of, or combination of, the described alternatives would limit the fee or assessment increases for any one-stakeholder group, yet provide a concrete timeline for returning the Fund to a financially sound position.

Alternative 1: Amortize the current fund deficit of $117.6 million over ten years, beginning January 1, 2007, by:

1. Requiring mandatory participation for hospitals and OB/GYNs
2. Increasing the assessment fees for participating physicians by $200 a year for 5 years to a level maximum of $6,200
3. Increasing assessment fees for participating hospitals by$2.50 per live birth per year up to a $60 maximum (i.e. over four years, current amount is $50 per live birth)
4. Increasing the annual assessment for other physicians (non-OB/GYNs) by $10 per year up to a maximum of $370
5. Establishing a surcharge at a level necessary to amortize the current fund deficit over fifteen years, to be applied proportionately to all those who are currently assessed by the Program (physicians, hospitals, liability insurers)

Other Options

In addition, the study identified other options that include the following four alternatives. Please note that alternatives two, three, and four would require mandatory participation from hospitals and OB/GYN's.

Alternative 2:

- Extend the number of years during which the $117.6 million dollar current Fund deficit will be amortized from approximately 10 years to 15 years. This would lower the annual surcharges noted above to $1,723 per year for participating physicians, $16.81 per live birth for participating hospitals, and $93 per year for non-participating physicians. For liability insurers, the surcharge would be a fixed, flat percentage of net direct premiums written equal to .08%. Yearly increases beginning with 2011 and extending through 2021 would be held at $100 for participating physicians, and $10 for non-participating physicians. Hospital rates per live birth would be capped at $60 beginning in 2010.

Alternative 3:

- Eliminate the entire Fund deficit of $117.6 million dollars in approximately 7 years, or by 2013, principally by assessing a new fee on all health insurance providers of one quarter of one percent (.25%) on net direct premiums written. The annual increase of $100 to participating physicians, as provided under current legislation, would continue between years 2012 through 2021 up to a maximum of $7,200 in that final year. The annual increase of $10 to non-participating physicians, as provided under current legislation, would continue between 2012 through 2021 up to a maximum of $400 in that final year. Hospital rates per live birth would be capped at $50 in accordance with the current legislation.

Alternative 4:

- Eliminate the entire Fund deficit of $117.6 million dollars in approximately 15 years, or by 2021, principally by assessing a new fee on all health insurance providers of eleven one hundredths of one percent (.11%) on net direct premiums written. Other changes would be as described in Alternative 3 above.

Alternative 5:

- Provide approximately $7.*8 million from the General Fund of the Commonwealth each year for 15 years, beginning with 2007 fiscal year.* This would retire the $117.6 million deficit without necessitating any significant adjustments to the pattern of fees reflected in the current enabling legislation.

As confirmed by this study, the deficit of 117.6 million, as reported by the independent actuaries, has placed the Birth-Related Neurological Injury Compensation Fund in an unsound financial position. As recommended within this study, the Compensation Fund can only be returned to financial soundness through changes to the current legislation that authorizes and instructs the Program. While the Program is not in immediate danger of defaulting on its current obligations, the long-term viability of the Compensation Program, and the financial soundness of the Compensation Fund, depends greatly on the passage of corrective legislative changes. Such changes, when signed into law will protect the current and the future claimants of the Program.

Virginia Birth-Related Neurological Injury Compensation Program Actuarial Analysis as of December 31, 2015

EXECUTIVE SUMMARY

Through a review and analysis of a significant amount of data and information, Pinnacle Actuarial Resources, Inc. (Pinnacle) has come to a number of key conclusions regarding the Virginia Birth-Related Neurological Injury Program (Program) and the Virginia Birth-Related Neurological Injury Fund (Fund) administered by the Program. This report summarizes Pinnacle's actuarial analysis based on data valued as of December 31, 2015. Beyond our key findings, there are several recommendations related to the ongoing operations of the Program.

Findings

Finding 1. Estimated Unpaid Benefits Liability and Surplus Position as of December 31, 2015

Pinnacle estimates that, as of December 31, 2015, the Fund had an outstanding liability of $460.9 million related to future benefits payments for Program participants who have been born as of December 31, 2015, regardless of whether they have been admitted to the Program as of this date. This estimate also includes a provision for future claim administrative expenses. When compared to assets valued at $412.4 million, this results in an estimated Fund deficit of $48.6 million.

Table 1 – Estimated Fund Surplus/(Deficit) as of December 31, 2015

Estimated Financial Position as of 12/31/2015
($ in millions, on a present value basis)

Claimant Status	Estimated Ultimate Number of Claimants	Estimate of Future Claim Payments	Estimate of Future Claim Admin. Expenses	Value of Total Assets	Forecasted Surplus/ (Deficit)
All Claimants Admitted to the Program	200	328.4	18.1		
All Claimants Not Yet Admitted to the Program	51	109.8	4.6		
Grand Total	251	438.2	22.7	412.4	(48.6)

These compare to the projected financial position of the Fund as of December 31, 2015 in the November 2014 report using data as of December 31, 2013 of an outstanding liability of $464.3 million, a forecasted asset value of $431.6 million and a Fund deficit of $32.7 million. We do not consider the difference in the magnitude of outstanding liabilities between these two projections to be material.

Underlying Pinnacle's December 31, 2013 analysis was the assumption the fund would earn a return of a 5.25% on its assets. In contrast to this, for calendar year 2014, the fund achieved an (1.2%) return. Also, the Fund's three year annualized return of 4.8% is forty five basis points below the return assumed in our prior analysis. This has contributed to lower than expected investment income, resulting in a lower than expected Fund asset balance, and thus an increase in the Fund's deficit.

In addition to the Fund's investment performance, several other, sometimes competing factors contribute to the increase in the Fund's deficit:

- A slight decrease in the assumed inflation rate, which compounded over many years into the future serves to reduce the present value of liabilities, and thus the deficit as well.
- An uptick in benefits payments during calendar year 2014 of $1.8 million, and sustained in calendar year 2015.
- A small decrease in projected present value lifetime claimant benefits resulting from both the decrease in the assumed inflation rate and lower assumed annual benefit payments.

Finding 2. Actuarial Soundness of the Fund as of December 31, 2015

As a result of the estimated Fund deficit of $48.6 million as of December 31, 2015, we find that the Fund continues to not be "actuarially sound" as of this date. In essence, this means that the current value of the Fund's assets is less than the present value of its liabilities, most notably the present value of the future benefits obligations and related administrative expenses for all Program participants born on or before December 31, 2015, regardless of whether or not they

have been admitted to the Program as of this date. This finding is solely related to the legislated standard for continuing the 0.25% premium tax on liability insurance premiums in Virginia.

This definition of actuarial soundness has been used with regard to the Program and the Fund since 1992. However, it is worth noting that the Fund does currently have sufficient assets as of December 31, 2015 ($412.4 million) to meet all expected future benefits obligations of participants that have been admitted to the Program as of December 31, 2015 ($346.5 million, including future administrative expenses). This suggests that the Fund can be viewed as having sufficient funding for all currently admitted participants. While this is not sufficient for the Fund to be viewed as actuarially sound, it is a positive finding regarding the financial condition of the Fund.

Finding 3. Forecasted Unpaid Benefits Liability and Surplus Position as of December 31, 2016

We forecast that the Fund will continue not being actuarially sound as of December 31, 2016, and will have unpaid benefits liabilities (including expenses) of $483.2 million and a Fund deficit that will decrease slightly, to approximately $47.5 million. This is shown in Table 2 below.

Table 2 – Estimated Fund Surplus/(Deficit) as of December 31, 2016

Estimated Financial Position as of 12/31/2016
($ in millions, on a present value basis)

Claimant Status	Estimated Ultimate Number of Claimants	Estimate of Future Claim Payments	Estimate of Future Claim Admin. Expenses	Value of Total Assets	Forecasted Surplus/ (Deficit)
All Claimants Admitted to the Program	210	344.5			
All Claimants Not Yet Admitted to the Program	51	115.9			
Grand Total	261	460.4	22.8	435.7	(47.5)

Our calculations indicate that the total number of participants as of December 31, 2016 will be 261. This is an increase of 10 participants from the total number as of December 31, 2015.

Finding 4. Forecasted Unpaid Benefits Liability and Surplus Position as of December 31, 2017 and December 31, 2018

Similar forecasts for the next two calendar year ends (i.e. 2017 and 2018) produce comparable results as the estimated Fund deficit will grow to $48.2 million at the end of 2017, and to $51.1 million at the end of 2018. This is shown in Tables 3 and 4, respectively, which follow. This modest worsening of the Fund deficit over the three year projection period is consistent with estimated assessment revenues and investment income not being quite sufficient to keep pace with calendar year benefits payments and additional unpaid benefits liabilities associated with new eligible Program participants, whether admitted or not.

Table 3 – Estimated Fund Surplus/(Deficit) as of December 31, 2017

Estimated Financial Position as of 12/31/2017
($ in millions, on a present value basis)

Claimant Status	Estimated Ultimate Number of Claimants	Estimate of Future Claim Payments	Estimate of Future Claim Admin. Expenses	Value of Total Assets	Forecasted Surplus/ (Deficit)
All Claimants Admitted to the Program	220	363.9			
All Claimants Not Yet Admitted to the Program	51	121.5			
Grand Total	271	485.4	22.9	460.0	(48.2)

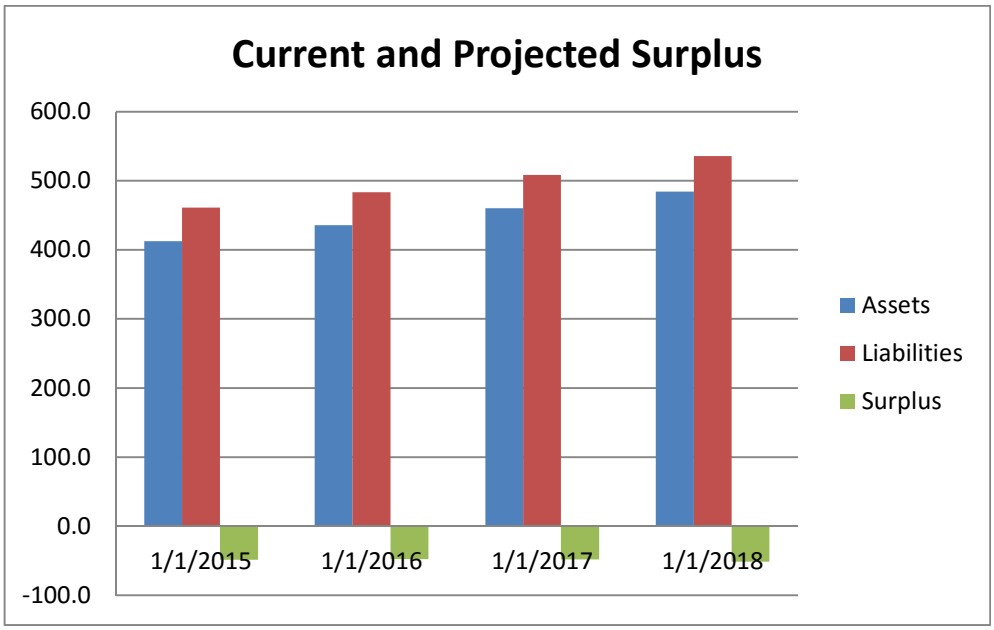
Table 4 – Estimated Fund Surplus/(Deficit) as of December 31, 2018

Estimated Financial Position as of 12/31/2018
($ in millions, on a present value basis)

Claimant Status	Estimated Ultimate Number of Claimants	Estimate of Future Claim Payments	Estimate of Future Claim Admin. Expenses	Value of Total Assets	Forecasted Surplus/ (Deficit)
All Claimants Admitted to the Program	230	385.5			
All Claimants Not Yet Admitted to the Program	51	127.0			
Grand Total	281	512.6	22.9	484.4	(51.1)

The steady growth of the Fund's assets and liabilities over the forecast period, as well as the slight deterioration in the Fund deficit, can be seen in the following graph.

Table 5 – Projected Fund Assets, Liabilities and Surplus/(Deficit) 2015-2018



Finding 5. Cash Position

The Fund is in a strong position to continue paying Program benefits for many years into the future. There does not appear to be a material risk of a cash shortfall for decades. This is based on a comparison of the current Fund asset value of $412.4 million compared to forecasted annual benefits payments in the near future, before recognizing the impact of mortality and discounting for the time value of money. Although the Fund is not technically actuarially sound for the purpose of discontinuing the liability insurance premium tax, it has sufficient assets to continue paying expected benefits and related administrative expenses for eligible claimants as of December 31, 2015, both admitted and non-admitted, for over fifty years.

Recommendations

In addition, there are several recommendations related to the ongoing operations of the Program that we find appropriate at this time. These recommendations are:

1. The Program should continue to assess the maximum levels permitted by law for participating and non-participating physicians and participating hospitals.

2. The Program should continue to assess liability insurers at the maximum amount permitted by law (currently 0.25% of net direct liability premiums written in Virginia).

3. The Program should continue investigating means of increasing Fund revenues, either through assessments or through the identification of other sources, to reduce the estimated deficit of the Program and to keep pace with inflationary pressures on Program benefits.

4. Reviews of the Program should be undertaken at least biennially by the Virginia State Corporation Commission, Bureau of Insurance (VA SCC) to assess the Fund's actuarial soundness. If a biennial comprehensive review is determined to be sufficient, an interim evaluation, on a smaller scale, to ascertain if any material changes impacting the Program have occurred may still be appropriate. These changes might include material changes in Program benefits payments or investment results, changes in Program administration or the legislation governing the Program, and/or other legislative or judicial changes at the state or federal level, including the implementation of the Patient Protection and Affordable Care Act (PPACA), that may materially impact Program benefits payments and, therefore, the Fund deficit.

5. The Program should continue to maintain payment history, claimant personal information and life plans for all Program participants, as well as Fund assessment information in formats suitable for future actuarial studies.

6. The Program should continue to maintain current copies of the claimants' insurance policies.

7. We recommend that the Program continue to evaluate potential changes in the estimated life expectancies for Program participants based on actual participant survival rates, changes in life plans, and changes in the life expectancies in the life plans. In addition, to continue to satisfy the legislative intent to consider individual participant costs, increases in estimated life expectancies have historically been a major source of adverse development for the Fund and remain potentially the single greatest risk factor for the Program going forward.

8. The Program should consider engaging a consultant to evaluate the potential impact of PPACA on the Program generally, potential changes in future benefits payments and, ultimately, the likely impact of PPACA on the indicated Fund surplus.

9. The Program should consider more detailed modeling of the growing impact of the wage loss benefit and the related issue of some participants losing Medicaid benefits. The Program incurs increased costs for medical-related benefits as a result of the latter impact.

10. The Program and SCC should closely monitor any other potential changes in medical insurance, including changes to PPACA, Medicare, Medicaid and the coordination of benefits between these programs and the benefits provided by the Program.