Commonwealth
of Massachusetts

Center for Health
Information and Analysis

Áron Boros
Executive Director

Mandated Benefit Review of H.B. 321: An Act Relative to Insurance Coverage for Craniofacial Disorders[1]

February 2013

This report was developed by the Division of Health Care Finance and Policy and published by the Center for Health Information and Analysis.

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1 Except where otherwise noted, a majority of the language in this report is taken directly from the actuarial analysis by Oliver Wyman; the full text of the Actuarial Report can be found on the CHIA website.

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Introduction

On December 1, 2011 the Joint Committee on Health Care Financing referred *House Bill No. 321: An Act Relative to Insurance Coverage for Craniofacial Disorders* (H.B. 321) to the Division of Health Care Finance and Policy (the Division) for review. Pursuant to the provisions of section 38C of chapter 3 of the General Laws of Massachusetts, which requires the Division (now the Center for Health Information and Analysis, or CHIA) to evaluate the impact of mandated benefit bills, the Division commissioned a study by Oliver Wyman to provide an actuarial estimate of the effect that enactment of the bill would have on the cost of health care insurance.[2] The full actuarial analysis was prepared by David Kerr and Dianna Welch.

This review is broken into four sections: (1) an overview of the mandate, (2) a summary of the actuarial analysis, (3) a literature review examining the medical efficacy of the bill's mandate, and (4) conclusions.

Overview of H.B. 321

As it is currently written, H.B. 321 would require insurers to provide coverage for medically necessary functional repair or restoration of craniofacial disorders to improve the function of, or to approximate the normal appearance of, any abnormal structures caused by congenital defects, developmental deformities, trauma, tumors, infections or disease. Coverage shall include the necessary care and treatment of medically diagnosed congenital defects and birth abnormalities, including, but not limited to cleft lip, cleft palate, ectodermal dysplasia, dentinogenesis imperfect, amelogenesis imperfectal, and other maxillofacial abnormalities. Coverage shall not include cosmetic surgery or for dental or orthodontic treatment unrelated to congenital defects, developmental deformities, trauma, tumors, infections or disease. All coverage shall be subject to any deductible, cost-sharing, and policy or contract maximum provisions, provided that they are no more restrictive for such services than for any injury or sickness covered under the policy.

The bill applies to:

1. Insurers of any individual policy of accident and sickness insurance under section 108 and any group blanket policy of accident and sickness insurance under section 110 regulated under Chapter 175 of the General Laws of Massachusetts.
2. Any contract between a subscriber and a corporation under an individual or group hospital service plan delivered, issued or renewed in the commonwealth, regulated under Chapter 176A of the General Laws of Massachusetts.
3. Any subscription certificate under an individual or group medical service agreement delivered, issued or renewed in the commonwealth, regulated under Chapter 176B of the General Laws of Massachusetts.
4. Any health maintenance contract regulated under Chapter 176G of the General Laws of Massachusetts.

Based on conversations with the bill's authors and staffers to the Joint Committee on Health Care Financing, it was concluded that, as the bill is currently written, the mandate shall not apply to procedures that are merely cosmetic in nature, with no related corrections to functional impairment.

2 Oliver Wyman Actuarial Consulting, Inc. (October 11, 2012). Actuarial Review of Massachusetts House Bill 321, An Act Relative to Insurance Coverage for Craniofacial Disorders.

Financial Impact

Oliver Wyman estimated the financial impact of the mandate on total, marginal, and baseline costs. The total cost estimate includes the full cost of the covered benefits mandated by the bill based on assumptions of cost and utilization levels that would exist under a mandate. Because health insurance carriers are already providing many of the services, and incurring related costs which would be mandated, those are referred to as the "baseline" services and costs. The marginal costs reflect the additional costs that are expected to be realized by the affected population due to the mandate and equal the difference between our total and baseline cost estimates. Exhibit 1 shows the dollar impact on a per-member per-month (PMPM) basis, and Exhibit 2 shows the dollar impact for the projected affected population. More detail on the methodology employed in these projections is available in the full report.

Costs for cleft palate and cleft lip – two of the most common craniofacial disorders – are not included in the marginal cost estimates since they will already be mandated effective January 1, 2013 by passage of House Bill 4557, An Act Relative to Coverage for Cleft Palate and Cleft Lip.[3] Instead, these costs are shown in the baseline cost.

The baseline, marginal and total 2012 cost estimates of the mandated benefits, as a percentage of total estimated 2012 cost levels for all benefits, are as follows:

- Baseline cost estimates: 0.08% to 0.19%
- Marginal cost estimates: 0.05% to 0.16%
- Total cost estimates: 0.13% to 0.35%

The estimated total premium costs for the mandated benefits for the period from 2013 through 2017 range from approximately $81,259,000 to $235,127,000, but it is important to note that these figures include the baseline costs of implementing H.B. 4557 (which has already passed). On a marginal basis, the H.B. 321 mandate would only increase premiums by $32,097,000 to $104,845,000 for the same five-year period. It is further estimated that 8.9-10.2% of premiums increases resulting from the mandate would be included for retention by carriers.

3 Estimated costs for House Bill 4557 can be found at: http://www.mass.gov/chia/docs/r/pubs/09/cleft-palate-mb-report.pdf.

Exhibit 1

PMPM Claims and Premium due to House Bill 321

Total Cost		2012 Estimate		Projection of Mandate				
		Mandate	% Total	2013	2014	2015	2016	2017
Claims	Low	$0.51	0.13%	$0.53	$0.54	$0.56	$0.57	$0.59
	Middle	0.84	0.21	0.87	0.91	0.94	0.98	1.02
	High	1.37	0.35	1.44	1.51	1.59	1.67	1.75
Premium	Low	0.56	0.13	0.58	0.59	0.61	0.63	0.65
	Middle	0.93	0.21	0.96	1.00	1.04	1.08	1.13
	High	1.53	0.35	1.60	1.68	1.77	1.86	1.95
Marginal Cost		**2012 Estimate**		**Projection of Mandate**				
		Mandate	**% Total**	**2013**	**2014**	**2015**	**2016**	**2017**
Claims	Low	$0.20	0.05%	$0.21	$0.21	$0.22	$0.23	$0.23
	Middle	0.35	0.09	0.36	0.38	0.39	0.41	0.43
	High	0.61	0.16	0.64	0.67	0.71	0.74	0.78
Premium	Low	0.22	0.05	0.23	0.23	0.24	0.25	0.26
	Middle	0.39	0.09	0.40	0.42	0.44	0.45	0.47
	High	0.68	0.16	0.72	0.75	0.79	0.83	0.87
Baseline Cost		**2012 Estimate**		**Projection of Mandate**				
		Mandate	**% Total**	**2013**	**2014**	**2015**	**2016**	**2017**
Claims	Low	$0.31	0.08%	$0.32	$0.33	$0.34	$0.35	$0.36
	Middle	0.49	0.12	0.51	0.53	0.55	0.57	0.59
	High	0.76	0.19	0.80	0.84	0.88	0.92	0.97
Premium	Low	0.34	0.08	0.35	0.36	0.37	0.38	0.39
	Middle	0.54	0.12	0.56	0.58	0.61	0.63	0.65
	High	0.85	0.19	0.89	0.93	0.98	1.03	1.08

Exhibit 2

Claims and Premium due to House Bill 321

Estimate of Commercially Insured Population		2,210,942*								
Total Cost (in $millions)		**2012 Estimate**		**Projection of Mandate**						
		Mandate	**% Total**	**2013**	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Claims	Low	$13.5	0.13%	$13.9	$14.4	$14.8	$15.2	$15.7	$74.0
	Middle	22.3	0.21	23.2	24.1	25.0	26.0	27.1	125.4
	High	36.4	0.35	38.2	40.1	42.1	44.2	46.4	211.1
Premium	Low	14.9	0.13	15.3	15.8	16.2	16.7	17.2	81.3
	Middle	24.5	0.21	25.5	26.5	27.6	28.7	29.9	138.3
	High	40.5	0.35	42.6	44.7	46.9	49.3	51.7	235.1
Marginal Cost (in $millions)		**2012 Estimate**		**Projection of Mandate**					
		Mandate	**% Total**	**2013**	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Claims	Low	$5.3	0.05%	$5.5	$5.7	$5.8	$6.0	$6.2	$29.2
	Middle	9.3	0.09	9.7	10.1	10.5	10.9	11.3	52.4
	High	16.2	0.16	17.0	17.9	18.8	19.7	20.7	94.2
Premium	Low	5.9	0.05	6.0	6.2	6.4	6.6	6.8	32.1
	Middle	10.3	0.09	10.7	11.1	11.5	12.0	12.5	57.8
	High	18.1	0.16	19.0	19.9	20.9	22.0	23.1	104.8
Baseline Cost (in $millions)		**2012 Estimate**		**Projection of Mandate**					
		Mandate	**% Total**	**2013**	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Claims	Low	$8.2	0.08%	$8.4	$8.7	$9.0	$9.2	$9.5	$44.8
	Middle	13.0	0.12	13.5	14.0	14.6	15.2	15.8	73.0
	High	20.2	0.19	21.2	22.2	23.3	24.5	25.7	117.0
Premium	Low	9.0	0.08	9.3	9.5	9.8	10.1	10.4	49.2
	Middle	14.3	0.12	14.9	15.4	16.1	16.7	17.4	80.5
	High	22.5	0.19	23.6	24.8	26.0	27.3	28.7	130.3

* According to the actuarial analysis, the estimated commerically insured population will remain constant for the next five years. Details on the calculations involved in this estimate can be found in the body of the full actuarial report by Oliver Wyman.

Medical Efficacy: A Literature Review[4]

M.G.L., c. 3 § 38C (d) requires the Division (now CHIA) to assess the medical efficacy of mandating the benefit, including the impact of the benefit to the quality of patient care and the health status of the population and the results of any research demonstrating the medical efficacy of the treatment or service compared to alternative treatments or services or not providing the treatment or services. Because the medical condition of craniofacial disorder encompasses such a wide range of medical issues, in order to determine the medical efficacy of H.B. 321, the Division conducted a literature review of the research specifically in ectodermal dysplasia (ED), which overlaps with and can describe a sizeable portion of craniofacial disorders.[5] The medical and dental procedures used to treat the conditions of ED discussed in this section would be covered by the mandate.

Facial and/or physical disfigurement relating to ED can range from mild to severe: all or only some teeth can be missing; a tooth or teeth can appear pointed, widely spaced, malformed or conical in nature; or an individual may have an excessive number of cavities due to absence of enamel. Individuals with the complete or partial loss of teeth have difficulty with speech and chewing. Absence of all or most teeth can also lead to underdevelopment of the jaws, compounding one's chewing difficulties and leading to an aged appearance in the face. The impact of dental abnormalities on the psychological development in young adults with ED is also frequently cited in the literature.[6,7] For these various reasons, dentures or dental implants are often recommended.

While a delay in wearing dental prostheses may result in social withdrawal and related adjustment difficulties for some, early fitting of dentures does not necessarily guarantee either peer or self-acceptance for all ED patients.[8] These patients sometimes have, in addition to dental abnormalities, other facial and/or physical disfigurement, which could lead to adjustment difficulties (despite having dental prostheses) in adolescents and children.

Efficacy of dentures as prostheses:

Many studies have discussed the importance of dentures in ED patients, especially children[9] although dentures might be best suited for individuals with a few natural teeth. Natural teeth can bear chewing pressure, reducing the pressure on the jaw and helping to preserve the bone.

Various types of dentures are available. An overdenture (a type of denture) is often recommended for children and adults with a few natural teeth as it helps reduce mobility of the remaining teeth and helps prevent bone loss. Complete dentures however, do not prevent bone loss and are uncomfortable because well-fitting dentures are difficult to create for ED patients with severe teeth loss owing to the extremely thin alveolar ridge present.

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4 A majority of the language in this section is taken directly from the Medical Efficacy Section of the Division's Mandated Benefit Report of S.B. 837, An Act Mandating Coverage for Ectodermal Dysplasia (March 2005): http://www.mass.gov/chia/docs/r/pubs/mandates/ectodermal-dysplasia.pdf.

5 Despite the impracticality of examining the medical efficacy of all procedures employed to treat or correct a myriad of craniofacial disorders, we caution that there are limitations to this narrower approach: it is likely that several syndromes within the craniofacial disorder classification require medical treatments not discussed in this medical efficacy review.

6 Tanner BA. (1988). Psychological aspects of hypohidrotic ectodermal dysplasia. Birth Defects Original Article Series, 24 (2), p263-75.

7 Abadi B, Herren C. (2001). Clinical treatment of ectodermal dysplasia: a case report. Quintessence International, 32(9), p743-5.

8 Tanner BA. (1988). Psychological aspects of hypohidrotic ectodermal dysplasia. Birth defects: original article series: New York: Alan. R. Liss: 24(2), p263-275.

9 Guckes AD. (2002). Prospective clinical trial of dental implants in persons with ectodermal dysplasia. Journal of Prosthetic Dentistry, 88(1), p21-5.

Efficacy of dental implants as prostheses:

The effectiveness of dental implants in ectodermal dysplasia patients has been demonstrated by a number of studies.[10] The overall cumulative success/non rejection rate is estimated to be 93.9 percent.[11] Implants can replace one tooth or an entire set of teeth and are successful in providing support to full or partial dentures.[12] The most important advantage to implants is that they help reduce bone loss. Ectodermal dysplasia patients often have underdeveloped alveolar ridges (jaw bones) so dentures cannot provide adequate support and can be difficult to maintain.

However, implants may not be suitable for all. Rejection occurs in about one in 20 implants. In addition, there is some debate on the efficacy of placing implants in individuals with a significant number of teeth lost in the lower jaw without damaging the nerves that run through the lower jaw.[13] Therefore, some studies emphasize the need to offer proper treatment planning, and to allow the patient to make informed decisions before placing implants.[14]

Efficacy of dental prostheses in children:

The use of dental implants in children is controversial. The conventional treatment for children has been the use of dentures before skeletal and dental maturation. From a physiological standpoint, the conservation of bone may be the most important reason for the use of dental implants in growing children. However, studies have shown that dental implants may not be successful in children and infants. Studies indicate that doctors recommend use of conventional prostheses (i.e., dentures or overdentures), as early as age 3, until the completion of all skeletal and dental growth (recommended age is 15-16 years[15]), at which time an implant-assisted treatment may begin. [16,17]

Alternate treatment

Not all individuals with dental abnormalities will need dental implants or dentures. Individuals with malformed or disfigured teeth may have other less expensive options such as crowns.

Dental crowns, a common method of treating malformed teeth, appear to be more advantageous than dentures and implants for individuals with mild ED: crowns preserve the natural teeth that help retain the jaw bone and avoid displacement of neighboring teeth. Depending on physician recommendation, this could be a less expensive alternative to implants with the average cost ranging from $500 to $900[18] or more per crown.

10 Balshi TJ, et al. (2002). Treatment of congenital ectodermal dysplasia with endosseous implants: A case report. The International Journal of Oral & Maxillofacial Implants, 17 (2), p277-81.

11 Higuchi KW. (1995). Implant survival rates in partially edentulous patients: a 3-year prospective multicenter study. Journal of Oral and Maxillofacial Surgery, 53(3), p264-8.

12 Doundoulakis JH, et al. (2003). The implant-supported overdenture as an alternative to the complete mandibular denture. Journal of the American Dental Association, 134 (11), p1455-58.

13 Bone augmentation and nerve positioning. (2002). Aetna, Inc. Retrieved from www.simplestepsdental.com

14 Nazarian Y, et al. (2003). Nerve injury following implant placement: prevention diagnosis and treatment modalities. Refuat Hapeh Vehashinayim, 20(3), p44-50.

15 Ledermann PD, et al. (1993). Osseointegrated dental implants as alternative therapy to bridge construction or orthodontics in young patients: seven years of clinical experience. Pediatric Dentistry, Sept-Oct: 15(5), p327-33.

16 Bector KB, Bector JP, Keller EE. (2001). Growth analysis of a patient with ectodermal dysplasia treated with endosseous implants: a case report. International Journal of Oral Maxillofacial implants, Nov-Dec: 16 (6), p864-74.

17 Cronin RJ Jr, Oesterle LJ. (1998). Implants use in growing patients. Treatment planning concerns. Dental Clinics North America, Jan 42(1), p1-34.

18 Commonwealth of Massachusetts, Division of Health Care Finance and Policy. (2005). Mandated Benefit Review: Review and Evaluation of Proposed Legislation to Mandate Coverage for Ectodermal Dysplasia: Senate Bill 837. Retrieved from http://www.mass.gov/chia/docs/r/pubs/mandates/ectodermal-dysplasia.pdf, (page 7).

Conclusion

CHIA does not take a position in support of, or in opposition to, any legislation referred for review, but we do conclude the following:

1. Implementation of H.B. 321 would increase the cost of claims and premiums between 0.05 and 0.16 percent. The estimated premium costs for the mandate for the next five years range from approximately $32,097,000 to $104,845,000.
2. Our actuaries estimate that 8.9-10.2 percent of premiums increases resulting from the mandate would be included for retention by carriers.
3. Implementation of H.B. 321 would not likely increase the number or types of providers of the mandated treatment or service significantly over the next five years.
4. The total estimated mean lifetime cost of dental and orthodontic procedures necessary for the treatment of craniofacial disorders is $16,585. Most families are finding ways to pay for the dental and orthodontic procedures that are not currently covered, either by paying out of pocket, receiving some coverage from dental insurance plans, or through charitable organizations. The mandate would represent a shift in cost of dental and orthodontic services from consumers, dental insurers, and charitable organizations to the medical insurance carriers, but there is no data available to suggest the magnitude of this portion of the cost.

Center for Health Information and Analysis

Center for Health Information and Analysis
Two Boylston Street
Boston, Massachusetts 02116

Phone: (617) 988-3100
Fax: (617) 727-7662

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OLIVER WYMAN

ACTUARIAL REVIEW OF MASSACHUSETTS HOUSE BILL 321, AN ACT RELATIVE TO INSURANCE COVERAGE FOR CRANIOFACIAL DISORDERS

MASSACHUSETTS DIVISION OF HEALTH CARE FINANCE AND POLICY

OCTOBER 11, 2012

MARSH & McLENNAN COMPANIES

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1

Executive Summary

Purpose and Scope

Pursuant to M.G.L. Chapter 3, Section 38c, when reporting favorably on a mandated benefit bill, joint committees of the general court and the house and senate committees on ways and means are required to include a review and evaluation of the bill conducted by the Massachusetts Division of Health Care Finance and Policy (Division).

The Division has contracted with Oliver Wyman Actuarial Consulting, Inc. (Oliver Wyman) to perform an actuarial review of House Bill 321, An Act Relative to Insurance Coverage for Craniofacial Disorders. Our analysis includes the impact on the fully-insured, commercial market. This market includes fully-insured plans offered by commercial insurers, Health Maintenance Organizations (HMOs), and Blue Cross and Blue Shield Plans. It does not include the Group Insurance Commission (GIC), Medicare Supplement or Medicare Advantage plans, Division of Medical Assistance, Commonwealth Care plans or individual products offered prior to July 1, 2007.

We have prepared this report for the sole use of the Division for the purpose described above, and we do not authorize parties other than the Division to use the information contained herein. Any party other than the Division who chooses to use or rely on the information presented in this report does so without our authorization. This report is not intended to be a legal interpretation of the bill as written.

Background

House Bill 321, An Act Relative to Insurance Coverage for Craniofacial Disorders, would require insurers to provide coverage for medically necessary functional repair or restoration of craniofacial disorders to improve the function of, or to approximate the normal appearance of, any abnormal structures caused by congenital defects, developmental deformities, trauma, tumors, infections or disease. Coverage shall include the necessary care and treatment of medically diagnosed congenital defects and birth abnormalities, including, but not limited to cleft lip, cleft palate, ectodermal dysplasia, dentinogenesis imperfect, amelogenesis imperfectal, and other maxillofacial abnormalities. Coverage shall not include cosmetic surgery or for dental or orthodontic treatment unrelated to congenital defects, developmental deformities, trauma, tumors, infections or disease. All coverage shall be subject to any deductible, cost-sharing, and policy or contract maximum provisions, provided that they are no more restrictive for such services than for any injury or sickness covered under the policy.

The bill applies to:

1) Insurers of any individual policy of accident and sickness insurance under section one hundred eight and any group blanket policy of accident and sickness insurance under section one hundred ten regulated under Chapter 175 of the General Laws of Massachusetts.

2) Any contract between a subscriber and a corporation under an individual or group hospital service plan delivered, issued or renewed in the commonwealth, regulated under Chapter 176A of the General Laws of Massachusetts.

3) Any subscription certificate under an individual or group medical service agreement delivered, issued or renewed in the commonwealth, regulated under Chapter 176B of the General Laws of Massachusetts.

4) Any health maintenance contract regulated under Chapter 176G of the General Laws of Massachusetts.

The full text of the bill is in Appendix A.

Actuarial Findings

We estimated the financial impact of the mandate on total and marginal costs. The total cost estimate includes the full cost of the covered benefits mandated by the bill based on our assumptions of cost and utilization levels that would exist under a mandate. However, health insurance carriers are already providing many of the services, and incurring related costs, which would be mandated (referred to in this report as "baseline" services and costs). The marginal costs reflect the additional costs that are expected to be realized by the affected population due to the mandate and equal the difference between our total and baseline cost estimates. Our cost estimates related to the proposed mandated benefit on the fully-insured commercial market for 2012 and the five-year projection period from 2013 through 2017 are included in the tables below.[1] Exhibit 1 shows the dollar impact on a per member per month (PMPM) basis, while Exhibit 2 shows the dollar impact for the projected affected population.[2]

The total cost estimates shown include costs related to cleft palate and cleft lip, as these are two of several craniofacial disorders that would be covered under the mandate of House Bill 321. Therefore, the estimated costs for House Bill 4557, An Act Relative to Coverage for Cleft Palate

[1] Based on direction from the Division, for purposes of the estimates it was assumed that procedures that are cosmetic only with no related functional impairment would not be covered under the mandate. This is discussed further in section 2.

[2] The estimated dollar costs are based on 2012 cost levels, projected forward at higher cost levels for each of the next five calendar years using cost trends described in sections 2 and 3.

and Cleft Lip,[3] which has already been passed and enacted, are reflected in the total cost estimates in this report. Costs for cleft palate and cleft lip are not included in the marginal cost estimates since they will already be mandated effective January 1, 2013 by passage of House Bill 4557. Instead, these costs are shown in the baseline cost. Certain services and costs related to craniofacial disorders, other than cleft palate and cleft lip, that carriers indicated were not currently covered are reflected in our marginal cost estimates.

2012 Premium and Claim Cost Estimates

The baseline, marginal and total 2012 cost estimates of the mandated benefits, as a percentage of total estimated 2012 cost levels for all benefits, are as follows:

- Baseline cost estimates: 0.08% to 0.19%
- Marginal cost estimates: 0.05% to 0.16%
- Total cost estimates: 0.13% to 0.35%

2013-2017 Projected Premium Cost Estimates

We estimate the total premium costs for the mandated benefits for the period from 2013 through 2017 to be approximately $81,259,000 to $235,127,000. On a marginal basis, we estimate that the mandate would increase premiums by $32,097,000 to $104,845,000 for the period from 2013 through 2017.

[3] Estimated costs for House Bill 4557 can be found at: http://www.mass.gov/eohhs/docs/dhcfp/r/pubs/09/cleft-palate-mb-report.pdf

Exhibit 1

PMPM Claims and Premium due to House Bill 321 Mandated Benefits

Total Cost		2012 Estimate		Projection of Mandate				
		Mandate	% Total	2013	2014	2015	2016	2017
Claims	Low	$0.51	0.13%	$0.53	$0.54	$0.56	$0.57	$0.59
	Middle	$0.84	0.21%	$0.87	$0.91	$0.94	$0.98	$1.02
	High	$1.37	0.35%	$1.44	$1.51	$1.59	$1.67	$1.75
Premium	Low	$0.56	0.13%	$0.58	$0.59	$0.61	$0.63	$0.65
	Middle	$0.93	0.21%	$0.96	$1.00	$1.04	$1.08	$1.13
	High	$1.53	0.35%	$1.60	$1.68	$1.77	$1.86	$1.95
Marginal Cost		2012 Estimate		Projection of Mandate				
		Mandate	% Total	2013	2014	2015	2016	2017
Claims	Low	$0.20	0.05%	$0.21	$0.21	$0.22	$0.23	$0.23
	Middle	$0.35	0.09%	$0.36	$0.38	$0.39	$0.41	$0.43
	High	$0.61	0.16%	$0.64	$0.67	$0.71	$0.74	$0.78
Premium	Low	$0.22	0.05%	$0.23	$0.23	$0.24	$0.25	$0.26
	Middle	$0.39	0.09%	$0.40	$0.42	$0.44	$0.45	$0.47
	High	$0.68	0.16%	$0.72	$0.75	$0.79	$0.83	$0.87
Baseline Cost		2012 Estimate		Projection of Mandate				
		Mandate	% Total	2013	2014	2015	2016	2017
Claims	Low	$0.31	0.08%	$0.32	$0.33	$0.34	$0.35	$0.36
	Middle	$0.49	0.12%	$0.51	$0.53	$0.55	$0.57	$0.59
	High	$0.76	0.19%	$0.80	$0.84	$0.88	$0.92	$0.97
Premium	Low	$0.34	0.08%	$0.35	$0.36	$0.37	$0.38	$0.39
	Middle	$0.54	0.12%	$0.56	$0.58	$0.61	$0.63	$0.65
	High	$0.85	0.19%	$0.89	$0.93	$0.98	$1.03	$1.08

Exhibit 2

Claims and Premium due to House Bill 321 Mandated Benefits

Estimate of Commercially Insured Population		2,210,942		2,210,942	2,210,942	2,210,942	2,210,942	2,210,942	
		2012 Estimate		Projection of Mandate					2013 - 2017
Total Cost (in $000's)		Mandate	% Total	2013	2014	2015	2016	2017	Mandate
	Low	$13,537	0.13%	$13,943	$14,362	$14,792	$15,236	$15,693	$74,027
Claims	Middle	$22,263	0.21%	$23,154	$24,080	$25,043	$26,045	$27,086	$125,407
	High	$36,392	0.35%	$38,212	$40,122	$42,128	$44,235	$46,447	$211,144
	Low	$14,860	0.13%	$15,306	$15,765	$16,238	$16,725	$17,226	$81,259
Premium	Middle	$24,546	0.21%	$25,528	$26,549	$27,611	$28,715	$29,864	$138,266
	High	$40,526	0.35%	$42,552	$44,680	$46,914	$49,259	$51,722	$235,127
		2012 Estimate		Projection of Mandate					2013 - 2017
Marginal Cost (in $000's)		Mandate	% Total	2013	2014	2015	2016	2017	Mandate
	Low	$5,347	0.05%	$5,508	$5,673	$5,843	$6,018	$6,199	$29,240
Claims	Middle	$9,309	0.09%	$9,681	$10,068	$10,471	$10,890	$11,325	$52,435
	High	$16,227	0.16%	$17,039	$17,891	$18,785	$19,725	$20,711	$94,150
	Low	$5,869	0.05%	$6,046	$6,227	$6,414	$6,606	$6,804	$32,097
Premium	Middle	$10,263	0.09%	$10,674	$11,101	$11,545	$12,006	$12,487	$57,812
	High	$18,071	0.16%	$18,974	$19,923	$20,919	$21,965	$23,063	$104,845
		2012 Estimate		Projection of Mandate					2013 - 2017
Baseline Cost (in $000's)		Mandate	% Total	2013	2014	2015	2016	2017	Mandate
	Low	$8,190	0.08%	$8,436	$8,689	$8,950	$9,218	$9,495	$44,787
Claims	Middle	$12,954	0.12%	$13,473	$14,011	$14,572	$15,155	$15,761	$72,972
	High	$20,165	0.19%	$21,173	$22,231	$23,343	$24,510	$25,736	$116,993
	Low	$8,990	0.08%	$9,260	$9,538	$9,824	$10,119	$10,422	$49,162
Premium	Middle	$14,283	0.12%	$14,854	$15,448	$16,066	$16,709	$17,377	$80,454
	High	$22,455	0.19%	$23,578	$24,757	$25,995	$27,294	$28,659	$130,282

2

Methodology and Analysis

Benefits

The benefits that this bill is intended to mandate include treatment for a wide range of services related to craniofacial disorders. To have a better understanding of the existing coverage in the market of craniofacial disorders of this type, Oliver Wyman and the Division surveyed (Survey) several of the largest carriers in the market. The five carriers responding to the Survey are listed in Appendix B. Among companies filing Health Annual Statements with the Commonwealth of Massachusetts as of the end of 2011, these carriers covered approximately 94% of the members in the fully-insured commercial market. The Survey showed that many of these services are already covered by insurance carriers in Massachusetts while others are not. However, there are varying levels of coverage in the market, particularly as it relates to dental, orthodontic, oral surgery and cosmetic benefits. With respect to coverage of craniofacial conditions, the carriers responded to the Survey as follows:

- Among the insured plans to which the bill would apply, all of the carriers indicated that all of their insured members are currently in plans that include benefits for treatment of craniofacial disorders.

- All of the carriers indicated that existing coverage for craniofacial disorders includes all of the causes listed in the proposed bill for these disorders (i.e. congenital defects, developmental deformities, trauma, tumors, infections and disease).

- No carrier applies any dollar, visit or procedural limits to covered services of craniofacial conditions.

- Generally, carriers provide coverage for services related to craniofacial conditions that are only medically necessary to restore function that is impaired, to relieve pain or for medical complications. This generally does not include cosmetic services to restore appearance unless those services are also provided in conjunction with other medically necessary covered services. For example, cosmetic services provided on a stand-alone basis (i.e. “pure” cosmetic services in the absence of functional impairment) are generally not covered by any carrier, although one carrier indicated that they do cover cosmetic services to repair or restore appearance after accidental injury.

- To further demonstrate that the only covered services for craniofacial conditions are those that restore function or relieve pain, two carriers specifically mentioned that

services to improve self-esteem or treat a mental health condition, as well as services where the only benefit is psychological or emotional in nature, are not covered.

- Generally, carriers do not cover dental or orthodontic services under their medical plans even if the services are medically necessary, although one carrier indicated limited dental coverage under their medical plan.[4]

Process

The first step we took in estimating the impact of this bill was to understand the legislative intent of the bill. We had a conference call with policy analysts at the Division and representatives from the Massachusetts legislature and Commonwealth of Massachusetts State Representative Mr. John Scibak. Through this call and subsequent communications we had with the Division analysts as well as discussions that the Division analysts had with Representative Scibak's office, we were able to gain an understanding of the intent of the bill. The original legislative intent was to require coverage as written in the bill, which includes coverage "to approximate the normal appearance of any abnormal structures caused by congenital defects, developmental deformities, trauma, tumors, infections or disease." However, the Division later provided guidance to exclude from the financial analysis services that are only cosmetic since the phrase stating "or to approximate the normal appearance of" was likely to be removed from the bill. That is, coverage for "pure" cosmetic services (strictly for appearance only) is no longer intended to be mandated. As indicated above, carriers generally already exclude these types of cosmetic services from their covered benefits. Based on this information and information provided by the carriers through the Survey described above, it would appear that the only services that carriers do not already cover for craniofacial conditions under the proposed bill are dental and orthodontic procedures. However, dental and orthodontic services for cleft lip/palate as enacted under House Bill 4557 would be covered effective January 1, 2013. Our analysis estimates the impact of the intent of this bill as described here and does not include a legal interpretation of the language of the bill.

Next, we estimated the financial impact of the bill. This involved estimating the size of the affected population, the targeted population that will utilize the service, the cost of treatment, and the administrative cost associated with the services. Additional detail explaining our analysis for each of these steps is provided in the sections that follow.

Affected Population

The population whose premiums will be affected by this mandate is the commercially insured population. To estimate the size of this population we reviewed the 2011 financial statements of companies filing Health Annual Statements with commercial membership in Massachusetts. However, there are companies that insure commercial members in Massachusetts that do not

[4] Carrier responses to the Survey reflect plan coverage during 2012. Dental and orthodontic services for cleft lip/palate will also be covered by these carriers, effective January 1, 2013, as enacted by House Bill 4557.

file Health Annual Statements and therefore we included an estimate of members for these companies in our total membership estimate. We estimated the size of the affected population to be 2,210,942.

Next we estimated the affected population for the time period 2013 through 2017 in order to perform our five-year cost estimate projections. The U.S. Census Bureau has projected Massachusetts total population to grow by 10.4% from 2000 to 2030 and the age 65 and older population to grow by 70.1% from 2000 to 2030.[5] This represents an average annual growth rate for the total and age 65 and older population to be 0.3% and 1.8%, respectively. The census also shows the Massachusetts population age 65 and older to be 13.5% of the total population in the year 2000. This corresponds to essentially no growth in the under-65 age group.

This can be shown by the following example:

Age	2000	2030	% Change	Annualized % Change
Under 65	865	874.4	1.09%	0.04%
65+	135	229.6	70.07%	1.79%
Total	1,000	1,104	10.40%	0.33%

The hypothetical year 2000 population is comprised of 86.5% under age 65 and 13.5% age 65 and older. The total population grows by 10.4% over the 30-year period to 1,104 in 2030. The age 65 and older population grows by 70.1% over the 30-year period to 229.6. Therefore, the under age 65 population in 2030 can be solved for by subtracting 229.6 from 1,104, resulting in 874.4. Dividing 874.4 by 865 results in a 30-year growth rate in the under age 65 population of 1.09%, which translates to an average annual growth rate of 0.04%, which is essentially flat.

Because the affected population by the proposed bill is predominantly under age 65, we are projecting no change in the affected population over the five-year projection period.

Targeted Population

The targeted population that would utilize the benefits mandated by House Bill 321 will include any portion of the affected population with craniofacial disorders caused by congenital defects, developmental deformities, trauma, tumors, infections or disease. Services for craniofacial conditions caused by congenital defects or developmental deformities are expected to be primarily provided to children, while craniofacial conditions caused by trauma, tumors, infections or disease could affect someone at any age.

We performed a search of published prevalence data to determine an estimate of the portion of the population that might be affected by craniofacial disorders requiring dental, orthodontic or

[5] U.S. Census Bureau, Population Division, Interim State Population Projections, 2005.

other related oral care. Our search resulted in a range of 1.12% to 1.75% of the population. The first source showed a frequency rate of 1.12% to 1.23%, representing common congenital disorders that could affect the dentition.[6] The variation in this range reflects the variation in frequency rate of cleft lip/palate, which ranged from 0.054% to 0.167% (the average of the low and high end of this range is 0.111%). The second source showed a frequency rate of 1.383%, representing craniofacial diseases and disorders relevant to oral health that are treated annually in the medical care system.[7] Details of these frequency rates by type of condition for these two sources are illustrated in Appendix C. The third source showed a birth rate of 1.75% with major craniofacial malformations.[8] We used these three sources to represent our low, middle and high estimates for the frequency in which some form of dental or orthodontic care related to craniofacial diseases and disorders could be received, as follows:

	Low	Middle	High
Cleft lip/palate	0.054%	0.111%	0.167%
All other	1.066%	1.272%	1.583%
Total	1.120%	1.383%	1.750%

Next, we estimated the portion of the covered population that is most likely to receive these services. While we expect that a large portion of the dental services will be provided to children (such as for cleft lip/palate), they can also be provided to adults for certain conditions. According to an Oliver Wyman study[9] prepared for the Division in 2009, 25.7% of the covered population is under the age of 18. We assumed this age distribution has not changed significantly in the last few years and used this rate as a proxy for our low, middle and high estimates for this study for services related to cleft lip/palate, since those services are primarily provided to children. We also used it as our low estimate for all other craniofacial conditions, since this represents the smallest portion of population that could receive these services. Given that other craniofacial conditions that could require dental or orthodontia treatment could also affect the adult population, we increased this estimate for our middle and high estimates to be 30% and 35% for all conditions other than cleft lip/palate. We set these values by assuming that the low and high

[6] Congenital Diseases and a New York State Regulation, NYSDJ June/July 2007.

www.eperiodr.com/congenitaldisease.pdf

[7] Costs of Medically Treated Craniofacial Conditions, Public Health Reports, January-February 2003, Volume 118.

www.publichealthreports.org/issueopen.cfm?articleID=1236

[8] DR James, P Ramsay-Baggs - Scott-Brown's Otolaryngology. …, 1997 - famona.sezampro.rs

famona.sezampro.rs/medifiles/otohns/scott/scott616.pdf

[9] Actuarial Review of Massachusetts House Bill 4557, An Act Relative to the Treatment of Cleft Palate and Cleft Lip, Massachusetts Division of Health Care Finance and Policy, Oliver Wyman, February 26, 2009

See Appendix of http://www.mass.gov/eohhs/docs/dhcfp/r/pubs/09/cleft-palate-mb-report.pdf

estimates of 25.7% and 35%, respectively, would represent a -/+ 15% range around the middle estimate, as follows:

Middle estimate = Low estimate / 85% = 25.7% / 85% = 30.2%, rounded to 30%
High estimate = Middle estimate x 1.15 = 30.2% x 1.15 = 34.5%, rounded to 35%

Cost of Treatment

The next step of our analysis was to estimate the cost of treating craniofacial conditions. We used four primary sources.

1) Proprietary database of commercial health insurance enrollment and claims (Database).
2) Health Annual Statements as of December 31, 2011 for carriers in Massachusetts.
3) Information provided by carriers in the Survey.
4) Published reports and statistics.

The data in the Database are self-reported and may not be representative of the entire market or a particular situation. However, we believe the data to be credible for the purposes of this analysis. The data is at the claim line level and includes approximately 45.2 million insured lives nationwide and approximately 656,000 insured lives in Massachusetts.

To determine an estimate of the baseline cost of the craniofacial conditions covered by the carriers, we first identified a relatively comprehensive list of ICD-9-CM diagnosis codes from a published study[10] as a proxy to identify the various types of mandated craniofacial diseases and disorders. We then selected all the records from the Database that listed these codes as the primary diagnosis for the service and, from those records, identified the CPT procedure codes associated with these diagnoses. We then compared those diagnosis and procedure codes to those provided by the carriers in the Survey. Three of the carriers provided their covered CPT procedure codes and one carrier provided its covered ICD-9 diagnosis codes. We further segmented and adjusted the results from the Database to reflect the covered codes categorized as craniofacial in nature by the carriers. Our calculations produced an average PMPM cost that is similar to the costs provided by the carriers from the Survey. In the Survey, one carrier provided its PMPM cost while other carriers provided other cost information that would allow us to estimate their PMPM costs when combined with membership information from the carriers' 2011 Health Annual Statements. Our analysis showed that the carrier claim costs resulting from the Survey for covered craniofacial conditions range from $0.11 PMPM to $1.88 PMPM, with an average claim cost for all five carriers in the Survey of $0.44 PMPM (costs are in 2011 dollars). Our cost analysis using the Database resulted in a similar average claim cost, which serves as validation of the carrier cost data.

[10] Costs of Medically Treated Craniofacial Conditions, Public Health Reports, January-February 2003, Volume 118.

www.publichealthreports.org/issueopen.cfm?articleID=1236

As noted by the carriers in the Survey, these costs include all of the proposed mandated services, with the exception of dental and orthodontia services that the carriers generally do not cover.[11] These costs also exclude cosmetic services provided in the absence of functional impairment, but as noted above, the cost estimate is not intended to include those services. Because the average PMPM claim costs resulting from the Survey and the Database are similar, we used the average PMPM claim cost of $0.44 noted above from the carrier Survey to represent our middle cost estimate. We estimated a range of cost estimates around this middle best estimate to be $0.29 to $0.68 PMPM, as follows:

> The low cost estimate of $0.29 PMPM is the average of the carrier PMPM costs from the Survey, excluding the carrier with the highest PMPM cost.
>
> The high cost estimate of $0.68 PMPM is the average of the following: The average of the carrier PMPM costs from the Survey excluding the carrier with the lowest PMPM cost (resulting in $0.81) and the average of the carrier PMPM costs from the Survey excluding the carriers with the lowest and highest PMPM costs (resulting in $0.54). The average of $0.81 and $0.54 PMPM is $0.68 PMPM.

To these baseline costs, we added an estimate to reflect the cost of dental and orthodontia services related to cleft lip/palate. While carriers already cover medical and surgical costs related to cleft lip/palate, they do not currently cover dental and orthodontia services for cleft lip/palate. Therefore, those services are not included in the carriers' current costs, but should be considered as a baseline cost for purposes of this report because those services will be covered by carriers effective January 1, 2013, as enacted by House Bill 4557. We estimated the baseline dental and orthodontia costs for cleft lip/palate in 2012 to range from $.01 to $.05 PMPM. This is similar to the cost range of $.02 to $.04 PMPM estimated previously for these services.[12]

The carrier costs and our range of average cost estimates imply that carrier costs for craniofacial conditions can vary by a wide margin, even though the overall cost is relatively small compared with total costs of a fully-insured medical plan. This does not necessarily mean that one carrier covers more craniofacial conditions than the other. In fact, all of the carriers stated in the Survey that they currently cover all of the mandated benefits in the bill except for dental and orthodontia. As noted above, dental and orthodontia services for cleft lip/palate will be covered by the carriers effective January 1, 2013, as enacted by House Bill 4557. The more likely explanation for this relatively wide cost range is that the carriers would appear to classify their costs

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[11] Carrier responses to the Survey reflect plan coverage during 2012. Dental and orthodontic services for cleft lip/palate will be covered by these carriers, effective January 1, 2013, as enacted by House Bill 4557.

[12] Actuarial Review of Massachusetts House Bill 4557, An Act Relative to the Treatment of Cleft Palate and Cleft Lip, Massachusetts Division of Health Care Finance and Policy, Oliver Wyman, February 26, 2009

http://www.mass.gov/eohhs/docs/dhcfp/r/pubs/09/cleft-palate-mb-report.pdf

differently. For example, one carrier might cover and classify a particular procedure as craniofacial in nature, while another carrier might cover and classify that same procedure as something other than craniofacial for internal tracking purposes (i.e. they still cover it, but they just don't classify it as craniofacial). We observed that type of behavior by comparing the covered procedure codes provided by three of the five carriers in the Survey and the diagnosis codes provided by one of the five carriers in the Survey. While this appears to show that many of the covered procedure and diagnosis codes provided by the carriers are common to these carriers, several of the codes are not, leading to the range of carrier cost estimates. As noted above, the average carrier claim cost for craniofacial conditions associated with this cost range is $0.44 PMPM. This serves as our best estimate of the average baseline cost prior to trending to 2012 and prior to adding in the estimated costs noted above for dental and orthodontia services related to cleft lip/palate that carriers currently do not provide, but will cover beginning January 1, 2013, as enacted by House Bill 4557.

Next, we trended these costs from 2011 to 2012. Using information from recent trend studies published by the Division,[13] we estimated an average cost trend for all services to be 4.0% per year. The 4.0% cost trend estimate represents an average of the 2009 cost per service trends in Table 1 of the Division's June 2011 report (which we estimated to be 5.3% by calculating a weighted average of the spending trend for each type of service) and the 2010 total medical expense trend of 2.7% in Figure 9 of the Division's May 2012 report. We averaged these trends (5.3% + 2.7% / 2 = 4.0%) to represent our middle estimate of the annual cost per service trend and assumed the trend would continue into 2012. We also used this trend as an estimate of the average cost per service trend in our 5-year projection. Based on the published data identified earlier in this report, we do not believe that prevalence or treatment protocols of craniofacial conditions has materially changed over time that would lead to any change in utilization of services for craniofacial conditions. Therefore, we used only a cost per service trend, and not a total PMPM trend which includes the impact of cost per service and utilization changes. We used an annual trend of 4.0% as our middle estimate and assumed 3.0% and 5.0% for our low and high estimates, respectively.

As noted above, all of the carriers in the Survey already provide coverage for medical surgeries and other medical services related to craniofacial conditions. We are assuming that there will be no change in these medical-related services that are being provided as a result of the increased coverage for dental and orthodontic benefits. The treatment protocols for many craniofacial conditions require these dental and orthodontic services to prepare the patient for additional medical procedures. Therefore, if dental and orthodontic services are not being performed due

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[13] Massachusetts Health Care Cost Trends, Trends in Health Expenditures, June 2011 and Premiums and Expenditures, May 2012, Division of Health Care Finance and Policy.

www.mass.gov/dhcfp/costtrends

to a lack of coverage, then theoretically there could be medical procedures that are not being performed as a result. However, it is believed that families are finding ways to pay for the dental and orthodontic procedures that are not currently covered.[14] This could be done by paying out of pocket, receiving some coverage from dental insurance plans (though these plans often have an annual maximum that would limit coverage), or through charitable organizations. Because it is believed that the vast majority of patients are not foregoing the dental and orthodontic care,[15] we do not believe there will be any material impact on the existing medical coverage. Therefore, the mandate would represent a shift in cost of dental and orthodontic services from consumers, dental insurers, and charitable organizations to the medical insurance carriers. There is no data available to suggest what portion of the cost is coming from each of these sources today.

Next, we estimated the cost of the dental and orthodontic services that are often not covered by the medical insurance carriers. We used two different sources to estimate these costs. The first source was the study noted above that Oliver Wyman performed in 2009 related to cleft palate and cleft lip, which are two of many craniofacial conditions. That study showed that the average lifetime cost in 2009 dollars for dental and orthodontic services needed to treat cleft palate and cleft lip (two of the most common forms of craniofacial conditions requiring dental and orthodontic treatment) is $18,500, with a range of -/+ 20%. The second source that we used to estimate this cost is a study[16] of patients who have been treated for amelogenesis imperfecta, one of the other most common forms of congenital defects with significant dental implications. That study, presented in early 2007, showed that the mean cost to provide dental services for this condition was $12,932. In addition, 71% of the cases required an additional mean cost of $5,145 for treatment in a hospital operating room. The total estimated mean cost is $16,585 ($12,932 + 71% x $5,145). Because cleft palate, cleft lip and amelogenesis imperfecta are among the most common forms of craniofacial conditions that have dental and/or orthodontic implications, representing 17% to 25% of the total frequency of conditions requiring such care,[17]

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[14] Actuarial Review of Massachusetts House Bill 4557, An Act Relative to the Treatment of Cleft Palate and Cleft Lip, Massachusetts Division of Health Care Finance and Policy, Oliver Wyman, February 26, 2009

http://www.mass.gov/eohhs/docs/dhcfp/r/pubs/09/cleft-palate-mb-report.pdf

[15] Actuarial Review of Massachusetts House Bill 4557, An Act Relative to the Treatment of Cleft Palate and Cleft Lip, Massachusetts Division of Health Care Finance and Policy, Oliver Wyman, February 26, 2009

http://www.mass.gov/eohhs/docs/dhcfp/r/pubs/09/cleft-palate-mb-report.pdf

[16] A Cost Analysis of Dental Treatment for Amelogenesis Imperfecta, A. SAMIMI1, J. LEE2, M.W. ROBERTS3, L. COOPER3, and J.T. WRIGHT3, 1UNC Chapel Hill, NC, USA, 2UNC-Chapel Hill School of Dentistry, Durham, NC, USA, 3University of North Carolina, Chapel Hill, USA.

http://iadr.confex.com/iadr/2007orleans/techprogramforcd/A90419.htm

[17] Congenital Diseases and a New York State Regulation, NYSDJ June/July 2007.

www.eperiodr.com/congenitaldisease.pdf

(also see Appendix C), we used these costs to represent the average cost for all craniofacial conditions requiring this type of treatment.

We trended the costs from both sources above to 2012 using the 4.0% annual trend noted earlier. The average cost estimate for cleft lip/palate is $20,800 and the average cost estimate for amelogenesis imperfecta is $21,000. Because these cost estimates are similar, we averaged them, resulting in an estimated cost of $20,900. We used this as our middle cost estimate, with a range of -/+ 20% as our low and high estimates, to represent the average costs associated with dental and orthodontia treatment for all craniofacial conditions.

Administrative Expense and Profit

Increases in benefits will likely also result in increases in administrative expenses and contributions to surplus or profit. In 2008, Oliver Wyman performed an expense study for the Division of Insurance (Expense Study).[18] This was a five-year study that analyzed expense ratios and loss ratios of the Commonwealth's HMOs and Blue Cross and Blue Shield Plans. The study found that the average loss ratio in Massachusetts for 2002 through 2007 was 86.5%, meaning 13.5% of premium was available for retention items, including administrative expense and contribution to surplus. Since the time of that study, loss ratios of the carriers in Massachusetts have increased due to health reform requirements and the retention margin for expenses and surplus has decreased. For example, according to a May 2012 trend study published by the Division,[19] loss ratios in 2008, 2009 and 2010 were 90.7%, 91.1% and 89.8%, respectively. This means that the retention margins were 9.3%, 8.9% and 10.2%, respectively. We used these margins as estimates of the low, middle and high retention ratios to estimate the amount that would be included for retention in premium increases for the mandated benefits.

It should be noted, however, that based on carrier responses from the Survey, there is potential for administrative expenses and other indirect costs to increase beyond current levels. In the Survey, carriers were asked to estimate the impact on administrative and other indirect costs if this mandate was passed. Below are their responses:

- Unknown.
- This mandate would result in additional administrative costs related to the utilization management process. These costs would be significantly front-loaded to the start-up

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[18] Oliver Wyman, Analysis of Administrative Expenses for Health Insurance Companies in Massachusetts, September 2008.

http://www.mass.gov/ocabr/docs/doi/consumer/maadminexpensestudyreport.pdf

[19] Massachusetts Health Care Cost Trends, Premiums and Expenditures, May 2012, Division of Health Care Finance and Policy.

www.mass.gov/dhcfp/costtrends

phase of implementation, but there would be some ongoing costs. The mandate would likely result in a higher volume of appeals for reconstructive and restorative services. The mandate would also result in indirect claims costs related to follow-up services. Examples might include physical therapy, prosthetic/orthotic devices, and durable medical equipment. There may also be claims costs associated with treatment for complications of the original procedure. As with the premium impact, it is difficult to place an estimate on the potential costs without further clarification as to the scope.

- Likely to be minimal if the mandate is limited to coverage of medically necessary procedures required to restore function or improve appearance in the case of significant deformities, whether congenital, due to trauma, infection or disease, because we already cover such treatments and would not be changing any of our care management processes. However, if the mandate requires coverage of cosmetic procedures or dental/orthodontic procedures that are related to a craniofacial disorder but do not meet the level of medical necessity or restoration of function, then administrative costs could increase since there would need to be greater care management of these procedures to avoid abuse and potentially the need to contract with additional provider types to meet demand.

- The estimated impact on administrative expenses and other indirect costs with the passing of this mandate will be negligible.

- In addition to the premium increases there could be additional administrative costs if dental and cosmetic coverage were to increase.

Marginal Costs

Using the data, information and assumptions noted above, we have estimated the baseline costs in the affected population based on current coverage levels, utilization levels, and cost per service. The difference between the total expected cost under the mandate and the baseline costs represent our marginal cost estimates.

3

Results

Estimated 2012 Baseline, Marginal and Total Costs

The following exhibits 3 and 3a show the results of our analysis.

Exhibit 3

Development of Average Total Cost and Average Marginal Cost Estimates of House Bill 321

Total Cost Estimates		Low	Middle	High
Estimate of Claims PMPM 2011 for typically covered services	A	$0.29	$0.44	$0.68
Annual claims trend	B	3.0%	4.0%	5.0%
Estimate of Claims PMPM in 2012	C = A*(1+B)	$0.30	$0.46	$0.71
Estimate of Claims PMPM in 2012 for Cleft Lip/Palate dental/orthodontia (Exhibit #3a)	C1	$0.01	$0.03	$0.05
Claims PMPM in 2012: Average Baseline Estimate	**D = C + C1**	**$0.31**	**$0.49**	**$0.76**
Prevalence of craniofacial disorders (other than cleft lip/palate) with dental implications	E	1.066%	1.272%	1.583%
% of members needing treatment	F	25.7%	30.0%	35.0%
Lifetime cost of dental/orthodontic/oral surgery services often not covered	G	$16,700	$20,900	$25,100
Average annual cost of dental/orthodontic/oral surgery services	H = G/18	$928	$1,161	$1,394
Dental/orthodontic/oral surgery 2012 claims PMPM	I = E*F*H/12	$0.21	$0.37	$0.64
Estimate of % of members that already have coverage	J	5.0%	5.0%	5.0%
2012 Marginal Claims Cost PMPM	**K = I/(1-J)**	**$0.20**	**$0.35**	**$0.61**
Total Cost Estimates in 2012				
Total Claims Cost PMPM	**L = D+K**	**$0.51**	**$0.84**	**$1.37**
Administrative expense & contribution to surplus ratio	M	8.9%	9.3%	10.2%
Total Premium PMPM	**N = L/(1-M)**	**$0.56**	**$0.93**	**$1.53**
Baseline Cost Estimates in 2012				
Baseline Claims Cost PMPM	**O = D**	**$0.31**	**$0.49**	**$0.76**
Baseline Premium PMPM	**P = O/(1-M)**	**$0.34**	**$0.54**	**$0.85**
Marginal Cost Estimates in 2012				
Marginal Claims Cost PMPM	**Q = K**	**$0.20**	**$0.35**	**$0.61**
Marginal Premium PMPM	**R = Q/(1-M)**	**$0.22**	**$0.39**	**$0.68**
Estimated commercial insured premium PMPM in 2012	**S**	$439	$439	$439
Baseline Premium as % of current premium	**T =P/S**	0.08%	0.12%	0.19%
Marginal Premium impact as % of current premium	**U = R/S**	0.05%	0.09%	0.16%
Total Premium impact as % of current premium	**V = N/S**	0.13%	0.21%	0.35%

Exhibit 3a

Development of Average Baseline Cost Estimates of Dental/Orthodontia Services for Cleft Lip/Palate Not Covered by Carriers in 2012
Mandated Under House Bill 321 and Enacted by House Bill 4557 Effective January 1, 2013

Baseline Cost Estimates				
		Low	Middle	High
Prevalence of cleft lip/palate with dental implications	A	0.054%	0.111%	0.167%
% of members needing treatment	B	25.7%	25.7%	25.7%
Lifetime cost of dental/orthodontic/oral surgery services often not covered	C	16,700	20,900	25,100
Average annual cost of dental/orthodontic/oral surgery services	D = C/18	928	1,161	1,394
Dental/orthodontic/oral surgery 2012 claims PMPM for cleft lip/palate	E = A*B*D/12	$0.01	$0.03	$0.05

Our average baseline premium estimate for all craniofacial disorders, including those enacted by House Bill 4557 effective January 1, 2013, as illustrated in Exhibit 3 ranges from 0.08% to 0.19% of current premium based on an average carrier PMPM premium of $439.[20]

Our marginal premium estimates for craniofacial disorders, as mandated under House Bill 321, represent an increase of 0.05% to 0.16% of current premium (our best estimate is 0.09%), which are slightly less than our baseline premium estimates, meaning that the mandate would almost double the current cost. In comparison, the estimated marginal premium increase reported by the five carriers in the Survey range from 0.04% to 1.0% of current premium. It is worth noting, however, that the high end of the carrier range (1.0%) was reported by only one carrier and, based on that carrier’s response, appears to represent a more broad interpretation of the mandate requiring cosmetic services unrelated to functional impairment (see response from carrier # 2 below). As noted above, the cost estimate is not intended to include that type of cosmetic benefit. Excluding the 1.0%, the range of marginal premium increases estimated by the carriers is 0.04% to 0.50% of current premium, which is approximately equal to the range of the baseline premiums provided by the carriers in the Survey.

The carriers’ marginal premium estimates as a percentage of their current premium levels are as follows:

- Carrier # 1: 0.04% (i.e. this carrier’s premium related to craniofacial services would double).

- Carrier # 2: 0.25% - 1.0%
  The precise impact of the mandate is difficult to place an estimate on without further clarification as to the scope. At a minimum, we estimate it would add $1.00 pmpm or about 0.25% to our commercial premiums. If the mandate were interpreted more broadly,

[20] Average commercial group premium per member is from the 2011 financial statements of companies filing health statements, trended to 2012 at an annual rate of 3.7%, which is the annualized trend from 2008 to 2010 from the May 2012 trends study cited above.

to encompass scars, that could create a much larger impact, possibly as much as a full 1%, but that is difficult to determine at this point.

- Carrier # 3: "Minimal"
  Likely to be minimal since we already provide coverage for most of these services although not for cosmetic or all dental/orthodontic services.

- Carrier # 4: "Negligible"
  We currently provide 100% coverage for medical treatments relating to craniofacial disorders. Therefore the impact on premium if this mandate is passed will be negligible.

- Carrier # 5: 0.30% to 0.50% (i.e. this carrier's premium related to craniofacial services would double).

These estimates would appear to show that there is no real consensus from the carriers surveyed regarding the potential marginal cost increase for this mandate other than the cost increases would be relatively small compared to total current premium levels.

Five-Year Projection

The following two exhibits illustrate the results of our five-year projection. Exhibit 4 (an abbreviated version of Exhibit 1 in the Executive Summary) shows the impact of the mandate on a dollar PMPM basis. Exhibit 5 (an abbreviated version of Exhibit 2 in the Executive Summary) shows the total dollar impact on the fully-insured commercial market.[21]

Total average premiums associated with the covered mandated benefits, including benefits not already covered by carriers, are estimated to range from $0.56 PMPM to $1.53 PMPM in 2012. On a marginal basis we would expect average premiums to increase by $0.22 to $0.68 PMPM in 2012.

We trended claims and premiums forward at the cost per service trends shown in Exhibit 3. By using the same trend for claims and premium, we are assuming that the loss ratio remains constant over the projection period. This is relatively consistent with recent loss ratio trends in Massachusetts noted earlier and would be reasonable given that carriers are now required to maintain a higher minimum loss ratio requirement in Massachusetts than in past years.

We estimate the total impact on average premiums of the mandated benefits for the period from 2013 through 2017 to be approximately $81.3 million to $235.1 million. On a marginal basis, we estimate that the mandate would increase average premiums by approximately $32.1 million to

[21] The estimated dollar costs are based on 2012 cost levels, projected forward at higher cost levels for each of the next five calendar years using cost trends described in sections 2 and 3.

$104.8 million from 2013 through 2017. These marginal estimates are included in the total estimates.

Exhibit 4

PMPM Claims and Premium due to House Bill 321 Mandated Benefits

Total Cost		Base	Projection				
		2012	2013	2014	2015	2016	2017
Claims	Low	$0.51	$0.53	$0.54	$0.56	$0.57	$0.59
	Middle	$0.84	$0.87	$0.91	$0.94	$0.98	$1.02
	High	$1.37	$1.44	$1.51	$1.59	$1.67	$1.75
Premium	Low	$0.56	$0.58	$0.59	$0.61	$0.63	$0.65
	Middle	$0.93	$0.96	$1.00	$1.04	$1.08	$1.13
	High	$1.53	$1.60	$1.68	$1.77	$1.86	$1.95
Marginal Cost		Base	Projection				
		2012	2013	2014	2015	2016	2017
Claims	Low	$0.20	$0.21	$0.21	$0.22	$0.23	$0.23
	Middle	$0.35	$0.36	$0.38	$0.39	$0.41	$0.43
	High	$0.61	$0.64	$0.67	$0.71	$0.74	$0.78
Premium	Low	$0.22	$0.23	$0.23	$0.24	$0.25	$0.26
	Middle	$0.39	$0.40	$0.42	$0.44	$0.45	$0.47
	High	$0.68	$0.72	$0.75	$0.79	$0.83	$0.87

Exhibit 5

Claims and Premium due to House Bill 321 Mandated Benefits

Estimate of Commercially Insured Population		2,210,942	2,210,942	2,210,942	2,210,942	2,210,942	
Total Cost (in $000's)		2013	2014	2015	2016	2017	2013 - 2017
Claims	Low	$13,943	$14,362	$14,792	$15,236	$15,693	$74,027
	Middle	$23,154	$24,080	$25,043	$26,045	$27,086	$125,407
	High	$38,212	$40,122	$42,128	$44,235	$46,447	$211,144
Premium	Low	$15,306	$15,765	$16,238	$16,725	$17,226	$81,259
	Middle	$25,528	$26,549	$27,611	$28,715	$29,864	$138,266
	High	$42,552	$44,680	$46,914	$49,259	$51,722	$235,127
Marginal Cost (in $000's)		2013	2014	2015	2016	2017	2013 - 2017
Claims	Low	$5,508	$5,673	$5,843	$6,018	$6,199	$29,240
	Middle	$9,681	$10,068	$10,471	$10,890	$11,325	$52,435
	High	$17,039	$17,891	$18,785	$19,725	$20,711	$94,150
Premium	Low	$6,046	$6,227	$6,414	$6,606	$6,804	$32,097
	Middle	$10,674	$11,101	$11,545	$12,006	$12,487	$57,812
	High	$18,974	$19,923	$20,919	$21,965	$23,063	$104,845

Based on the Survey responses provided by the carriers, there is potential for costs and premiums to vary widely over the next five years under the mandate relative to the average estimated costs and premiums. For example, the Survey asked carriers how they might expect cost and utilization of these services as well as the number and types of providers for this treatment to change over the next five years if the mandate is passed. Below are the carrier responses:

- If carriers are required to provide coverage for purely cosmetic services, the cost and utilization of these services would increase dramatically.
- We would expect cost and utilization to increase as the benefit becomes available and its availability becomes more widely known. It is likely that most members who currently desire these services do not get them due to the lack of insurance coverage.
- If cosmetic surgery or dental or orthodontic treatments are included as standard benefits, then both cost and utilization of these services could increase substantially. We are unable to estimate the increase because the mandate would cover a number of conditions and the potential dental/orthodontic procedures or services are not specified and could range from simple dental visits to significant oral surgery.

- The current legislation poses two main challenges for insurers: (1) The vague language re: approximate the normal appearance of any abnormal structures caused by congenital defects, etc. exposes the insurers risk to paying for cosmetic surgery. As written there is little clarity re: what is/could be excluded as cosmetic surgery. (2) The noted additional congenital defects include disorders which are solely dental in nature; therefore there is little if any data available which could provide an estimate of utilization or projection of medical expense to model impact of the legislation on insurers. While there is direct reference to specific congenital anomalies, the inclusion of "trauma, tumors, infections or disease" will likely result in more potential cases than those individuals with congenital defects or developmental deformities. Based on the nature of the included congenital anomalies of teeth, we are concerned that these services would fall under 'oral surgery' which is currently an area with limited medical coverage.
- Cost and utilization of these services would potentially double if the mandate is passed.

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Other Items

The Survey asked the carriers to identify other areas of concern or potential costs of the proposed mandate. Below is a synopsis of the carrier responses:

Administrative concerns or other potential costs

- Because most dental or orthodontic services are not covered, carriers generally do not have the administrative expertise or a contracted network of providers for these services, which could limit the ability to manage costs and determination of medical necessity for these services.
- The range of dental costs could be significant as dental care is typically very different than medical care in the range of options open to the dentist in how to treat a clinical situation.
- There is concern that the bill language does not adequately define the exact scope and intent of this mandate, particularly as it relates to dental, orthodontia and cosmetic services that are not medically necessary to restore function, including language for coverage criteria (such as procedural and diagnosis codes), which could lead to health plans interpreting and administering the mandate differently.
- Administrative costs could increase in areas such as member services for pre-authorization, information technology systems, medical claims systems and customer service.
- Because self-insured accounts are not required to follow state mandates, this bill will create a situation where self-insured accounts are unlikely to accept this coverage, as it will increase their costs.
- Health plans have been required to keep rate increases as low as possible. Adding new mandates will make it very difficult to keep rate increases at a minimum.

The Survey also asked the carriers to identify potential benefits and/or savings of the proposed mandate. Here is a summary of the carrier responses:

Potential benefits or savings

- Four of the five carriers believe that there are little to no potential benefits or savings from the mandate. They responded as follows:
  - None.
  - We do not see any cost savings for large employers or small employers. While non-group purchasers may experience a decrease in out-of-pocket costs, this will be offset at least in part by the increase in premiums they will experience.
  - No potential benefits or specific savings that can be quantified.
  - The mandate does not provide any additional medically necessary coverage beyond our current benefit levels.

- One carrier believes that this mandate will provide access to additional services if insurance coverage becomes widely available for the services, but that some insured members may find that they no longer need certain other services they are currently receiving (e.g., behavioral health).

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Considerations and Limitations

- Data Verification (Claim and Exposure) – For our analysis, we relied on data and information described in this report without independent audit. Though we have reviewed the data for reasonableness and consistency, we have not audited or otherwise verified this data. It should also be noted that our review of data may not always reveal imperfections. We have assumed that the data and information is both accurate and complete. The results of our analysis are dependent on this assumption. If this data or information is inaccurate or incomplete, our findings and conclusions may need to be revised.

- Prospective Period Estimates – The prospective period estimates developed in this analysis are based on estimated costs and projected exposures. It should be noted that prospective period estimates are directly related to the projected exposures. Therefore, if actual exposures differ from the projection, prospective period estimates would need to be adjusted accordingly.

- Supplemental Data – Where certain data was either (i) not available, (ii) not appropriate or (iii) not sufficiently credible to develop our actuarial assumptions, we supplemented it with external information, as we deemed appropriate. Although we believe these external sources may be more predictive of future experience than any other data of which we are aware, the use of external data adds to the uncertainty associated with our projections.

- Exclusion of Other Costs – The scope of the project does not include the estimation of any costs other than those described herein.

- Rounding and Accuracy – Our models may retain more digits than those displayed. In addition, the results of certain calculations may be presented in the exhibits with more or less digits than would be considered significant. As a result, it should be recognized that (i) there may be rounding differences between the results of calculations presented in the exhibits and replications of those calculations based on displayed underlying amounts, and (ii) calculation results may not have been adjusted to reflect the precision of the calculation.

- Unanticipated Changes – Our conclusions are based on an analysis of the data and information described herein and on the estimation of the outcome of many contingent events. Future estimates were developed from the historical experience and covered

exposure, with adjustments for anticipated changes. Our estimates make no provision for extraordinary future emergence of new classes of costs or types of costs not sufficiently represented in historical databases or which are not yet quantifiable.

- Uncertainty Inherent in Projections – While this analysis complies with applicable Actuarial Standards of Practice, users of this analysis should recognize that our projections involve estimates of future events, and are subject to economic and statistical variations from expected values. We have not anticipated any extraordinary changes to the legal, social, or economic environment that might affect the frequency or severity of our estimates. For these reasons, no assurance can be given that the emergence of actual experience will correspond to the projections in this analysis.

- Opinions - The opinions expressed in this report are valid only for the purpose stated herein and as of the date of this report. No obligation is assumed to revise this report to reflect changes, events or conditions, which occur subsequent to the date hereof.

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Distribution and Use

- Usage and Responsibility of Client - This report was prepared for the sole use of the Division for the purposes outlined in this report. All decisions in connection with the implementation or use of advice or recommendations contained in this report are the sole responsibility of the Division.

Third Party Reliance and Due Diligence – Oliver Wyman's consent to any distribution of this report (whether herein or in the written agreement pursuant to which this report has been issued) to parties other than Division does not constitute advice by Oliver Wyman to any such third parties and shall be solely for informational purposes and not for purposes of reliance by any such third parties. Oliver Wyman assumes no liability related to third party use of this report or any actions taken or decisions made as a consequence of the results, advice or recommendations set forth herein. This report should not replace the due diligence on behalf of any such third party.

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Acknowledgment of Qualifications

This report was prepared by David Kerr, ASA, MAAA and Dianna Welch, FSA, MAAA. We are members of the American Academy of Actuaries and meet that body's Qualification Standards to render this report. We have utilized generally accepted actuarial methodologies and have complied with Actuarial Standards of Practice in preparing this report.

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Appendix A

HOUSE . . . . No. 00321

The Commonwealth of Massachusetts

PRESENTED BY:
John W. Scibak

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General
Court assembled:

The undersigned legislators and/or citizens respectfully petition for the passage of the accompanying bill:

An Act relative to insurance coverage for craniofacial disorders.

PETITION OF:

NAME:	DISTRICT/ADDRESS:
John W. Scibak	*2nd Hampshire*
Louis L. Kafka	*8th Norfolk*
Peter V. Kocot	*1st Hampshire*
James E. Timilty	*Bristol and Norfolk*
Cory Atkins	*14th Middlesex*
George T. Ross	*2nd Bristol*
David Paul Linsky	*5th Middlesex*
Stephen Kulik	*1st Franklin*
James Arciero	*2nd Middlesex*
Timothy R. Madden	*Barnstable, Dukes and Nantucket*
Kimberly N. Ferguson	*1st Worcester*
Geraldine M. Creedon	*11th Plymouth*

Thomas M. Stanley	*9th Middlesex*
Christine E. Canavan	*10th Plymouth*
Garrett J. Bradley	*3rd Plymouth*
James M. Cantwell	*4th Plymouth*
David M. Torrisi	*14th Essex*
Eileen M. Donoghue	*First Middlesex*
Denise Andrews	*2nd Franklin*

HOUSE . . . . No. 00321

By Mr. Scibak of South Hadley, a petition (accompanied by bill, House, No. 321) of John W. Scibak and others relative to insurance coverage for craniofacial disorders. Financial Services.

[SIMILAR MATTER FILED IN PREVIOUS SESSION
SEE
HOUSE
, NO. *01034* OF 2009-2010.]

The Commonwealth of Massachusetts

In the Year Two Thousand Eleven

An Act relative to insurance coverage for craniofacial disorders.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. Chapter 175 of the General Laws, as appearing in the 2006 Official Edition, is hereby amended by inserting after section 47U the following section:-

Section 47V. (a) Any individual policy of accident and sickness insurance pursuant to section one hundred and eight and any group blanket policy of accident and sickness insurance issued pursuant to section one hundred and ten shall provide coverage for medically necessary functional repair or restoration of craniofacial disorders to improve the function of, or to approximate the normal appearance of any abnormal structures

caused by congenital defects, developmental deformities, trauma, tumors, infections or disease. Coverage under this section shall include the necessary care and treatment of medically diagnosed congenital defects and birth abnormalities, including, but not limited to cleft lip, cleft palate, ectodermal dysplasia, dentinogenesis imperfect, amelogenesis imperfectal, and other maxillofacial abnormalities. Coverage shall not include cosmetic surgery or for dental or orthodontic treatment unrelated to congenital defects, developmental deformities, trauma, tumors, infections or disease. All coverage shall be subject to any deductible, cost-sharing, and policy or contract maximum provisions, provided that they are no more restrictive for such services than for any injury or sickness covered under the policy.

SECTION 2. Chapter 176A of the General Laws, as appearing in the 2006 Official Edition, is hereby amended by inserting after section 8AA the following section:-

Section 8BB. (a) Any contract between a subscriber and the corporation under an individual or group hospital service plan delivered, issued or renewed in the commonwealth shall provide, as benefits to all individual subscribers and members within the commonwealth and to all group members having a principal place of employment within the commonwealth, coverage for medically necessary functional repair or restoration of craniofacial disorders to improve the function of, or to approximate the normal appearance of any abnormal structures caused by congenital defects, developmental deformities, trauma, tumors, infections or disease. Coverage under this section shall include the necessary care and treatment of medically diagnosed congenital defects and birth abnormalities, including, but not limited to cleft lip, cleft palate, ectodermal dysplasia, dentinogenesis imperfect, amelogenesis imperfectal, and other maxillofacial abnormalities. Coverage shall not include cosmetic surgery or for dental or orthodontic treatment unrelated to congenital defects, developmental deformities, trauma, tumors, infections or disease. All coverage shall be subject to any deductible, cost-sharing, and policy or contract maximum provisions, provided that they are no more restrictive for such services than for any injury or sickness covered under the policy.

SECTION 3. Chapter 176B of the General Laws, as appearing in the 2006 Official Edition, is hereby amended by inserting after section 4Rthe following section:-

Section 4S. (a) Any subscription certificate under an individual or group medical service agreement delivered, issued or renewed in the commonwealth shall provide, as benefits to all individual subscribers and members within the commonwealth and to all group members having a principal place of employment within the commonwealth, coverage for medically necessary functional repair or restoration of craniofacial disorders to

improve the function of, or to approximate the normal appearance of any abnormal structures caused by congenital defects, developmental deformities, trauma, tumors, infections or disease. Coverage under this section shall include the necessary care and treatment of medically diagnosed congenital defects and birth abnormalities, including, but not limited to cleft lip, cleft palate, ectodermal dysplasia, dentinogenesis imperfect, amelogenesis imperfectal, and other maxillofacial abnormalities. Coverage shall not include cosmetic surgery or for dental or orthodontic treatment unrelated to congenital defects, developmental deformities, trauma, tumors, infections or disease. All coverage shall be subject to any deductible, cost-sharing, and policy or contract maximum provisions, provided that they are no more restrictive for such services than for any injury or sickness covered under the policy.

SECTION 4. Chapter 176G of the General Laws, as appearing in the 2006 Official Edition, is hereby amended by striking out section 4 and inserting in place thereof the following section:-

Section 4. A health maintenance contract shall provide coverage for:

(a) pregnant women, infants and children as set forth in section 47C of chapter 175;

(b) cardiac rehabilitation as set forth in section 47D of chapter 175;

(c) prenatal care, childbirth and postpartum care as set forth in section 47F of chapter 175;

(d) cytologic screening and mammographic examination as set forth in section 47G of chapter 175;

(e) diagnosis and treatment of infertility as set forth in section 47H of chapter 175;

(f) services rendered by a certified registered nurse anesthetist or nurse practitioner as set forth in section 47Q of chapter 175, subject to the terms of a negotiated agreement between the health maintenance organization and the provider of health care services as set forth in section 47V of chapter 175; and

(g) medically necessary functional repair or restoration of craniofacial disorders to improve the function of, or to approximate the normal appearance of any abnormal structures caused by congenital defects, developmental deformities, trauma, tumors, infections or disease.

The dependent coverage of any such policy shall also provide coverage for medically necessary early intervention services delivered by certified early intervention specialists, as defined in the early intervention operational standards by the department of public health and in accordance with applicable certification requirements. Such medically necessary services shall be provided by early intervention specialists who are working in early intervention programs certified by the department of public health, as provided in sections 1 and 2 of chapter 111G, for children from birth until their third birthday. Reimbursement of costs for such services shall be part of a basic benefits package offered by the insurer or a third party, with a maximum benefit of $5,200 per year per child and an aggregate benefit of $15,600 over the total enrollment period.

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Appendix B

Carriers that provided Survey responses

Blue Cross Blue Shield of Massachusetts

Fallon Community Health Plan

Harvard Pilgrim Health Care

Neighborhood Health Plan

Tufts Health Plan

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Appendix C

Common congenital disorders that could affect the dentition[22]

Condition	Frequency
Klinefelter's Syndrome (47, XXY)	0.200%
47, XXX	0.200%
47, XYY	0.200%
Cleft lip/palate	0.054% - 0.167%
Amelogenesis Imperfecta	0.139%
Down's Syndrome (Trisomy 21)	0.125%
Ectodermal Dysplasia	0.070%
Turner's Syndrome (45, X) - females	0.040%
Velocardiofacial Syndrome Chromosome 22 (22q11)	0.025%
Edward's Syndrome (Trisomy 13)	0.017%
Dentinogenesis Imperfecta	0.013%
Patau Syndrome (Trisomy 18)	0.010%
Stickler Syndrome	0.010%
Smith-Lem Li Opitz Syndrome	0.005%
Crouzon Syndrome	0.004%
Branchio-Oto-Renal Dysplasia	0.003%
Treacher-Collins Syndrome or Mandibulofacial Dysostosis	0.002%
Nevoid Basal Cell Carcinoma Syndrome - PTCH gene mutation	0.002%
Total	**1.12% - 1.23%**

[22] Congenital Diseases and a New York State Regulation, NYSDJ June/July 2007.

www.eperiodr.com/congenitaldisease.pdf

Craniofacial diseases and disorders relevant to oral health[23]

Disease/Condition/Injury		Frequency
Symptoms of the head and neck		0.715%
Injury		0.120%
Diseases of the tooth and gum		0.118%
Diabetes-related		0.087%
Herpes		0.059%
Other diagnosis of the jaw, salivary glands and soft tissue		0.054%
Malignant neoplasms		0.048%
Candidiasis of the mouth		0.045%
Dysphasia		0.037%
Congenital anomalies		0.036%
Selected viral-related and chlamydiae		0.012%
Benign neoplasms		0.011%
Endocarditis		0.011%
Other		0.032%
	Total	**1.383%**

[23] Costs of Medically Treated Craniofacial Conditions, Public Health Reports, January-February 2003, Volume 118.

www.publichealthreports.org/issueopen.cfm?articleID=1236

Oliver Wyman
Three Logan Square
1717 Arch Street, Suite 1100
Philadelphia, PA 19103
1 215 864 3616

MARSH & McLENNAN
COMPANIES