



2015

Actuarial Report for the Bermuda Health Council

2015 Actuarial Report for the Bermuda Health Council

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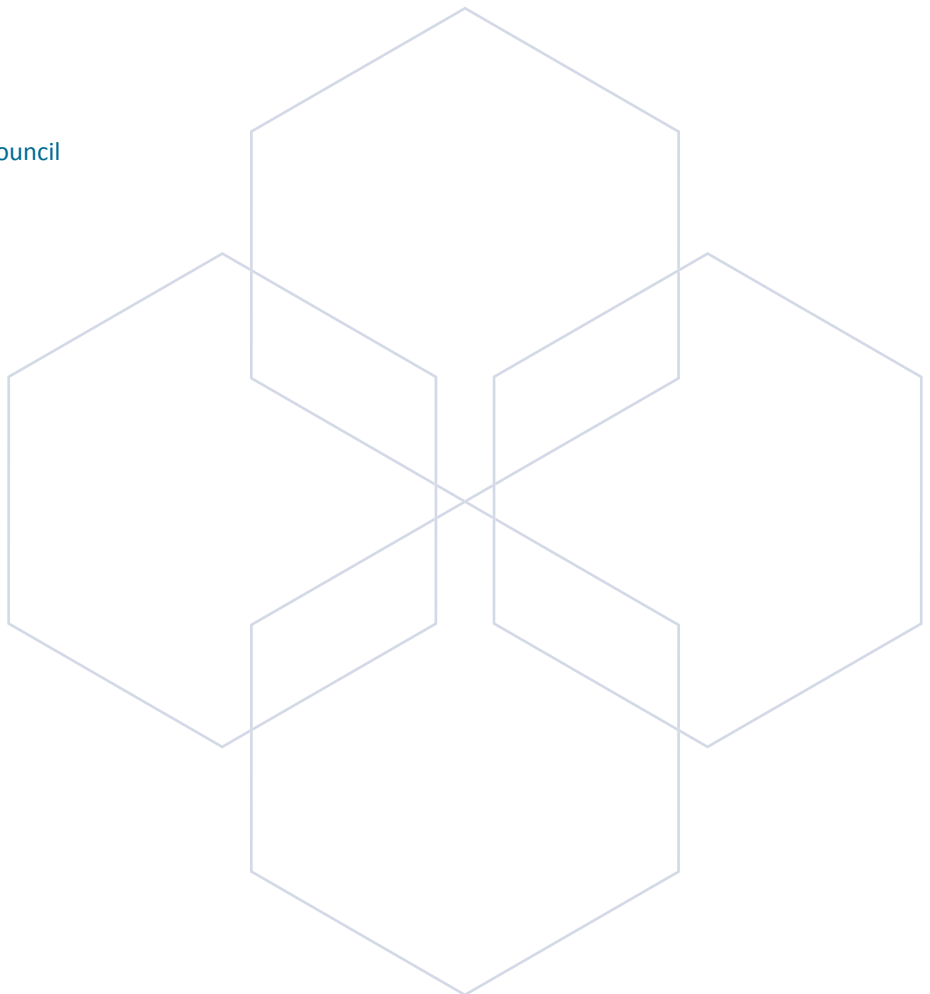
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Abridged Version

2015 Actuarial Report for the Bermuda Health Council

- The Standard Health Benefit (SHB)
- The Mutual Reinsurance Fund (MRF)

March 2016

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Introduction

Morneau Shepell has been engaged by the Bermuda Health Council (Health Council) and we are pleased to present our report on the Fiscal 2015 review (i.e. the period April 1, 2014 to March 31, 2015) of the following programs:

- > the Standard Health Benefit (SHB), and
- > the Mutual Reinsurance Fund (MRF).

The purpose of this report is:

- > to review the statistical and claims information submitted by the insurance companies and approved schemes, as it relates to the SHB
- > to comment on trends over the Fiscal 2014 / Fiscal 2015 period
- > to recommend premium rates that are to take effect in Fiscal 2017
- > to analyze any changes in SHB and MRF benefit provisions that are under consideration

In preparing this report we relied on the documentation and information provided to us by the Health Council.

Section A – Summary & Premium Recommendation

A summary of Fiscal 2015 and Fiscal 2014 insured headcount, claims and costs per-capita is tabled below:

A.1. : Standard Health Benefit Insured Headcount

| | Fiscal 2015 | Fiscal 2014 | % Change |
|-------------|-------------|---------------------|----------|
| Grand Total | 47,854 | 48,089 ¹ | -0.5% |

A.2. : Standard Health Benefit Claims Data

| Claim Amounts (in \$ '000s) | Local | | | Overseas | | Overall | |
|--------------------------------|------------|-------------|-----------|------------|-------------|----------|-----------|
| | In-Patient | Out-Patient | Total | In-Patient | Out-Patient | Total | Total |
| Fiscal 2014 | \$38,864 | \$82,218 | \$121,082 | \$13,755 | \$24,271 | \$38,025 | \$159,107 |
| Fiscal 2015 | \$47,493 | \$98,530 | \$146,023 | N/A | N/A | N/A | \$146,023 |
| Increase | 22% | 20% | 21% | N/A | N/A | N/A | N/A |

Effective Fiscal 2015, the following changes under the SHB were effected:

- The local government claims subsidy changed to 70% for persons between age 65 and 74 and to 80% for persons age 75 and over (previously the government subsidy was 80% and 90% respectively) – this gives rise to an increase in the claim amounts tabled above
- The SHB excluded portability (i.e. off-island care) – hence there are no overseas claim amounts tabled above for Fiscal 2015
- The benefits paid under the MRF were transferred to SHB becoming payable by the insurers – this gives rise to an increase in the claim amounts tabled above

¹ This is revised from 48,580 as previously reported.

A.3. : Standard Health Benefit Cost per-capita and Loss Ratios

| Fiscal 2015 | | Fiscal 2014 | | Cost Per-Capita Increase |
|-----------------------|------------|-----------------------|------------------|--------------------------|
| Local Cost Per-Capita | Loss Ratio | Local Cost Per-Capita | Loss Ratio | |
| \$254 | 93% | \$210 | 94% ² | 21% |

A.4. : Standard Premium Recommendation (including the MRF)

| | Inc. % | Standard Health Benefit | Mutual Reins. Fund | Total |
|---|--------|-------------------------|--------------------|-----------------|
| Fiscal 2016 Premium | | \$274.33 | \$63.74 | \$338.07 |
| 1. Increase in BHB Fees | 0.0% | \$0.00 | \$0.00 | \$0.00 |
| 2. Local Change in Utilization / Inflation / Services | (4.0%) | (\$10.91) | \$0.00 | (\$10.91) |
| 3. Future Changes in Benefit Provisions | 1.4% | \$3.93 | \$0.00 | \$3.93 |
| 4. Future Changes in MRF Transfers | 11.0% | \$0.00 | \$6.98 | \$6.98 |
| Recommended Fiscal 2017 SPR | | \$267.35* | \$70.72 | \$338.07 |
| % Change in Premium | | (2.5%) | 11.0% | 0.00% |
| \$ Change in Premium | | (\$6.98) | \$6.98 | \$0.00 |

* The multiplier for those over age 65 and not eligible for the government subsidy is 4 times the Standard Premium Rate.

² The loss-ratio for Fiscal 2014 includes the claims in respect of portability. Due to the insurers' overestimation of the outstanding claims for the Fiscal 2014 period, and a revision to the headcount, the loss ratio is revised to 94% compared with 97% as previously reported.

Please refer to the sections that follow for notes on the above recommendation.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "H. Cimring". The signature is fluid and cursive, with a large loop at the end.

Howard Cimring, FFA, FCIA

Partner

MORNEAU SHEPELL

March, 2016

Section B – The Standard Health Benefit

B.1. : Introduction

The Standard Health Benefit (SHB), as defined by the Health Insurance (Standard Health Benefit) Regulations 1971, consists of inpatient, outpatient, home medical services and other benefits. The SHB is the minimum package of benefits which must be provided within any health insurance policy sold in Bermuda, including each employer sponsored or health insurance provider's health plan. Further, it is compulsory for each employed (including self-employed) person to have health insurance.

A Standard Premium Rate (SPR) for the Standard Health Benefits is determined annually by the Ministry of Health, Seniors and Environment, after taking advice from the Bermuda Health Council which commissions an actuarial review for the SPR. The SPR is the ceiling rate that can be charged to insured persons for the Standard Health Benefits. A health insurance provider cannot charge more than the SPR for the Standard Health Benefits. An employee cannot be required to pay more than half of the SPR for SHB coverage. The SPR allows all insured persons to access the same basic level of SHB health insurance coverage for the same price regardless of their health status.

The SPR is set with reference to the claims experience of all the insured participants. As such, the claims experience (in respect of the SHB component only) across all the health insurance providers is pooled together and a single premium rate reflective of the pooled experience is determined.

B.2. : Fiscal 2015 Claims and Statistical Data

We have analyzed the Fiscal 2015 and Fiscal 2014 insurance company and approved scheme³ submissions to the Health Council. A summary of certain data elements and our analysis is tabled below:

Table 1: Headcount

| | Average Headcount ⁴ | | | | |
|--------------------|--------------------------------|-------------|---------------|-------------|--------------|
| | 2015 | % Total | 2014 | % Total | % Change |
| Private Plans | 33,180 | 70% | 33,753* | 70% | -2% |
| Government Plans | 14,674 | 30% | 14,336 | 30% | 2% |
| Grand Total | 47,854 | 100% | 48,089 | 100% | -0.5% |

* revised from that previously reported

In Fiscal 2015, there were five insurers and three approved schemes. In Fiscal 2015, 39% of the insured population was aged 55 and over (compares with 38% in Fiscal 2014). The estimated average age of the insured population in Fiscal 2015 is 51.0 years old (a 0.3 year increase over Fiscal 2014).

The claims are summarized below:

Table 2: Claim Amounts

| (in \$ '000s) | Local | | | Overseas | | Overall | |
|---------------|------------|-------------|-----------|------------|-------------|----------|-----------|
| | In-Patient | Out-Patient | Total | In-Patient | Out-Patient | Total | Total |
| Fiscal 2014 | \$38,864 | \$82,218 | \$121,082 | \$13,755 | \$24,271 | \$38,025 | \$159,107 |
| Fiscal 2015 | \$47,493 | \$98,530 | \$146,023 | N/A | N/A | N/A | \$146,023 |
| Increase | 22% | 20% | 21% | N/A | N/A | N/A | N/A |

³ An approved scheme is a scheme established by an employer to cover its employees and retirees.

⁴ These figures represent SHB insured persons only (not including the youth that are 100% subsidized by government) and do not represent the total number of lives that are insured.

Effective the beginning of Fiscal 2015 the following changes to the SHB were effected:

- The local government claims subsidy⁵ changed to 70% for persons between age 65 and 74 and to 80% for persons age 75 and over (previously the government subsidy was 80% and 90% respectively) – this gives rise to an increase in the claim amounts tabled above
- The SHB excluded portability (i.e. off-island care) – hence there are no overseas claim amounts tabled above for Fiscal 2015
- The benefits paid under the MRF were transferred to SHB becoming payable by the insurers – this gives rise to an increase in the claim amounts tabled above

The cost per-capita and loss ratios for Fiscal 2015 and Fiscal 2014 are tabled below:

Table 3: Cost Per-Capita and Loss Ratio

| | Fiscal 2015 | | Fiscal 2014 | | Cost Per-Capita Increase |
|------------------|-----------------------|------------|-----------------------|-------------------------|--------------------------|
| | Local Cost Per-Capita | Loss Ratio | Local Cost Per-Capita | Loss Ratio ⁶ | |
| Private Plans | \$219 | 80% | \$204 | 93% | 7% |
| Government Plans | \$334 | 122% | \$224 | 97% | 49% |
| Total | \$254 | 93% | \$210 | 94% | 21% |

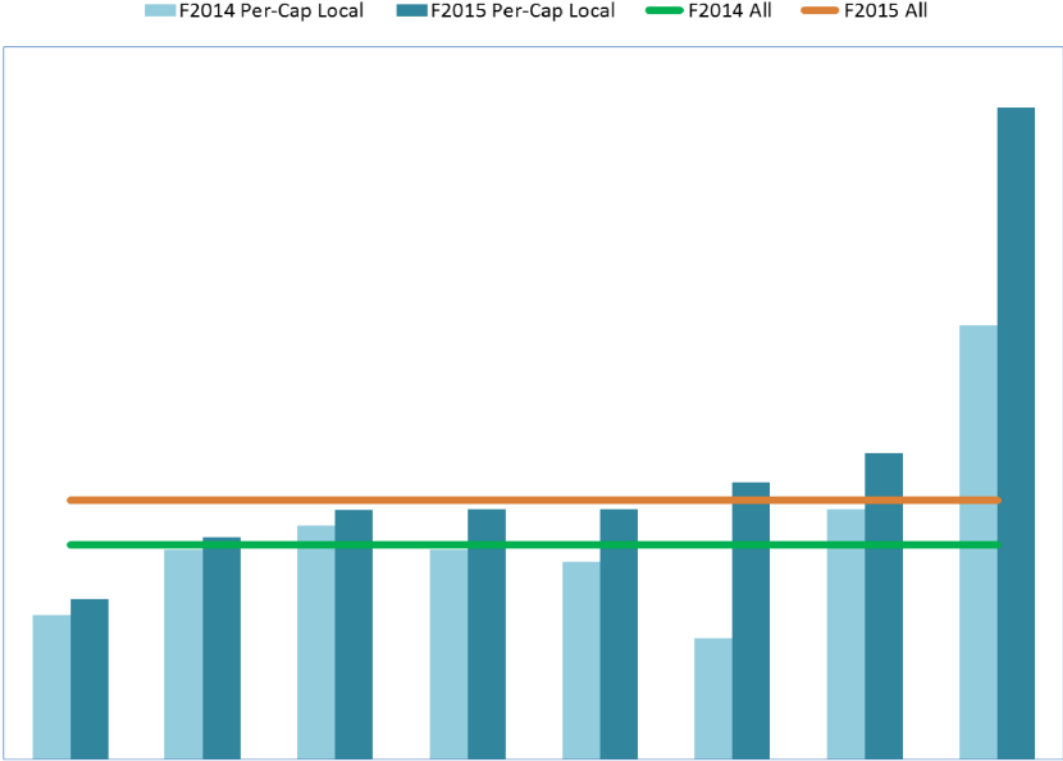
The Fiscal 2015 loss ratio is based on a Standard Premium Rate of \$272.67.

The following chart illustrates the variation in the local costs per-capita by insurer / approved scheme, as well as the comparison to the overall cost-per capita. The omission of data points on the charts is deliberate.

⁵ For those that are age 65 and over, if they satisfy a 10 year residency requirement, the government provides a subsidy for claims under the SHB.

⁶ The loss-ratio for Fiscal 2014 includes the claims in respect of portability. Due to the insurers' overestimation of the outstanding claims for the Fiscal 2014 period, and a revision to the headcount, the total loss ratio is revised to 94% compared with 97% as previously reported.

Chart 1 – Local Costs Per-Capita (by Insurer)



The data supplied by insurers and approved schemes also includes claims data grouped into various age bands. The data has been analyzed and the charts in Appendix 1 present the average per-capita claims by age band. As expected, the charts show an increasing cost per-capita leading up to age 65 (i.e. healthcare costs on average increase with age). At age 65 a decline is expected due to the government subsidy. The increase in the post age 65 Fiscal 2015 costs per-capita is due to the revision in the government subsidy.

We have also analyzed In-Patient data supplied by the Bermuda Hospitals Board and In-Patient and Out-Patient data supplied by the insurers. The results of this analysis can be found in Appendix 2 and Appendix 3.

B.3. : The Standard Premium Rate History

The history of the SPR is as follows:

Table 4: SPR and Loss Ratio History

| | Standard Premium Rate | % Change | Loss Ratio* |
|-------------|------------------------------|-----------------|----------------------------|
| Fiscal 2007 | \$140.92 | 17.9% | 93% |
| Fiscal 2008 | \$152.59 | 8.3% | 100% |
| Fiscal 2009 | \$164.37 | 7.7% | 109% |
| Fiscal 2010 | \$184.01 | 11.9% | 112% |
| Fiscal 2011 | \$209.63 | 13.9% | 108% |
| Fiscal 2012 | \$225.46 | 7.6% | 106% (revised) |
| Fiscal 2013 | \$236.73 | 5.0% | 105% |
| Fiscal 2014 | \$282.27 | 19.2% | 94% (revised) |
| Fiscal 2015 | \$272.67 | (3.4%) | 93% |
| Fiscal 2016 | \$274.33 | 0.6% | To be determined next year |

* based on a comparison of the SPR to the determined claims cost per-capita

B.5. : The Standard Premium Rate Recommendation

The recommendation for the Fiscal 2017 Standard Premium Rate is as follows:

Table 5: Standard Premium Rate Recommendation

| | Increase % | |
|---|-------------------|-----------------|
| Fiscal 2016 SPR | | \$274.33 |
| 1. Increase in BHB Fees (adjustment to Fee Schedule) | 0.00% | \$0.00 |
| 2. Allowance for Change in Local Utilization / Inflation / Services | (4.0%) | (\$10.91) |
| 3. Changes in Benefit Provisions | | |
| a) Provision for a single BHB Ward Rate | 1.3% | \$3.45 |
| b) Inclusion of coverage for a Zio Patch | Negligible | Negligible |
| c) Inclusion of coverage for Peripheral Artery Disease Services | 0.02% | \$0.05 |
| d) Inclusion of coverage for High Risk Foot Podiatry | 0.04% | \$0.10 |
| e) Inclusion of coverage for a Plasma Exchange | 0.12% | \$0.33 |
| Recommended Fiscal 2017 SPR | | \$267.35 |
| % Change in SPR | | (2.5%) |
| \$ Change in SPR | | (\$6.98) |

Notes

- The decision to maintain prior year rates for BHB fees was determined by collaboration between BHB and other stakeholders with the support of the Ministry of Health, Seniors and Environment.
- Over recent fiscal periods, utilization of services has declined and the loss ratios under the SHB have been less than 100%. In order to level set the SPR to a revised baseline, the allowance for utilization has been revised by (4%) which captures the recent improvements and assumes stability over the Fiscal 2017 period. This item will be monitored and if increased utilization were to materialize, the Fiscal 2017 loss ratio will be higher than would otherwise have been the case.
- We understand that with effect from Fiscal Year 2017, there are a number of changes to the SHB benefit provisions as follows:

- a) The BHB ward rates are to be harmonized to a single rate of \$1,350 per diem. Previously the rates varied by general, semi-private, and private wards. The harmonized rate increases the SPR by \$3.45 (also see the notes under the MRF premium recommendation).
- b) Various additional coverages are to be added to the SHB:
- Zio Patch – Use of a chest-attached device to do monitoring of heartbeat for more accurate diagnosis of heart conditions. It is similar to the Holter Monitor but has been shown to provide more comprehensive diagnostics.
 - Peripheral Artery Disease – Development of a center to conduct early diagnosis of peripheral artery using Arterial Brachial Indexing and ultrasound.
 - High Risk Foot Podiatry – Providing care primarily focused on complex patients at risk for lower limb amputation due to peripheral disease and/or non-healing wounds.
 - Plasma Exchange – Conducting services for Therapeutic Apheresis. This is the process of extracting plasma from patients in the midst of acute exacerbation events (e.g., Multiple Sclerosis) and replacing that plasma with donor plasma or plasma substitutes.

The total addition to the SPR of these coverages is \$0.48.

4. We recommend maintaining the multiplier at 4 times the SPR for those over age 65 and not eligible for the government subsidy (to be eligible for the government subsidy one has to have been resident for a continuous period of not less than 10 years during the period of 20 years immediately preceding the application for payment of the subsidy). The cost (without subsidies) for persons aged 65 and over is estimated to be approximately four times the population as a whole (and the SPR is representative of the cost of the population as a whole).

Section C – Mutual Reinsurance Fund

C.1. : Introduction

The Mutual Reinsurance Fund (MRF) is funded by a premium which is added onto each health insurance contract. The insurance providers collect a premium from each insured participant and deposit this premium with the MRF. The determination of the premium rate of the MRF rests with the Ministry of Health, Seniors and Environment.

The MRF serves the following purposes:

- a) it may act as a catastrophic fund⁷ to cover certain high dollar value claims which are included as benefits under the SHB or allow the introduction and assessment of new and experimental treatments and programs which have no prior established actuarial experience or pricing model,
- b) it transfers funds to the following:
 - the Health Insurance Department of the Ministry of Health, Seniors and Environment to sustain HID's role as insurer of last resort⁸ and to support the various healthcare programs (e.g. the Enhanced Care Pilot Program) maintained by HID,
 - the Health Council so that it may continue to fulfill its mandate as it relates to the oversight of insurers, healthcare providers, the SHB, MRF and other initiatives,
 - to the BHB related to care services, and
 - with effect from Fiscal 2017, to the Consolidated Fund in respect of subsidy payments.

⁷ Although it does not currently function in this capacity, it has in the past and may possibly function in this capacity again in the future.

⁸ HID accepts high-cost participants and has open enrollment policies which impose no terms of underwriting or exclusion of pre-existing conditions.

The history of the MRF Premium is as follows:

Table 6: Premium History

| | MRF Premium Rate | % Change |
|-------------|-------------------------|----------------------|
| Fiscal 2009 | \$22.84 | 7.5% |
| Fiscal 2010 | \$24.43 | 7.0% |
| Fiscal 2011 | \$26.51 | 8.5% |
| Fiscal 2012 | \$26.81 | 1.1% |
| Fiscal 2013 | \$34.88 | 30.1% |
| Fiscal 2014 | \$43.57 | 24.9% |
| Fiscal 2015 | \$29.18 | (33.0%) ⁹ |
| Fiscal 2016 | \$63.74 | 118.4% |

⁹ With effect from Fiscal 2015, various claims covered by the MRF were transferred to SHB, becoming payable by the insurers.

C.3. : The Mutual Reinsurance Fund Premium Recommendation

The recommendation for the Fiscal 2017 MRF Premium is as follows:

Table 7: MRF Premium Recommendation

| | Increase % | |
|--|------------|----------------|
| Fiscal 2016 MRF Premium | | \$63.74 |
| Revision to Transfers | | |
| a) Increase transfer to the Health Council | 0.1% | \$0.09 |
| b) Increase transfer to HID | 10.4% | \$6.60 |
| c) Reduce the BHB transfer (due to Ward Rates) | (11.4%) | (\$7.24) |
| d) Transfer to offset additional costs incurred by Government's Consolidated Fund in respect of subsidy payments | 11.8% | \$7.53 |
| Recommended Fiscal 2017 MRF Premium | | \$70.72 |
| % Change in MRF Premium | | 11.0% |
| \$ Change in MRF Premium | | \$6.98 |

Notes

1. With respect to the transfers:
 - a) The transfer to the Health Council will increase by \$0.09 (from \$1.00 to \$1.09 per month for each insured person).
 - b) As a result of the additional risk and claims that are absorbed by the Health Insurance Plan¹⁰, the transfer to HIP will increase by \$6.60 (from \$18.40 to \$25.00 per month for each insured person).

¹⁰ HIP acts as an insurer of last resort with open enrollment policies that lead to the attraction of high-cost participants.

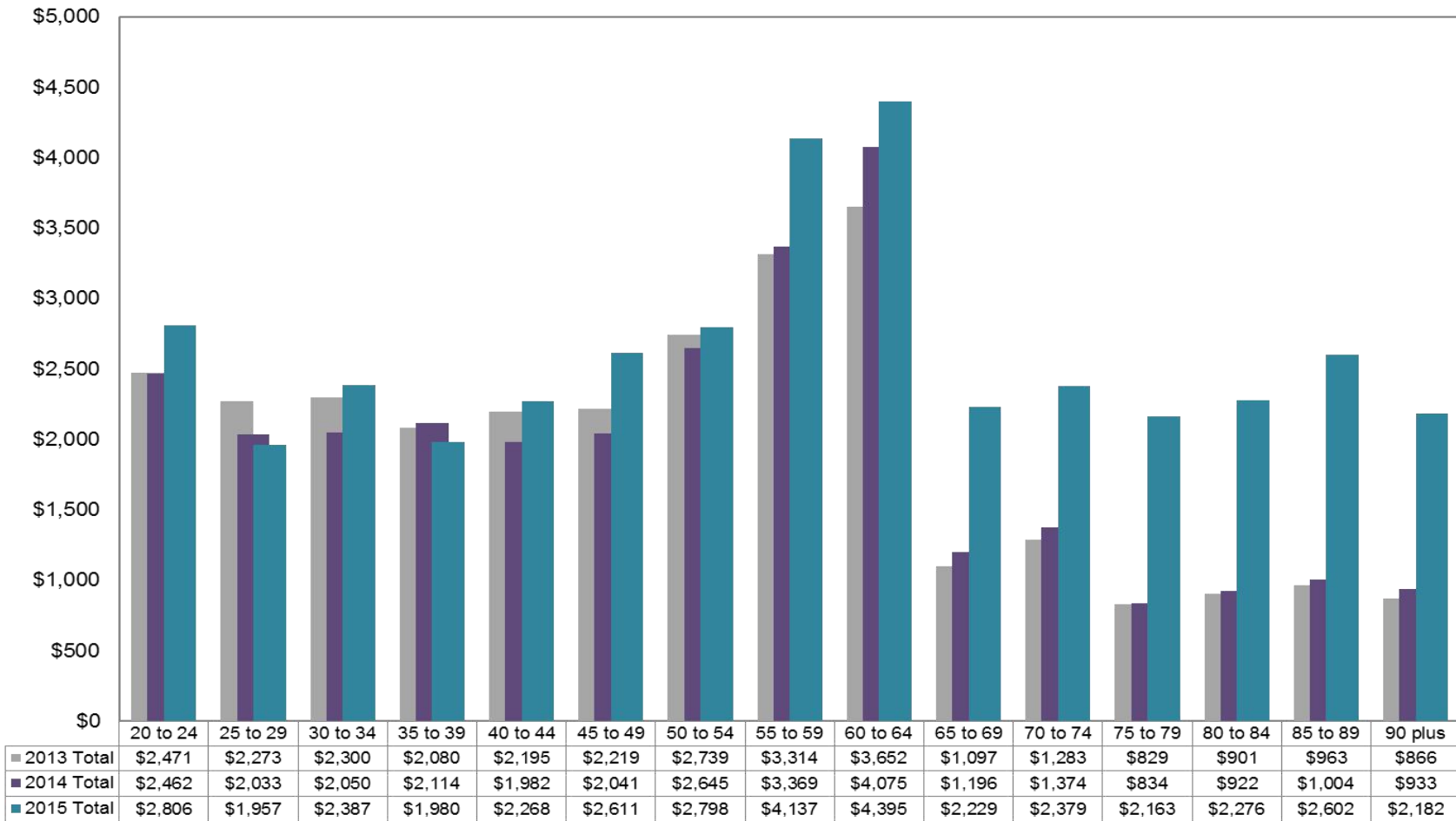
- c) In Fiscal 2016, a transfer to the BHB was initiated, part of which was to fund for the cost of an in-patient stay in the Acute Care Wing at the semi-private ward rate. With effect from Fiscal 2017, the BHB ward rates will be harmonized to a single rate of \$1,350 per diem (which is approximately the same per-diem rate as the current semi-private ward per-diem rate). As such, the funding previously provided from the MRF will be replaced by claims paid by the insurers and approved schemes (and by government subsidy). This gives rise to a decline in the MRF transfer rate of \$7.24 per month for each insured person.
- d) The transfer from the MRF is increased to provide funding to government to support increased subsidy expenditure and to cover the new items that, from Fiscal 2017, will be payable by subsidy due to the various changes under the SHB (e.g. the harmonized BHB ward rate, and the government subsidy on the new SHB coverages - see the notes under the SPR premium recommendation).
2. The Fiscal 2017 MRF funding allocations are summarized as follows:

Table 8: Fiscal 2017 MRF Funding Allocations

| | Funding Rate (per month per member) |
|--------------------------------|--|
| FutureCare | \$14.00 |
| Health Insurance Plan | \$25.00 |
| Bermuda Health Council | \$1.09 |
| Enhanced Care Pilot Program | \$6.19 |
| Bermuda Hospitals Board | \$16.40 |
| Government's Consolidated Fund | \$7.53 |
| Operational and Administrative | \$0.51 |
| Total | \$70.72 |

Appendix 1 – Standard Health Benefits (Total Annual Per-Capita Claim Costs – Local Claims)

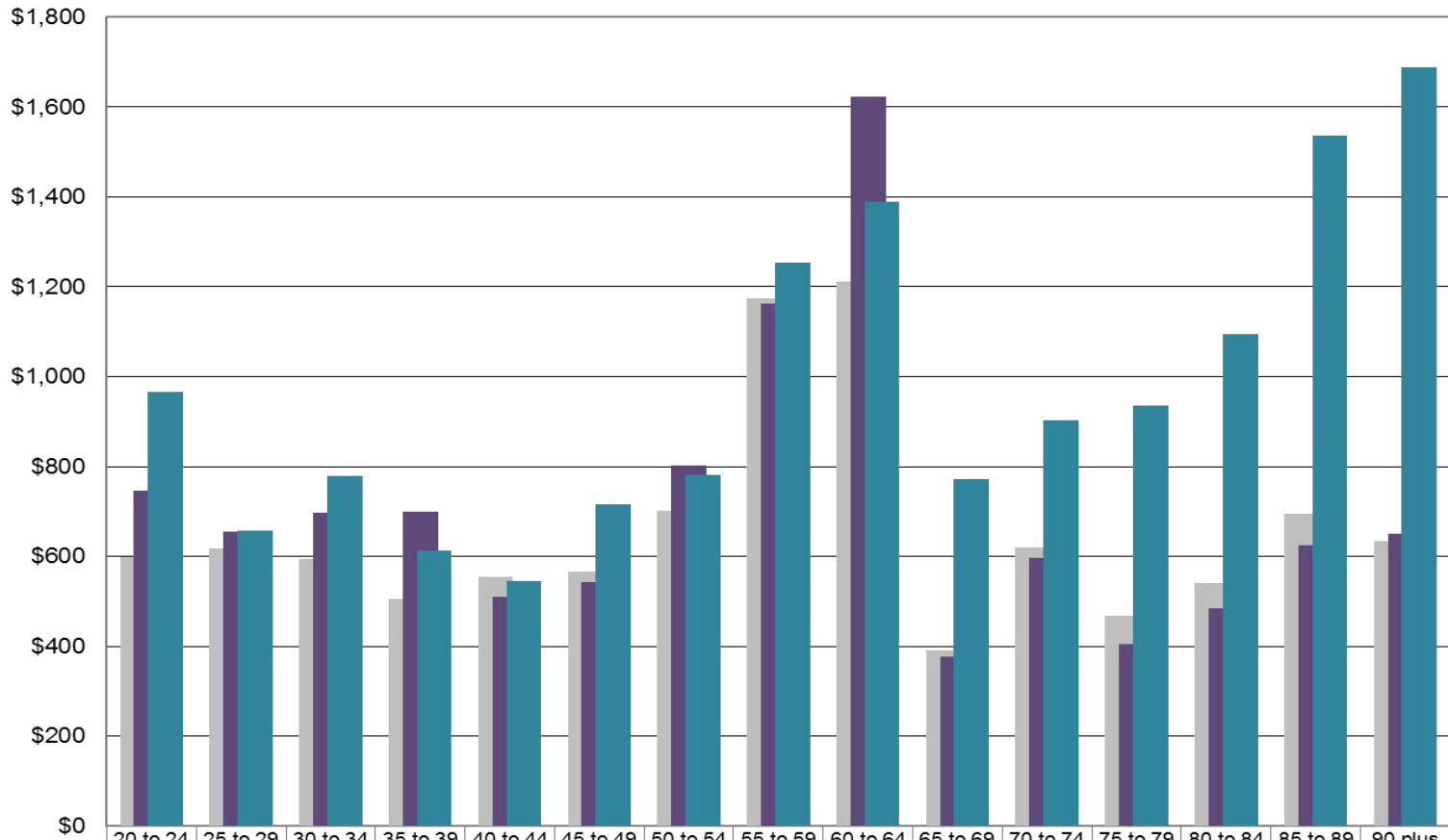
Per-Capita Claims



The decline in the cost per-capita at age 65 is due to the government subsidy.

Appendix 1a – Standard Health Benefits (Bermuda In-Patient Annual Per-Capita Claim Costs)

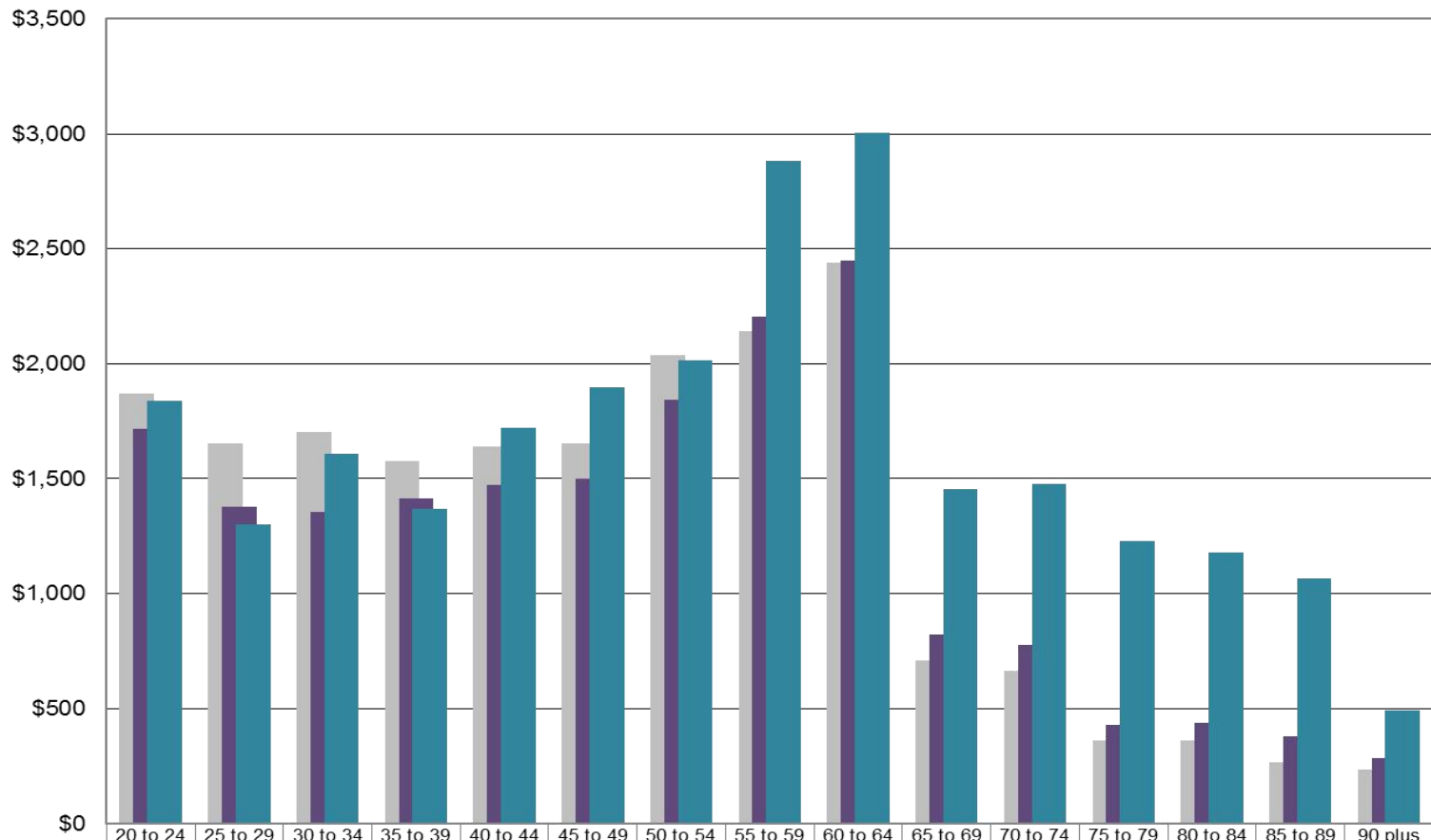
Per-Capita Claims



| | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 to 44 | 45 to 49 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 to 79 | 80 to 84 | 85 to 89 | 90 plus |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------|
| ■ 2013 Bermuda Inpatient | \$599 | \$619 | \$595 | \$504 | \$556 | \$565 | \$703 | \$1,174 | \$1,211 | \$390 | \$619 | \$467 | \$539 | \$696 | \$634 |
| ■ 2014 Bermuda Inpatient | \$747 | \$654 | \$696 | \$700 | \$509 | \$542 | \$802 | \$1,163 | \$1,624 | \$376 | \$597 | \$405 | \$484 | \$625 | \$650 |
| ■ 2015 Bermuda Inpatient | \$966 | \$658 | \$779 | \$612 | \$546 | \$715 | \$781 | \$1,253 | \$1,390 | \$773 | \$903 | \$935 | \$1,096 | \$1,537 | \$1,689 |

Appendix 1b – Standard Health Benefits (Bermuda Out-Patient Annual Per-Capita Claim Costs)

Per-Capita Claims



| | | | | | | | | | | | | | | | |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| 2013 Bermuda Outpatient | \$1,872 | \$1,654 | \$1,705 | \$1,576 | \$1,639 | \$1,654 | \$2,036 | \$2,140 | \$2,442 | \$707 | \$664 | \$362 | \$361 | \$267 | \$232 |
| 2014 Bermuda Outpatient | \$1,716 | \$1,379 | \$1,354 | \$1,414 | \$1,473 | \$1,499 | \$1,843 | \$2,206 | \$2,451 | \$820 | \$777 | \$429 | \$438 | \$380 | \$283 |
| 2015 Bermuda Outpatient | \$1,840 | \$1,300 | \$1,608 | \$1,368 | \$1,722 | \$1,896 | \$2,016 | \$2,884 | \$3,005 | \$1,456 | \$1,477 | \$1,228 | \$1,181 | \$1,065 | \$493 |

Appendix 2 – Bermuda Hospitals Board In-Patient Analysis - Admissions by Age

| Age | Fiscal 2015 | | | | Fiscal 2014 | | | |
|-------|----------------------|-------------------------|-----------------|-----------------|----------------------|-------------------------|-----------------|-----------------|
| | Number of Admissions | Total DRG Fee (in '000) | % of Admissions | % of Total Cost | Number of Admissions | Total DRG Fee (in '000) | % of Admissions | % of Total Cost |
| <5 | 830 | \$4,690 | 15% | 10% | 876 | \$5,012 | 15% | 10% |
| 5-14 | 115 | \$762 | 2% | 2% | 141 | \$876 | 2% | 2% |
| 15-24 | 270 | \$2,109 | 5% | 4% | 311 | \$2,483 | 5% | 5% |
| 25-34 | 645 | \$4,711 | 11% | 10% | 721 | \$4,870 | 12% | 10% |
| 35-44 | 553 | \$4,226 | 10% | 9% | 612 | \$4,628 | 10% | 9% |
| 45-54 | 571 | \$5,129 | 10% | 11% | 614 | \$5,746 | 10% | 12% |
| 55-64 | 710 | \$7,061 | 13% | 15% | 773 | \$7,777 | 13% | 16% |
| 65-74 | 799 | \$7,922 | 14% | 17% | 712 | \$7,094 | 12% | 14% |
| 75-84 | 701 | \$6,847 | 12% | 14% | 698 | \$6,746 | 12% | 14% |
| 85-95 | 400 | \$3,592 | 7% | 8% | 397 | \$3,528 | 7% | 7% |
| >95 | 38 | \$407 | 1% | 1% | 28 | \$260 | 0% | 1% |
| Total | 5,632 | \$47,455 | 100% | 100% | 5,883 | \$49,019 | 100% | 100% |

Data Source : BHB

Notes

1. The total fees are the DRG charge only (prior to subsidy) and do not include the per-diem fee or any other fee charged for in-patient services.
2. The number of admissions in Fiscal 2015 has declined by 4.3% (the being due to declines in the under age 65 admissions).
3. The under 5 age group is mostly comprised of newborns.
4. The percentage of cost related to those age 65 and over is 40% in Fiscal 2015 (which is a 4% increase over Fiscal 2014).
5. In Fiscal 2015 the decrease/increase in the total cost for admissions for those under age 65/age 65 and over, is -9%/6% respectively.

Appendix 2a - Admissions by Major Diagnostic Categories

| Major Diagnostic Category (sorted by F2015 Fee) | Fiscal 2015 | | | | Fiscal 2014 | | |
|--|----------------------|----------------------|-------------------------|-----------------|----------------------|-------------------------|-----------------|
| | Number of Admissions | Change in Admissions | Total DRG Fee (in '000) | % of Total Cost | Number of Admissions | Total DRG Fee (in '000) | % of Total Cost |
| Musculoskeletal System And Connective Tissue | 674 | -13% | \$8,234 | 17% | 774 | \$9,241 | 19% |
| Digestive System | 531 | -3% | \$5,359 | 11% | 545 | \$5,616 | 11% |
| Circulatory System | 627 | -8% | \$5,217 | 11% | 682 | \$5,486 | 11% |
| Respiratory System | 556 | 4% | \$4,498 | 9% | 533 | \$4,308 | 9% |
| Pregnancy, Childbirth And Puerperium | 663 | -9% | \$3,374 | 7% | 732 | \$3,695 | 8% |
| Newborn And Other Neonates (Perinatal Period) | 585 | -9% | \$3,285 | 7% | 640 | \$3,616 | 7% |
| Nervous System | 365 | 0% | \$2,910 | 6% | 364 | \$2,892 | 6% |
| Infectious and Parasitic DDs | 200 | 46% | \$2,449 | 5% | 137 | \$1,720 | 4% |
| Hepatobiliary System And Pancreas | 216 | 18% | \$2,111 | 4% | 183 | \$1,686 | 3% |
| Kidney And Urinary Tract | 240 | 2% | \$1,738 | 4% | 235 | \$1,809 | 4% |
| Skin, Subcutaneous Tissue And Breast | 169 | -11% | \$1,250 | 3% | 189 | \$1,468 | 3% |
| Ear, Nose, Mouth And Throat | 173 | -3% | \$1,124 | 2% | 179 | \$1,225 | 2% |
| Endocrine, Nutritional And Metabolic System | 131 | -23% | \$860 | 2% | 171 | \$1,124 | 2% |
| Blood / Forming Organs and Immunological Disorders | 114 | 14% | \$815 | 2% | 100 | \$746 | 2% |
| Female Reproductive System | 106 | 1% | \$806 | 2% | 105 | \$783 | 2% |
| Multiple Significant Trauma | 31 | 24% | \$758 | 2% | 25 | \$477 | 1% |
| All Other | 251 | -13% | \$2,669 | 6% | 289 | \$3,128 | 6% |
| Total | 5,632 | -4% | \$47,455 | 100% | 5,883 | \$49,019 | 100% |
| | -4% | | -3% | | -4% | 10% | |

Data Source : BHB

- Notes:**
1. We have summarized the DRG codes into mutually exclusive diagnosis areas (referred to as Major Diagnostic Categories).
 2. In Fiscal 2015, the average DRG charge per admission increased by 1.1%.

Appendix 2b - Fiscal 2015 Admissions, Days in Hospital

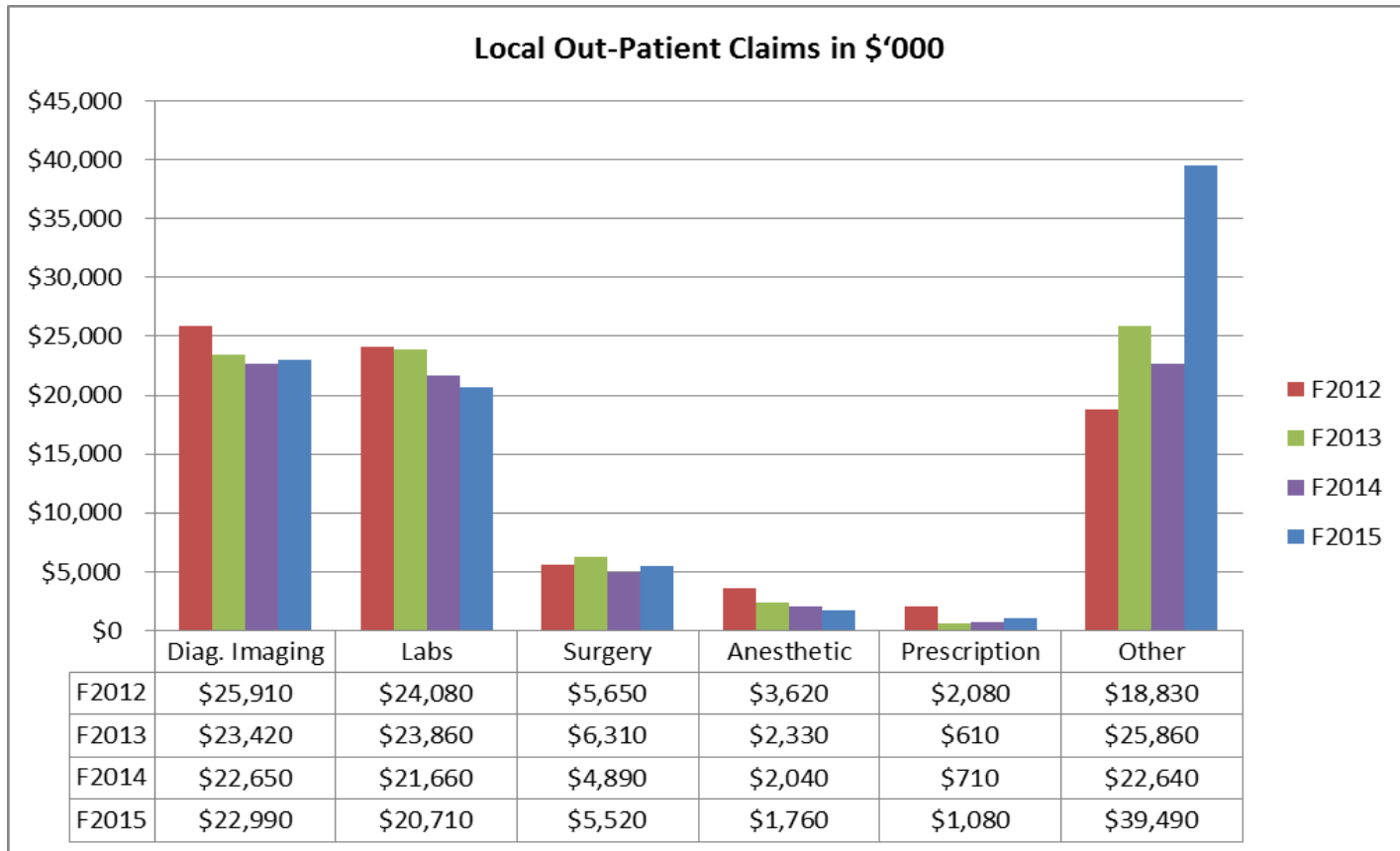
| Days in Hospital | Number of Admissions | % of Admissions | % of Total Cost | Average days in Hospital | DRG Fees (in '000) |
|------------------|----------------------|-----------------|-----------------|--------------------------|--------------------|
| 0-4 | 3,723 | 66% | 56% | 2.3 | \$26,433 |
| 5-9 | 1,134 | 20% | 22% | 6.2 | \$10,505 |
| 10-14 | 336 | 6% | 9% | 11.0 | \$4,179 |
| 15-19 | 139 | 2% | 4% | 14.2 | \$1,803 |
| 20-24 | 80 | 1% | 2% | 20.2 | \$1,039 |
| 25-29 | 49 | 1% | 1% | 21.5 | \$674 |
| 30-35 | 52 | 1% | 2% | 26.8 | \$796 |
| >35 | 119 | 2% | 4% | 59.6 | \$2,027 |
| | 5,632 | 100% | 100% | 5.9 | \$47,455 |

Data Source : BHB

Notes

1. Eighty-six percent of admissions are under 10 days, which is similar to prior fiscal periods.
2. For Fiscal 2015 admissions, the average days in hospital has increased to 5.9 days. For Fiscal 2014 admissions, it was 5.7 days and for Fiscal 2013 admissions it was 6.4 days.

Appendix 3 – Chart of Local Out-Patient data



Data Source : Insurers

Appendix 3a – Table of Local Out-Patient data

| Claims in \$'000 | 1. Diag. Imaging (outpatient) | 2. Diag. Imaging (appr.facility) | 3. Labs | 4. Surgery | 5. Anesthetic | 6. Prescription | 7. Other outpatient claims | Total |
|---------------------------------------|--|---|------------|---------------|------------------|--------------------|-------------------------------------|----------|
| Local Out-Patient Claims F2012 | \$18,600 | \$7,310 | \$24,080 | \$5,650 | \$3,620 | \$2,080 | \$18,830 | \$80,170 |
| Local Out-Patient Claims F2013 | \$16,850 | \$6,570 | \$23,860 | \$6,310 | \$2,330 | \$610 | \$25,860 | \$82,400 |
| Local Out-Patient Claims F2014 | \$16,280 | \$6,370 | \$21,660 | \$4,890 | \$2,040 | \$710 | \$22,640 | \$74,590 |
| Local Out-Patient Claims F2015 | \$16,210 | \$6,780 | \$20,710 | \$5,520 | \$1,760 | \$1,080 | \$39,490 | \$91,550 |
| Total % Increase F2012 – F2013 | -9% | -10% | -1% | 12% | -36% | -71% | 37% | 3% |
| Total % Increase F2013 – F2014 | -3% | -3% | -9% | -23% | -12% | 16% | -12% | -9% |
| Total % Increase F2014 – F2015 | 0% | 6% | -4% | 13% | -14% | 52% | 74% | 23% |

Data Source : Insurers

Notes

1. With the exception of the category “other”, claims have indicated reasonable stability or decline since Fiscal 2012/2013. The “other” category has increased significantly since Fiscal 2014 due the claims payable by the insurers that were formerly paid by the MRF (most notably claims in respect of dialysis). Local Diagnostics and Labs constitute 48% of Fiscal 2015 local out-patient spending. The category other contains 43% of the Fiscal 2015 local out-patient spending.
2. In the local context, the other category is in respect of all other services (e.g. emergency room services, dialysis, oncology and cardiology services).

About Morneau Shepell

Morneau Shepell is Canada's largest human resource consulting and outsourcing firm focused on pensions, healthcare, and workplace health management and productivity solutions.

We offer consulting and administrative services for the full range of retirement, healthcare, and employee benefits programs, as well as absence and disability management, workplace training and education, and employee assistance program. This suite of services allows us to offer solutions that help improve the financial security, health and productivity of organizations and their people around the globe.

Morneau Shepell has approximately 3,900 employees in 70 locations across Canada, the United States and the Bahamas. We provide services across Canada, the United States, Bermuda, the Caribbean and around the globe. Our clients range from government entities, associations, large corporations and small businesses. The origins of our company trace back to 1962.