Agenda and Objectives

- Market Overview
- Funding Overview
- Stop-Loss Market Overview
- Captive Considerations
Market Overview
National Medical/Prescription Drug (Rx) Trend History

- Carrier survey trends are expected allowed trends and are often set conservatively
- Health Value Initiative™ (HVI) trends are paid employer cost trends (i.e., net of plan design changes)
- Guidance historical and projected trends are based on Aon's trend expectations

Historical and Projected Medical Trends

Medical Trends by Price and Utilization

- Projected trends are based on Aon’s internal trend guidance

Health Care Trends Are Driven by Price

“It’s the prices, stupid”

—Uwe Reinhardt

Inpatient Prices in 2016

- Surgery: $41,702
- Total: $20,929
- Medical: $18,465
- Newborns: $10,824
- Labor & Delivery: $9,517
- MHSU: $9,368

Source: Health Care Cost Institute, January 2018.
Target Strategies to Drive Better Provider Decisions and Value

- Employersponsored Clinics
- Surgery Networks
- Narrow/Tiered Networks
- Referenced-Based Pricing
- Dynamic Networks
- Centers of Expertise
- Centers of Excellence
- Tier Benefits by Place of Service
- ACOs
- Rx Networks
- Lab/Radiology Networks
- Retail/Convenience Care
- Transparency Tools
- Telemedicine

Employee Impact/Disruption vs. Savings Potential
Prescription Drug Trends

Total Drug Cost
Specialty drug costs on the Rx benefit are projected to reach close to 50% by 2020 (50% by 2021)

<table>
<thead>
<tr>
<th>Year</th>
<th>Specialty</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td>2018</td>
<td>43%</td>
<td>57%</td>
</tr>
<tr>
<td>2019</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>2020</td>
<td>48%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Overall Cost Trend
Decreased trend in 2019 and 2020 are primarily due to slower growth of specialty drugs

Specialty Cost Per Claim
$1,661, $1,995, $4,157, $6,300
4x increase over 12 years

Number of Specialty Drugs
249, 433, 557, 700
3x increase over 12 years

Pharmacy Programs—Solutions to Address Rx Trends

Continuum of Solutions

Traditional
- Generic incentives
  - DAW penalties
  - Copay incentives and coinsurance
  - Targeted generic alternative messaging
- Basic drug utilization review and utilization management
  - Prior authorization
  - Quantity limits
  - Safety and utilization review
  - Pharmacy advisor support/counseling
  - Drug savings review
  - Specialty guideline management (specialty drug prior authorization and prospective patient follow-ups)
- Increase use of 90-day fills
  - Maintenance choice
- Competitive pricing
  - Aon Rx Coalition (ARxC)
- Specialty pharmacy network
  - Exclusive specialty network

Evolving
- Step therapy protocols
  - Generic step therapy
  - Specialty preferred drug plan design (PDPD)
- Narrow or tiered networks
  - Advanced Choice Network (excludes Walgreens and Rite Aid)
- Formulary exclusions/restrictions
  - Exclusion formulary
  - Advanced control formulary (additional exclusions)
- Compound management
  - Compound drug solution
- Value-based design
- Preventive drug list
  - Could increase Option 3 participation
- Specialty drug cost sharing
  - Fourth tier (50% with a $250 maximum)
Funding Overview
What Is the “Risk”?

- Volatile monthly claim totals which will vary from month to month (one month could have double the claims of preceding months especially with high-deductible health plans)
- Large individual claimants (e.g., $500,000 premature baby, $450,000 patient on Soliris)
- Aggregate total cost comes in higher than expected when premiums set (i.e., expected cost to go up 6% but in hindsight went up 12%)
Stop-Loss Coverage Overview

- Stop-loss coverage protects against catastrophic losses for health expenses
  - Reduces claim volatility by covering large claims exposure
  - Provides a better level of predictability for medical and Rx claim expenditures
    • Adjusts claims distribution curve against “tail” skew from outlier (large) claims

- Stop-loss customers include
  - Self-insured companies (usually have stop-loss coverage in addition to an ASO)
  - Risk-averse groups wanting to reduce liability
    • Escalating medical costs lead to high risk of catastrophic claims

- Insurer reimburses insured for difference above deductible or “level”
  - Specific/individual (i.e., claims over $250,000 per member per year)
  - Aggregate (i.e., aggregate claims over 120% of expected budget)
Stop-Loss Market Overview
Medical Stop-Loss Market—General Comments

Market Industry Trends
- Industry continues to grow at ~15% with $21 billion in stop-loss premium across the market; but...
- Gross industry losses have gone from 75.5% in 2015 to 79.1% in 2018 creating a firming market
  - Per the 2019 Milliman Study, a majority of carriers (61%) experienced loss ratios 5% or more than their desired target
- Specialty pharmacy trends and pipeline greatest concern to the market; gene therapy and new infusion therapies are hitting the market with large price tags (i.e., Zolgensma at $2.125 million)
- The industry is trying to address increased large claims through new approaches to specialty Rx risk, improvements to underwriting, and clinical management

Renewal Trends
- Expected leverage trends in the industry will be 15% to 25% for 2020 with higher leverage trends for larger deductibles
- Strong renewal offers will be high single digits to low double digits; lower if a known large claimant that was covered through premium comes off the plan
- Carriers not consistently offering no new lasers with rate cap past the first year renewal

Marketing Trends
- Increase in declined to quote—the market is getting more selective on opportunities
- Carriers requiring more data from the major carries to properly evaluate the risk
- More lasers to address known risk especially high cost Rx patients (e.g., hemophilia, cancer)
- Flat and negative offers will typically be for corrections where an employer is coming out of tough years or covered a known large claimant through increased premium versus a laser

Stop-Loss GPW and Gross Loss Ratio

~+15% Average Annual Growth Rate

Source: SNL, Aon.
### Stop-Loss Leverage Trend

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim (7% Trend)</td>
<td>$462,841</td>
<td>$495,239</td>
<td>$529,906</td>
<td>$567,000</td>
<td>$606,690</td>
</tr>
<tr>
<td>Stop-Loss Deductible</td>
<td>$250,000</td>
<td>$250,000</td>
<td>$250,000</td>
<td>$250,000</td>
<td>$250,000</td>
</tr>
<tr>
<td>Stop Loss Insurer</td>
<td>$212,841</td>
<td>$245,239</td>
<td>$279,906</td>
<td>$317,000</td>
<td>$356,690</td>
</tr>
<tr>
<td>Leveraged Trend</td>
<td><strong>15.2%</strong></td>
<td><strong>14.1%</strong></td>
<td><strong>13.3%</strong></td>
<td><strong>12.5%</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Responsible Dollar Amount**

- **Current**: $212,841
- **Year 1**: $245,239
- **Year 2**: $279,906
- **Year 3**: $317,000
- **Year 4**: $356,690

**Legend**
- Insurer
- Stop-Loss Deductible
Cancer continues to be the largest cost driver of high-cost claimants accounting for 26.8% of reimbursements in Sun Life’s book of business. Breast cancer is the largest cost driver for claimants over the age of 20. Multiple myeloma and lymphocytic leukemia are the largest costs under the age of 20.

The number of members with claims over $3 million doubled from 2017 to 2018; a primary driver of these large claims was prolonged hospital stays. Claims of $1 million increased 4.6% from 194 to 203 claimants, claimants with claims over $3 million increased 100% from 6 to 12. Members under the age of 20 is where the market is seeing the most catastrophic claims.

Within the top 20 highest-cost injectable drugs, 71% of the cost is related to medications used to treat cancer; this includes all top five high-cost injectable drugs (Herceptin, Neulasta, Perjeta, Avastin, and Keytruda) and eight of the top 10. From 2015 to 2018, 9% to 10% of all paid claims for large cost claimants are due to injectable drugs, which is the same time period the market saw the increase in loss ratios.

The FDA expects to approve between 10 to 20 gene and cell therapies a year by 2025. Recently, Zolgensma was approved as a cure for spinal muscular atrophy, a disease that in its most severe form affects approximately 300 American infants per year and is typically fatal. Novartis has set the price of the drug at $2.125 million per patient.
# Top 10 High-Cost Claimants

## Top 10 high-cost claim conditions by deductible level

<table>
<thead>
<tr>
<th>Rank</th>
<th>Overall</th>
<th>$0-50K</th>
<th>$51K-100K</th>
<th>$101K-250K</th>
<th>$251K-500K</th>
<th>$500K+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Malignant neoplasm</td>
<td>Malignant neoplasm</td>
<td>Malignant neoplasm</td>
<td>Malignant neoplasm</td>
<td>Malignant neoplasm</td>
<td>Congenital anomalies</td>
</tr>
<tr>
<td>2</td>
<td>Leukemia, lymphoma and/or multiple myeloma</td>
<td>Dorsopathies</td>
<td>Leukemia, lymphoma and/or multiple myeloma</td>
<td>Leukemia, lymphoma and/or multiple myeloma</td>
<td>Leukemia, lymphoma and/or multiple myeloma</td>
<td>Transplant</td>
</tr>
<tr>
<td>3</td>
<td>Chronic/end-stage renal disease</td>
<td>Leukemia, lymphoma and/or multiple myeloma</td>
<td>Chronic/end-stage renal disease</td>
<td>Chronic/end-stage renal disease</td>
<td>Congenital anomalies</td>
<td>Malignant neoplasm</td>
</tr>
<tr>
<td>4</td>
<td>Congenital anomalies</td>
<td>Chronic/end-stage renal disease</td>
<td>Congenital anomalies</td>
<td>Congenital anomalies</td>
<td>Transplant</td>
<td>Hemophilia/bleeding disorder</td>
</tr>
<tr>
<td>5</td>
<td>Transplant</td>
<td>Mental disorders</td>
<td>Dorsopathies</td>
<td>Liveborn</td>
<td>Chronic/end-stage renal disease</td>
<td>Pulmonary collapse/respiratory failure</td>
</tr>
<tr>
<td>6</td>
<td>Septicemia</td>
<td>Septicemia</td>
<td>Septicemia</td>
<td>Septicemia</td>
<td>Septicemia</td>
<td>Leukemia, lymphoma and/or multiple myeloma</td>
</tr>
<tr>
<td>7</td>
<td>Liveborn</td>
<td>Coronary Atherosclerosis</td>
<td>Cerebrovascular disease</td>
<td>Transplant</td>
<td>Liveborn</td>
<td>Congestive heart failure</td>
</tr>
<tr>
<td>8</td>
<td>Complications of surgical and medical care</td>
<td>Congenital anomalies</td>
<td>Complications of surgical and medical care</td>
<td>Complications of surgical and medical care</td>
<td>Disorders relating to short gestation and low birthweight</td>
<td>Septicemia</td>
</tr>
<tr>
<td>9</td>
<td>Hemophilia/bleeding disorder</td>
<td>Cerebrovascular disease</td>
<td>Liveborn</td>
<td>Hemophilia/bleeding disorder</td>
<td>Complications of surgical and medical care</td>
<td>Other respiratory conditions of fetus and newborn</td>
</tr>
<tr>
<td>10</td>
<td>Cerebrovascular disease</td>
<td>Other</td>
<td>Other</td>
<td>Cerebrovascular disease</td>
<td>Hemophilia/bleeding disorder</td>
<td>Respiratory distress syndrome, fetus or newborn</td>
</tr>
</tbody>
</table>
2019 Sun Life Stop-Loss Research Report
Rise of Million-Dollar Claimants

Total claimants with $1M+ in paid claims

Since 2015, the number of claimants over $3M has more than doubled
$2M+ to $3M
$1.5M+ to $2M
$1M to $1.5M

2015 2016 2017 2018

153 192 194 203
107 130 144 132
25 16 39 29
5 7 6 12
16 15 21 38

Proprietary & Confidential | October 2019
### 2019 Sun Life Stop-Loss Research Report

#### Top 20 High-Cost Injectable Drugs

<table>
<thead>
<tr>
<th>2015 Rank</th>
<th>2018 Rank</th>
<th>Injectable drug</th>
<th>Paid charges</th>
<th>Average paid charges</th>
<th>Most frequently used to treat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Herceptin</td>
<td>$17.4M</td>
<td>$95.4K</td>
<td>Cancer</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Neulasta</td>
<td>$16.4M</td>
<td>$35.7K</td>
<td>Cancer</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Perjeta</td>
<td>$10.9M</td>
<td>$86.3K</td>
<td>Cancer</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Avastin</td>
<td>$10.7M</td>
<td>$59.7K</td>
<td>Cancer</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Keytruda</td>
<td>$10.1M</td>
<td>$113.3K</td>
<td>Cancer</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>Opdivo</td>
<td>$9.2M</td>
<td>$96.9K</td>
<td>Cancer</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>Soliris</td>
<td>$8.7M</td>
<td>$457.2K</td>
<td>Blood disorder</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Yervoy</td>
<td>$8.5M</td>
<td>$198.5K</td>
<td>Cancer</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>Rituxan</td>
<td>$7.0M</td>
<td>$50.1K</td>
<td>Cancer</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>Advate, Kogenate*</td>
<td>$6.5M</td>
<td>$363.9K</td>
<td>Blood disorder</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Uncategorized Drugs</td>
<td>$5.9M</td>
<td>$9.7K</td>
<td>Other</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>Spinraza</td>
<td>$5.7M</td>
<td>$332.5K</td>
<td>Other</td>
</tr>
<tr>
<td>13</td>
<td>13</td>
<td>Inflxra, Remicade</td>
<td>$4.9M</td>
<td>$55.9K</td>
<td>Other</td>
</tr>
<tr>
<td>14</td>
<td>14</td>
<td>Eloxatide</td>
<td>$4.4M</td>
<td>$629.8K</td>
<td>Blood disorder</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>Darsalax</td>
<td>$4.1M</td>
<td>$107.2K</td>
<td>Cancer</td>
</tr>
<tr>
<td>16</td>
<td>16</td>
<td>Alimta</td>
<td>$3.7M</td>
<td>$60.6K</td>
<td>Cancer</td>
</tr>
<tr>
<td>17</td>
<td>17</td>
<td>Gammagard</td>
<td>$3.5M</td>
<td>$84.5K</td>
<td>Other</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>Velcade</td>
<td>$3.3M</td>
<td>$44.4K</td>
<td>Cancer</td>
</tr>
<tr>
<td>19</td>
<td>19</td>
<td>Tysabri</td>
<td>$3.3M</td>
<td>$110.0K</td>
<td>Other</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>Adcetris</td>
<td>$3.3M</td>
<td>$192.1K</td>
<td>Cancer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Totals</th>
<th>Top 20 by type</th>
<th></th>
<th>Cancer</th>
<th>Blood disorder</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$104.5M</td>
<td>$69.5K</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$19.6M</td>
<td>$446.5K</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$23.3M</td>
<td>$29.7K</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


*Additional brand names are associated with this medication.

- Injectable drug costs were 9.2% of total paid claims 2015–2018
- 45% of injectable drug costs were covered by stop-loss
Injectable drug costs

- Frequency versus severity
  - Some cancer drugs while the average cost is low are taken multiple times
Claims recurring year over year can create significant losses to a book of business:

- Certain diagnoses often recur year over year and are good candidates for extended review during the underwriting process.
  - Blood and blood-forming organ diseases (hemophilia), chronic kidney disease, and large Rx claims are more likely to recur at high thresholds.
- Claims originating from premature children, while often some of the most severe, are also some of the least likely to recur the following years.
- As deductible thresholds rise the volatility in claims recurring increases, but overall the probability starts to drop.
- However, the share of high-cost claimants recurring at these higher thresholds is increasing at a much faster rate than for lower retentions.

### Year-Over-Year High-Cost Claimant Recurrence

#### Claims in Excess of $100,000

<table>
<thead>
<tr>
<th>Year Over Year</th>
<th>% Recurring</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013/2012</td>
<td>28%</td>
</tr>
<tr>
<td>2014/2013</td>
<td>29%</td>
</tr>
<tr>
<td>2015/2014</td>
<td>31%</td>
</tr>
<tr>
<td>2016/2015</td>
<td>32%</td>
</tr>
</tbody>
</table>

#### Claims in Excess of $1 Million

<table>
<thead>
<tr>
<th>Year Over Year</th>
<th>% Recurring</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013/2012</td>
<td>10%</td>
</tr>
<tr>
<td>2014/2013</td>
<td>12%</td>
</tr>
<tr>
<td>2015/2014</td>
<td>14%</td>
</tr>
<tr>
<td>2016/2015</td>
<td>17%</td>
</tr>
</tbody>
</table>

**Source:** Truven data from Marketscan Commercial Claims Database. Copyright © Truven Health Analytics LLC.
Medical Stop-Loss Market—Action Items

What Can We Do to Manage Stop-Loss Renewals and Large Claims

- Having reasonable expectations that increases in the 20% range are likely going to be competitive for the next few years
- Start the renewal/marketing early with data 120 days from effective date to ensure enough time to secure quotes for groups not running well
- The better the data to higher change to reduce declined to quotes and increase competitive offers
- Consider increasing their deductible to reduce leverage trend impact to reduce the premium; risk versus premium
- Negotiate no new laser renewal rate cap on renewals after the first year; carriers will offer second year rate caps conditionally on ~95% of their business
- Focus on clinical and utilization management programs with carrier/TPA to address cost control of high-cost claimants; large claim risk management in conjunction with risk transfer
- Consider transplant carve-outs to remove the risk of transplant from the stop-loss premium and move transplants to COEs; more common in the TPA market
- Monitor specialty Rx and work with PBM/carrier on programs to address emerging therapies to ensure the efficacy of the treatment plan
- Ensure plan document matches the way the plan is being administered (i.e., eligibility is of greatest concern)
Captive Considerations
Typical Medical Stop-Loss Structure

- Employers can use captives to directly insure stop-loss.
- Many employers doing this:
  - Primarily mid-sized companies
  - Large enough to retain risk and small enough to need to dampen volatility
- Can also be used to limit the health care liability of subs.
- Savings are generated over time:
  - Commercial stop-loss expense load (20%–35%) versus captive expense load (5%–10%)
Medical Stop-Loss in Captives

- No DOL approval required
  - DOL considers stop-loss to provide insurance to the employer and not the plan; therefore, it is not regulated under ERISA
- Employers can use captives to directly insure stop-loss
- Many employers are doing this; primarily mid-sized companies
  - Large enough to retain risk
  - Small enough to need to dampen volatility caused by large medical claims
  - Can also be used as formal mechanism to limit the health care liability of subsidiaries
- Savings are generated over time by difference between commercial stop-loss expense load (30%–35%) versus captive expense load (5%–10%)
- Per the Milliman 2019 survey, one-third of respondents currently offer coverage to captives, but 10% of total premium is for currently covered captives
  - Captives continue to grow and provide employers with the structure to share in risk/profits and allow for spreading of risk for greater stability and accountability of the risk management of their health care program
Using a Captive to Reduce Stop-Loss Cost

- Many groups have captives set up for purposes of insuring workers’ compensation and various property and casualties (i.e., P&C) liabilities
- Employers are beginning to look at moving some large claim risk into their pre-existing captives
  - For example, all claims between $500,000 and $1 million are reimbursed through the captive
  - Compared to the severity and long tails of other claims against a captive, stop-loss claims may not be considered impactful
  - Due to comparatively less risk, many captive managers are open to carrying the risk of stop-loss coverage
- Moving high-claim risk to a captive can be thought of as “self-insuring” stop-loss
  - The premium normally paid to the vendor can be paid to the captive
  - Any excess premium can be kept by the captive as a reserve versus profit for the stop-loss vendor
- Advantages of moving stop-loss to a captive
  - Avoid additional risk premium charged by commercial stop-loss vendors
  - Once sufficient reserve is built up, the premiums can be reduced yet still offer the same level of protection
  - If reserves are sufficient, the attachment point can be lowered for no additional cost to the group (i.e., similar to a reduced premium)
- Disadvantages of moving stop-loss to a captive
  - May add administrative complexity as the captive would now be responsible for reimbursement of large claims to the group
  - Lose the implicit audit of large claims which the stop-loss vendor provides
What Are Aon Clients Financing Through Their Captives?

Lines of Business Written

Number of Annual Programs

- Property
- General/Public Liability
- Workers' Compensation
- Auto Insurance
- Marine
- Life/Disability
- Professional Liability
- Credit
- Terrorism
- Crime/Fidelity
- Employers' Liability
- Business Interruption
- Environmental
- Directors & Officers
- Aviation
- Construction
- Product Liability
- Product Recall
- Warranty
- Medical Stop-Loss
- Surety
- Travel Insurance
- Cyber Liability
- Equipment Maintenance
- International Employee Benefits

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