

Welcome! The session will begin at 3:00 ET.

2022 High-cost claims and injectable drug trends analysis

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2022 Health and Risk Solutions

High-cost claims and injectable drug trends report

**A recording of this
session and a copy of
the slides will be
sent to attendees.**

10 years in, and time for a change

- Ten years ago, we produced this report for the first time
- Now, we have data on nearly 50,000 claims we cover 5.3M lives and have \$2.4B in premium...

It was time for a change

- We now use underlying mappings of CCSR (Clinical Classifications Software Refined) to map to clinically relevant conditions based on the 21 body systems
- We also are reporting on our top 20 conditions (compared to top 10) which give you a look at over 90% of our total stop-loss experience

We are excited to share this updated analysis with you



2013



2018



2022

Research highlights

- **70%** of all reimbursed stop-loss claims are from the top 10 conditions.
- In the four-year benefit year period from 2017-2020, **21% of employers had a member with over \$1 million in claims.**
- In 2021, the number of **million-dollar+ claims per million covered employees rose by 21%** compared to 2020
- In 2021 alone, **COVID-19 was #8** on our list with over \$114 million in total spend for 486 members with a stop-loss claim (a 276% increase in spend and 355% increase in number of claims in 2020).

Research highlights

- Members with a **Mental and Behavioral Health claim is up 21%** over 2020 as the effects of the pandemic continue.
- Cancer has been the #1 and #2 high-cost claims for the past decade, with cancer drugs making up **11 of the top 20 high-cost injectable drugs in 2021**.
- **Five new drugs** entered our top 20 list this year: Tepezza, used in the treatment of thyroid eye disease, Hemlibra, used in the treatment of hemophilia and Tecentriq, Kadcylla and Darzalax Faspro, all used in the treatment of cancer.
- This year's highest-cost claim was for **hemophilia/bleeding disorder at \$6.23M**.

Top 20 high-cost claim conditions



TOP 20 HIGH-COST CLAIM CONDITIONS

Stop-loss claim reimbursements

2021 Rank	4 Year Rank	Condition/Disease/Disorder	2021 Single Year Reimbursements	2018-2021 Reimbursements
1	1	Malignant Neoplasm	\$294.9M	\$1.03B
2	2	Leukemia, Lymphoma, Multiple Myeloma	\$117.0M	\$443.1M
3	3	Cardiovascular	\$102.3M	\$389.4M
4	4	Orthopedics/Musculoskeletal	\$89.6M	\$297.5M
5	5	Newborn/Infant Care	\$82.3M	\$287.0M
6	6	Respiratory	\$65.0M	\$234.1M
11	7	Urinary/Renal	\$57.5M	\$222.6M
9	8	Neurological	\$61.2M	\$210.7M
10	9	Gastrointestinal/Abdominal	\$59.3M	\$200.9M
7	10	Sepsis	\$64.2M	\$182.4M
13	11	Congenital Anomaly (structural)	\$41.9M	\$172.0M
12	12	Physician Treatment	\$47.1M	\$143.1M
17	13	Transplant	\$26.7M	\$127.8M
14	14	Cerebrovascular	\$29.8M	\$98.7M
16	15	Hemophilia/Bleeding	\$28.4M	\$96.3M
19	16	Immune System	\$21.2M	\$87.5M
15	17	Mental and Behavioral Health	\$28.5M	\$87.1M
18	18	Malnutrition	\$23.1M	\$79.8M
8	19	COVID-19	\$61.5M	\$75.4M
20	20	Blood and Blood Forming Organs	\$18.6M	\$72.0M

Total payments

38%
Top 3 conditions

72%
Top 10 conditions

□ Indicates a change in 3 or more places compared to the single year rank

Stop-loss reimbursements for top 10 conditions **\$3.50B**

Stop-loss reimbursements for top 20 conditions **\$4.54B**

Stop-loss reimbursements for all conditions **\$4.89B**

Expected cost range

- **Costs vary widely** within a condition based on severity, complexity and duration of treatment
- Medical cost makes up majority of spend for all conditions
- Three conditions have **Rx spend** over 50%*
- The highest cost claim in 2020 was **\$6.3M** for Leukemia, lymphoma and/or multiple myeloma

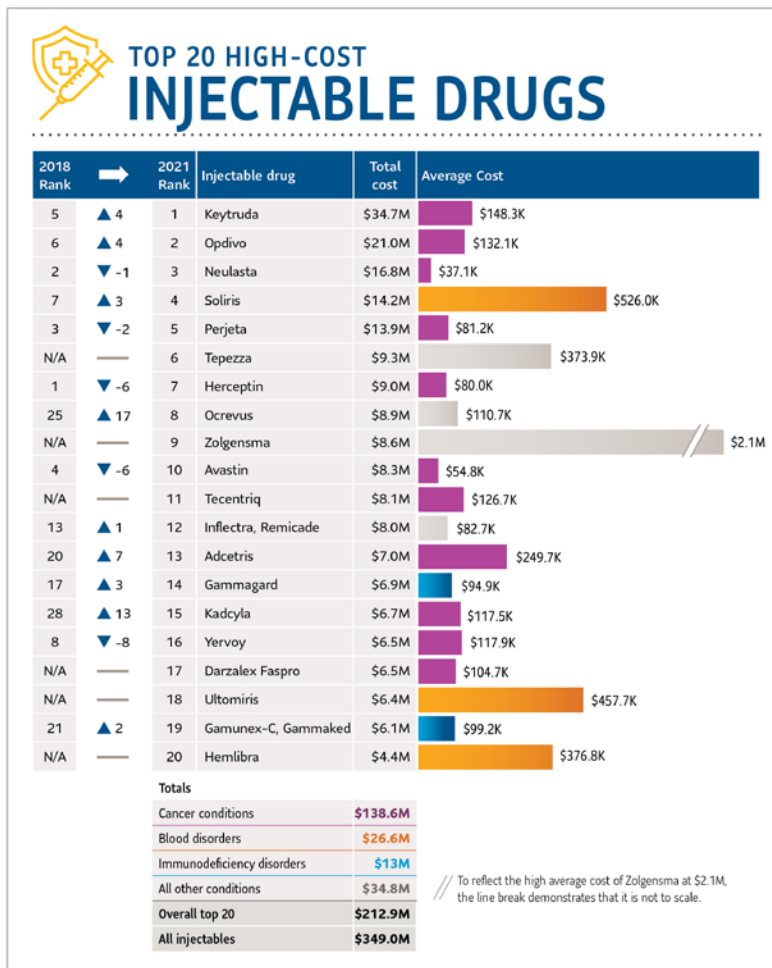
*Rx spend includes both pharmacy and injectable drug spend
Source: Sun Life book of business data, 2018-2021

Condition/Disease/Disorder	Average cost	Highest cost	% Medical versus Rx
Hemophilia/Bleeding	\$334.0K	\$6.22M	16%
Newborn/Infant Care	\$318.0K	\$3.51M	99%
Leukemia, Lymphoma, Multiple Myeloma	\$258.3K	\$4.83M	69%
COVID-19	\$231.3K	\$1.75M	98%
Congenital Anomaly (structural)	\$197.1K	\$5.43M	97%
Transplant	\$184.8K	\$2.53M	93%
Sepsis	\$179.6K	\$2.21M	96%
Malnutrition	\$178.1K	\$3.20M	30%
Malignant Neoplasm	\$170.4K	\$2.09M	68%
Cerebrovascular	\$153.3K	\$2.71M	97%
Immune System	\$120.9K	\$1.94M	30%
Urinary/Renal	\$114.1K	\$2.24M	91%
Cardiovascular	\$102.2K	\$2.45M	95%
Blood and Blood Forming Organs	\$99.2K	\$2.66M	63%
Respiratory	\$80.8K	\$4.04M	83%
Gastrointestinal/Abdominal	\$76.3K	\$1.38M	72%
Orthopedics	\$75.8K	\$1.97M	81%
Neurological	\$75.2K	\$3.42M	74%
Mental and Behavioral Health	\$68.3K	\$1.04M	85%
Physician Treatment	\$23.4K	\$1.20M	76%

The top 20 high-cost injectable drugs in 2021

- 11 of top 20 drugs used in treatment of cancer
- Zolgensma, Soliris and Ultomiris had the highest average cost [\$2.M, 526K and 458K respectively]
- New entrants:
 - Hemlibra
 - Tepezza
 - Tecentriq
 - Kadcylla
 - Darzalax Faspro

Source: Sun Life book of business data, 2018-2021



Conditions with the highest number of million-dollar+ claims by year

Conditions with the highest number of million-dollar+ claims by year

Rank	2018	2019	2020	2021
1	Malignant Neoplasm	Newborn	Leukemia	Leukemia
2	Leukemia	Leukemia	Newborn	Malignant Neoplasm
3	Newborn	Cardiovascular/ Transplant***	Malignant Neoplasm	Newborn
4	Cardiovascular	Hemophilia/ Malignant Neoplasm***	Cardiovascular	COVID-19
5	Congenital Anomaly	Congenital Anomaly	Respiratory	Congenital Anomaly

Majority condition for each claimant was used.

Age and million-dollar claims

- Ages 19 and under makes up a much larger percentage of million-dollar claims (26%) than they do all claims (9%)
- Ages 60+ makes up double the percentage (22%) of all claims than they do million-dollar+ (11%)
- Only 1% of COVID-19 claims were for members 19 and under



Under 2

Make up 26% of million-dollar claims, compared to just 9% of overall claims



2-19



20-39

Make up an even amount of all claims and million-dollar claims at 15%

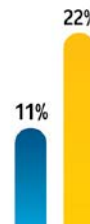


40-59



60+

Make up 22% of overall claims, but just 11% of million-dollar claims

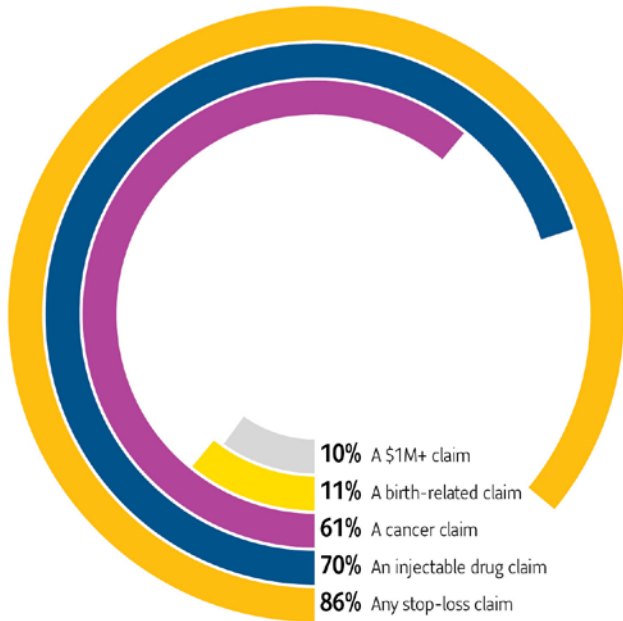


● Million-dollar+ claims ● Any claim

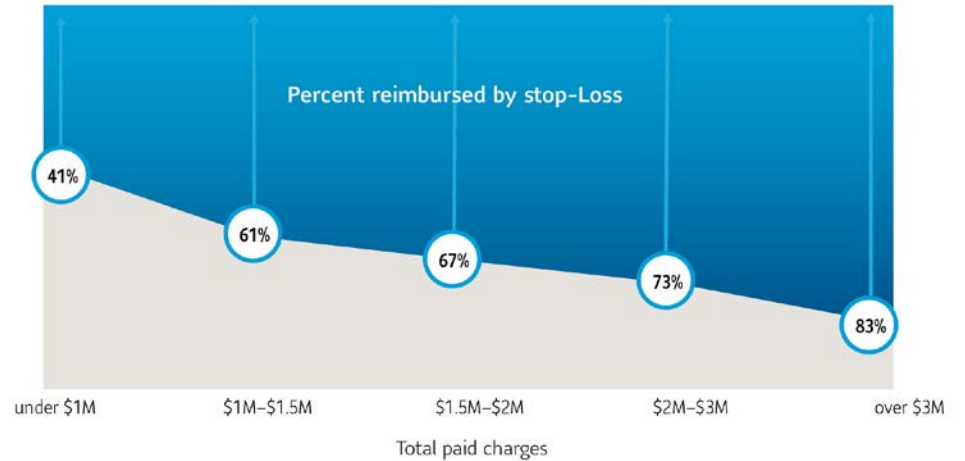
*Liveborn (with secondary conditions)
Source: Sun Life book of business data, 2017-2020

Importance of stop-loss coverage

Percentage of employers to have a stop-loss claim



Stop-loss reimbursements increase along with total cost



Q&A with Mike and Lisa



Mike Huppert, VP of Risk and Actuarial, Health and Risk Solutions



Lisa Hundertmark, Director of Clinical Services, Health and Risk Solutions

Moderated by: Valerie Ryan, Associate Marketing Director

Defining our top 20 (highlights)

#12. Physician Treatment category contains physician provided care, including injury aftercare, implant or prosthetic care, preventative and supportive care, health counseling and examination, and review of diagnostic results.

#14. Cerebrovascular category contains acute and chronic disease and injury related to cerebral diagnoses, including cerebral infarction (stroke) caused by obstruction or bleeding, deficits (neurological, cognitive, psychomotor) related to cerebral compromise, and complications of treatment.

Physician Treatment

Surgical or medical care complications	32.2%
Aftercare	12.6%

% of total spend for this diagnosis

44.8%

Cerebrovascular

Acute hemorrhagic	43.6%
Cerebral infarction	30.3%
Other and ill defined	8.9%

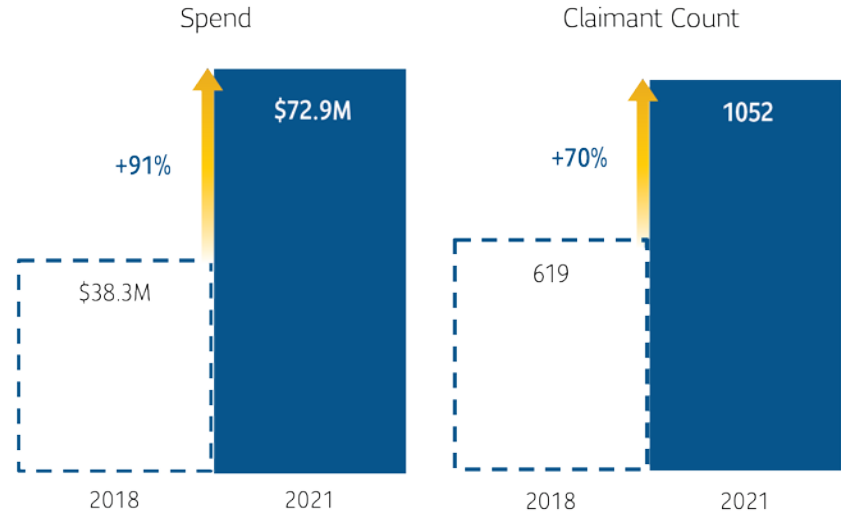
% of total spend for this diagnosis

82.8%

Mental (and Behavioral) Health is Health

- The COVID-19 pandemic brought more attention to Mental Health than ever before- but although the pandemic may be slowing down in some ways, we do not anticipate that to be true for Mental Health (as a topic, or as a high-cost condition)
- Since 2018, we have seen a 91% increase in total spend, and a 70% increase in the number of members with a high-cost claim for mental health

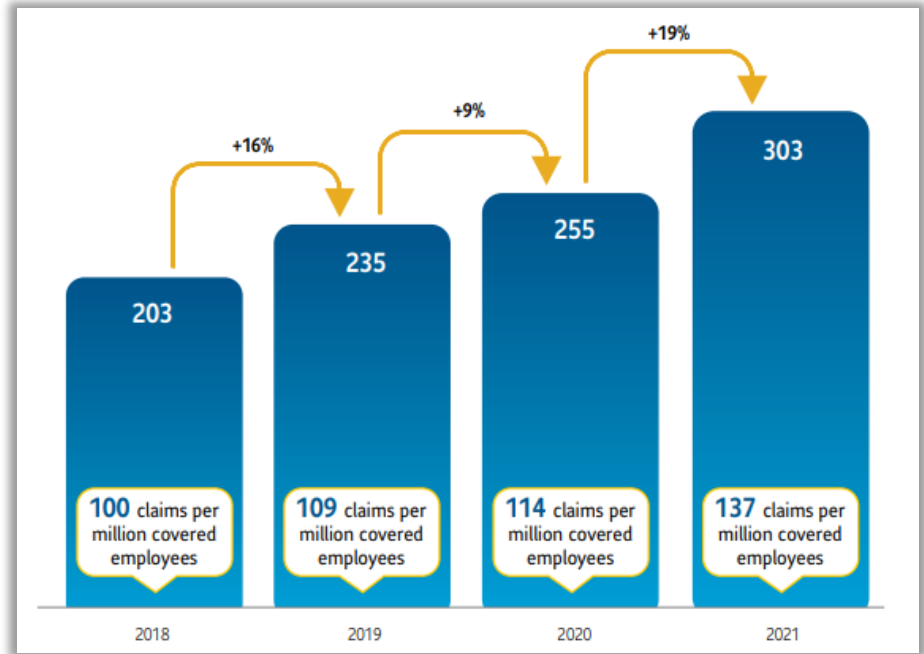
Several subcategories of mental health are contributing to this rise:



Source: Sun Life book of business data including first dollar claims and stop-loss reimbursements from 2018-2021

Rise of million-dollar+ claims

- From 2018-2021, 21% of employers had at least one \$1M+ claim*
- Total million-dollar claims across Sun Life's book of business increased by 19% in 2021 compared to 2020. During the same period, the number of claims per million covered employees rose by 21%.



*Percentage of employers that have been on our book for four benefit years that have had at least 1 claim over \$1M, 2016- 2019.

Source: Sun Life book of business data, 2017-2020

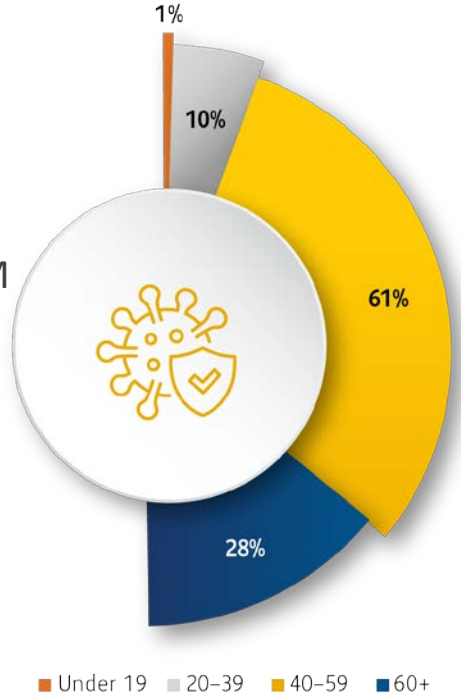
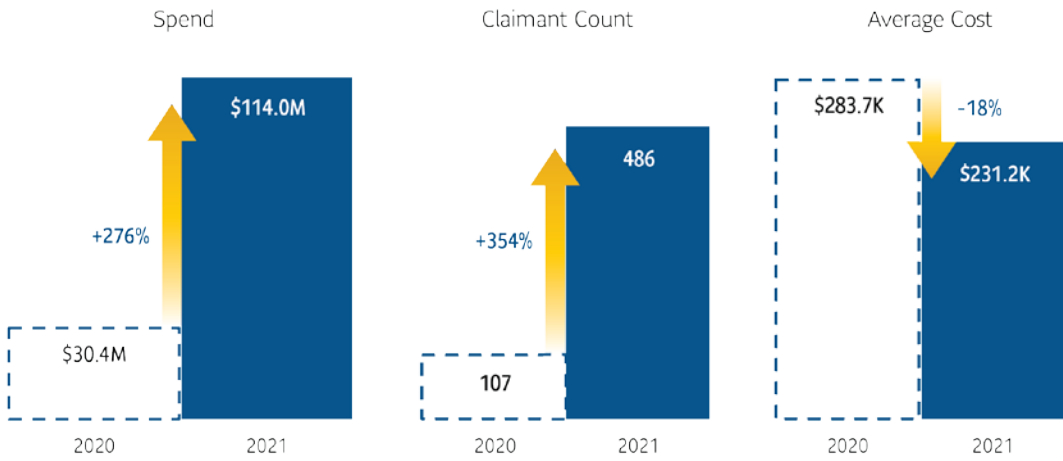
Cancer

- Since 2018 stop-loss reimbursements related to cancer were \$1.5B while the next closest reimbursement category (third on our list) had just under \$390M
- Advancements in screening technology, CAR-T therapy, gene therapy, and treatment options are improving the outlook for those who are diagnosed with cancer- **but diagnosing cancer early is key**
- COVID-19 decreased breast cancer screenings by 8% over the past two years, leading to missed diagnoses or delayed care resulting in later-stage cancers
- From 2018 to 2021, the number of individuals on our book with a cancer claim increased by 39% (from 3300+ to 4600+) ; the highest cost claim we saw in the treatment of cancer in 2021 was within the category of Leukemia, Lymphoma and Multiple Myeloma for just over \$4.83M



Two years of COVID-19 (#19)

- COVID-19 continues to top the news stories, our minds, and now, a spot on our top 20 list in the four-year view- even with just two years of claims!
- COVID-19 was the 8th most expensive claim in 2021 single year with 486 members having a high-cost claim, and spend reaching over \$114M



Impacts on healthcare system and rising medical spend

1. Current Inpatient Hospital Utilization will rise
2. Worsening Morbidity
3. Provider Critical Personnel Shortage
4. Inflationary Pressures (including pandemic related revenue losses)



Injectable drugs alternative treatments

- Home infusions and biosimilar drug options are two considerations members can make to lower treatment costs, and increase convenience of care
- 8 drugs on our list are available via home infusion

Drug	2021 member utilization	% change since 2019 (pre-pandemic)
Soliris	27	50% ▲ increase
Tepezza	25	N/A (approved in 2020)
Ocrevus	80	29% ▲ increase
Inflectra	97	10% ▼ decrease
Gammagard	73	62% ▲ increase
Ultomiris	14	N/A (approved in 2018)
Gammunex	61	13% ▲ increase
Hemlibra	16	N/A (approved in 2020)

- 3 drugs on our list [Neulasta, Herceptin and Avastin] have biosimilars, and 2 drugs [Inflectra and Kadcyła] are biosimilars