

2019 Global Medical Trend Rates Report

Global Benefits



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Introduction

Aon is pleased to present the results of its 2019 survey of average medical trend rates from countries around the world. The survey was conducted among Aon offices in 103 countries that broker, administer, or otherwise advise on employersponsored medical plans in each of the countries covered in this report. The survey responses reflect the medical trend expectations of the Aon professionals, clients, and carriers represented in the portfolio of Aon medical plan business in each country. The trend rates presented in this report do not include any allowances for potential employer countermeasures such as cost containment plan amendments or the potential impact of any attendant employer/broker negotiations with carriers.

Aon has conducted this survey in order to help multinational companies:

- Budget premium costs for medical plan renewals
- Understand the factors driving medical cost increases
- Devise wellness and cost containment initiatives to respond to the challenges

The trend rate figures shown in this report represent the percentage increases in medical plan (insured and self-insured) unit costs that are anticipated to be technically required to address projected price inflation, technology advances in the medical field, plan utilization patterns, and cost shifting from social programs to private insurance, including employer-sponsored plans, in each covered country.

Care should be taken in interpreting the information presented here. The medical trend rates provided are not meant to represent an overview of each country's health care costs as a whole. Neither are they necessarily indicative of the health care situation of each country's population overall.

This survey covers several separate themes:

- Estimated medical trend rates for 2019
- Risk factors that are driving medical cost inflation
- Principal cost elements in medical claims

- Wellness and health promotion initiatives being undertaken by employers to deal with spiraling medical cost increase trends
- The most common employer practices in each covered country around medical plan prevalence, design, funding, and administration
- Qualitative responses to provide greater context to medical plans globally

This report also provides information on the growing practice of requiring employee cost sharing in medical plan costs. The report summarizes the most typical practices in each covered country in this regard—employee sharing in medical premium costs, or in medical claim outlays.

As a reference, we have also included the projected general inflation rates for 2019 published by the International Monetary Fund (IMF) that have been adopted as a proxy for the expected domestic retail inflation level in each country for 2019.

The trend rate figures, risk factors, and cost elements in this report relate to employer-sponsored plans and their participants with aggregate premiums managed by Aon of over USD 116 billion.

The global and regional medical trend rate averages reflect the following technical procedures:

- A weighting process based on each country's average private health care insurance expenditure per person with arbitrary adjustments for some countries in order to prevent over or under weighting
- A geometric averaging mechanism

Due to the hyperinflation environment prevailing in Venezuela, we have left this country out of the regional and global medical trend rate averaging mechanism for 2019.

Aon intends to issue annual survey updates in the future. We expect that as the global demand for medical plan benefits extends to more countries, the number of participating countries in our published reports will increase over time.

We hope you will find this report useful. We welcome any feedback you may wish to provide.

Key Highlights

Global Overview

The prevalence of employer-sponsored medical plans is increasing in all countries covered by the survey. Furthermore, the scope of the provisions offered by these medical plans continues to expand (e.g., covered procedures, larger maximum lifetime benefits, higher allowances for maternity benefits, fewer exclusions from plan coverage, more lenient plan participation requirements.)

All regions of the world are expected to experience lower medical trend rates in 2019 relative to 2018 with the most significant decreases in average medical trend rates in North America and Europe.

In fact, the 2019 global average nominal (gross of inflation) medical trend rate as well as the global average real (net of inflation) medical trend rate are at the lowest registered since 2013, the initial year of the Aon global medical trend rate survey.

The drop in medical trend rates is due to lower rates of projected inflation worldwide as well as the result of employer cost containment measures and tighter medical goods and services procurement initiatives. Despite the drop, medical trend rates continue to grow over general inflation.

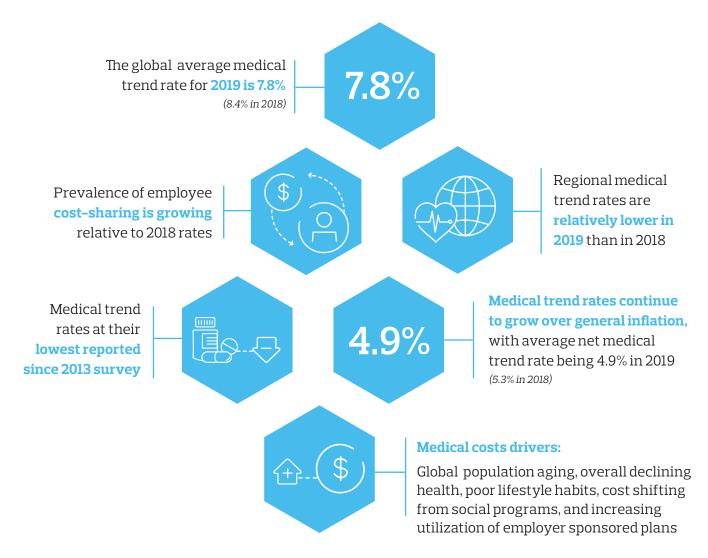


Exhibit 1: Double-digit margins between 2019 medical trend rates and domestic inflation levels were found in the following countries:



The 2019 average global nominal and real medical trend rates are significantly lower than the corresponding 2018 average global medical trend rates:

- For 2019, the global average medical trend rate was 7.8% and the average general inflation rate was 2.9%1
- In 2018, the global average medical trend rate was 8.4% and the average general inflation rate was 3.1%²

For 2019, the gap between the average global nominal medical trend rate and the global average general inflation rate is expected to decrease to 4.9% from the corresponding 5.3% figure in 2018.

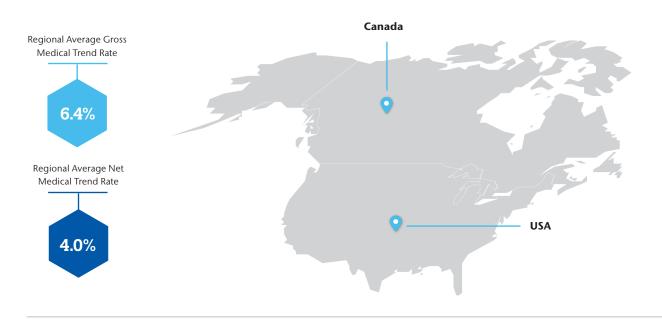
¹ 2019 projected inflation from IMF World Economic Outlook Database April 2018

² 2018 projected inflation from IMF World Economic Outlook Database April 2017

Regional Commentaries

The commentaries below present brief descriptions of developments that influenced the medical trend rates in selected countries that have large medical premiums per employee:

North America (NA)



USA

While the individual health insurance marketplace continues to face an uncertain future; employers can expect slightly lower increase in costs for 2019 when compared to 2018 unit cost increases.

Key drivers of medical costs in the United States, mainly medical services and pharmacy, are being more effectively managed. Employers are utilizing a growing number of strategies to help control the cost of pharmacy and medical services including cost transparency tools, referring employees to cost-effective providers, direct contracting with vendors, prescription drug alternatives, prescription drug formulary management, accountable care organizations (ACOs), and bundled payment models.

Other factors are also at play:

- · The entry of new players will likely introduce new innovations and efficiencies into the health insurance markets
- Less uncertainty in the regulatory environment of employer medical plans, including the suspension of the health insurer fee for 2019 for fully insured plans, will also contribute to the lower cost increases
- While the individual healthcare exchanges continue to struggle; employer exchanges continue to provide an effective cost management solution

Canada

Prescription drug costs are the largest single cost driver for medical plans in Canada. The federal government is taking steps to organize the purchase of pharmaceutical products at the national level which is now being performed at the provincial level with over 80 different provincial/territorial plans.

Asia-Pacific (APAC)



China

The Chinese government has taken a series of measures to control medical costs:

- 1. Removed the 15% drug mark-ups in all public hospitals
- 2. Issued regulations to limit the number of intermediaries in the distribution of pharmaceutical and medical products to two; the core of the regulation is that a manufacturer (importer) sells to a distributor, and the distributor sells directly to the hospital; a second distributor or local dealer is no longer permitted; this policy will help lower medical product costs
- 3. Started a pilot program on innovative but expensive medicines that were outside the National Formulary
- 4. Promoted the research and availability of generic drugs and the improvement of their quality

These developments are expected to have a tempering effect on medical trend rates.

Hong Kong

General population aging, increasing levels of stress, and respiratory infections are core contributors to rising use of company plans in recent years. These factors have led to higher gross and net medical trend rates in 2019 relative to 2018 despite lower general inflation projections for 2019.

India

The gross medical trend rate will be the same as last year's despite a modest decrease in expected general inflation which was offset by recent requirements for insurers to set premium rates based on portfolio claim experience and avoid artificially low medical premiums for competitive advantage. Additionally, employers in general will be concentrating on initiatives aimed at medical plan cost shifting to employees.

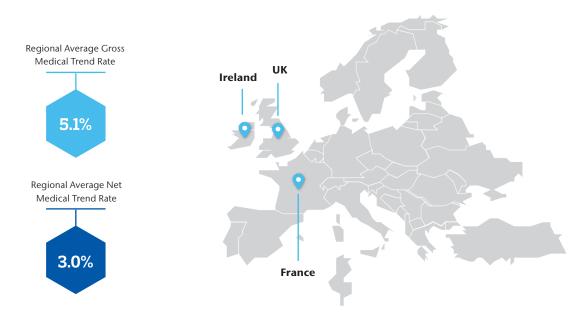
Singapore

The gross medical trend rate for 2019 remains high despite lower projected general inflation in 2019. This situation will need to be closely monitored as there is increasing traction from employers and insurers taking a pro-active approach with health intervention initiatives. However, there is a great deal of uncertainty as to whether the ROI from these measures will materialize in the short term.

South Korea

Decreases in medical trend rates for 2019 are mainly driven by regulation changes on 3 non-statutory medical coverages: (1) Chiropractic procedures, (2) Injections, and (3) MRI exams. Additionally, the typical coinsurance rates have increased from 20% to 30%.

Europe



France

Medical trend rates for 2019 anticipate higher physician fees due to nationwide negotiations with doctors and dentists. Additionally, we estimate that the upward direction of medical trend rates will continue over the 2020-2021 period, given the "100% Medical" reform which will impose full coverage of dental, optical and audio prosthetics related costs by medical insurance plans. This reform will have a stronger impact on lower-level schemes which will have to be upgraded accordingly.

Ireland

We anticipate that premium rates will remain flat in 2019 medical plan renewals due to lower general inflation, a soft carrier market in a community-rated premium-pricing environment (same price for all for a specific plan at a specific point in time) and improvements in efficiency in the public healthcare sector services.

United Kingdom

With continued deterioration in the social healthcare system (NHS) along with high incidence of large claims (especially in the area of oncology) medical trend rates remain at a relatively high level relative to other industrialized countries with insurer focus on claims and cost management minimizing the impact of these.

Latin America and Caribbean (LAC)



Brazil

The 2019 medical trend rate reflects the impact of expansion in the minimum provisions mandated on approved employer-sponsored medical plans (e.g., additional testing procedures, new prescription drugs and radiation treatments) as well as expectations from the top four carriers in regard to lower adjustments to premium rates and clients reducing the reach of their geographic coverage to their state or region.

Mexico

Higher gross and net medical trend rates are anticipated for 2019 despite lower projected general inflation levels in 2019 relative to 2018 due to anticipated currency erosion against hard currencies for imported medical products and further cost shifting from the social healthcare program.

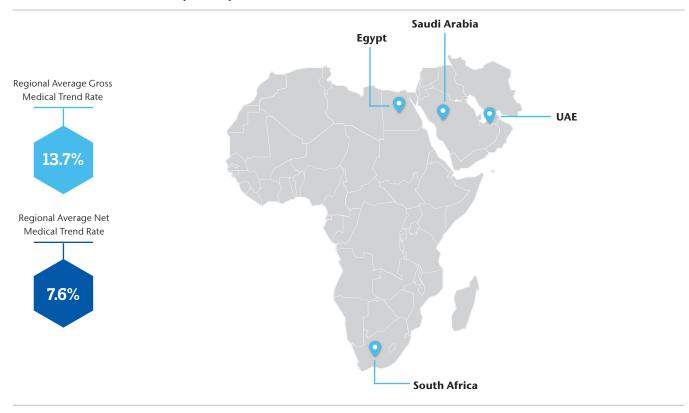
Puerto Rico

The 2019 gross and net medical trend rates will experience severe drops as a result of challenges from a macro-economic standpoint, and the impact of Hurricane María. Medical service providers are making exceptional concessions and insurance carriers are working on creating discount networks, reviewing pharmacy benefit contracts, among other strategies, to drive savings, all in order to help the population through a lingering socioeconomic crisis. Furthermore, we also expect lower enrollment levels and changes in plan utilization which may drive gross premium reductions.

Venezuela

The Venezuela economy continues to spiral out of control, constantly breaking inflation rate records. Spending on company medical plans has taken a secondary priority behind maintaining employment in a contracting economy. Consequently, we have once again excluded Venezuela from the regional and global averages.

Middle East Africa (MEA)



Egypt:

Over the last 12 months, several reforms have been implemented by the government that have resulted in a steady decline of medical inflation levels which we expect will continue over the next 2 years.

Saudi Arabia:

Despite the lower expected general inflation in 2019, the 2019 net medical trend rate remains at a high level due to the impact of the implementation of VAT taxes and the new regulatory mandated enhancements in health insurance policies.

South Africa:

The medical trend rates for 2019 are higher than the corresponding 2018 figures despite slightly lower projected general inflation levels due to higher expected levels of utilization of company medical plans, increases in hospital costs and increases in VAT taxes from 14% to 15%.

United Arab Emirates:

The UAE is expected to see higher healthcare spending fueled mainly by rising incidence of chronic diseases. Health Insurance is now becoming the second largest cost for employers in UAE apart from salaries. Sedentary lifestyle patterns and the shift from traditional diets to fast food have led to higher incidence of hypertension, obesity, cancer and heart conditions.

Call to Action

While the 2019 medical trend rates are at their lowest compared to prior years, their levels in nominal and real terms are still extremely high. Aon expects continued medical plan cost escalation due to global population aging, overall declining health, poor lifestyle habits becoming pervasive in emerging countries, continuing cost shifting patterns from social programs, and heavy utilization of employer-sponsored plans.

Rising costs and the increased prevalence of chronic conditions are global phenomena. Employers will continue to face the prospect of added organizational cost and employee productivity losses unless the controllable factors contributing to these patterns are effectively addressed.

A good place for employers to start addressing these challenges is the optimization of the plan design, financial strategy and delivery mechanisms of their medical plans around the world.

However, once these initiatives have been properly executed, they will have a diminishing incremental improvement on the business.

The structural solution for the long term involves the active promotion of a healthy workforce, beginning with a robust health care benefits offering for all company employees and their families aimed at:

- · Providing quality health care treatment when needed
- · Facilitating the management of chronic health conditions
- · Preventing/reducing the risk of accidents and illness
- · Helping employees understand their own health risks and educating them on steps to improve their health
- Encouraging healthy behaviors

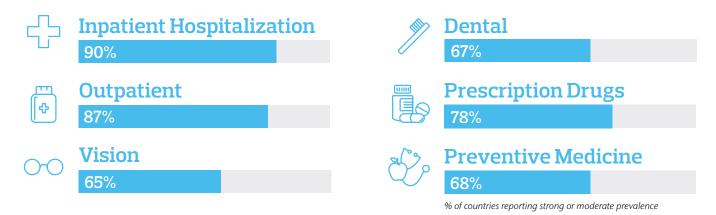
The summaries on global practices in this report should be useful in understanding wellness and cost mitigation efforts being undertaken by employers worldwide. However, the report shows that the underlying causes of illness and risk factors vary greatly by region, country, company sector, etc. It is therefore important to carefully target employer initiatives to the specific situation surrounding each medical plan.

Results Summary

Medical Plan Features

This year we surveyed our offices to canvass the prevalence of medical programs in each country. A summary of the replies is as follows:

Exhibit 2: Global Medical Plan Features



Medical Plan Financing Approaches

Below are the most commonly used medical plan financing approaches reported in the indicated region.

Exhibit 3: Prevalence of Financing Approaches

| North A | America | ADAC | Europo | LAC | MEA |
|----------------|----------------|----------------|---|----------------|--|
| United States | Canada | APAC | Europe | LAC | MEA |
| Self-Insurance | Insurance | Insurance | Insurance | Insurance | Insurance |
| Insurance | Mixed | Self Insurance | Self-Insurance, Mixed | Self-Insurance | Self-Insurance |
| Mixed | Self-Insurance | Mixed | Company Owned/ Contracted Facilities | Mixed | Pre-paid Subscription Service (e.g., HMO, Mutual Company), Mixed |

Medical Plan Employee Cost Sharing

As employee cost sharing is often a very important element of a company's medical cost mitigation strategy, we have investigated the prevalence of employee cost sharing general practices in each country covered from two perspectives:

- Employees sharing the cost of medical premiums
- Employees sharing in claim outlays, such as deductible, copay and coinsurance

The figures below represent the percentages of Aon offices reporting countrywide most common practices in employee cost sharing in the medical plan premiums and claims in their respective regions.

Exhibit 4: Employee Cost Sharing

| | Global | APAC | Europe | LAC | MEA |
|---------------------------------------|--------|------|--------|-----|-----|
| Share of Medical Premium | 78 | 68 | 94 | 91 | 56 |
| Contributions to Employee Premium | 45 | 32 | 42 | 70 | 33 |
| Contributions Toward Spouse Premium | 78 | 67 | 93 | 91 | 56 |
| Contributions Toward Children Premium | 77 | 67 | 93 | 91 | 52 |

% of countries responding per indicated region

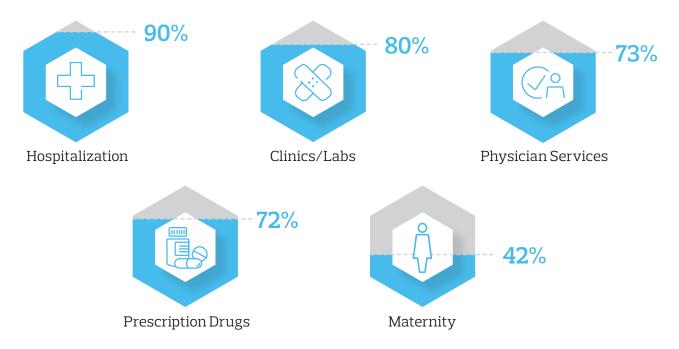
| | Global | APAC | Europe | LAC | MEA |
|--|--------|------|--------|-----|-----|
| Share of Medical Claims | 93 | 89 | 84 | 96 | 100 |
| Deductible | 48 | 28 | 42 | 74 | 41 |
| Copays | 45 | 42 | 35 | 55 | 48 |
| Coinsurance | 66 | 68 | 42 | 86 | 74 |
| Payments of Medical Costs Above Limits | 52 | 70 | 64 | 32 | 47 |

Most Important Elements of Medical Plan Cost

The figures below represent the percentages of responses from Aon offices that reported the indicated cost item as the most important element of medical plan cost in their respective countries.

Exhibit 5: Top Global Cost Elements

% of countries responding



The figures below represent the percentages of Aon offices reporting the indicated cost element in their respective regions.

Exhibit 6: Indicated Cost Elements In Respective Regions

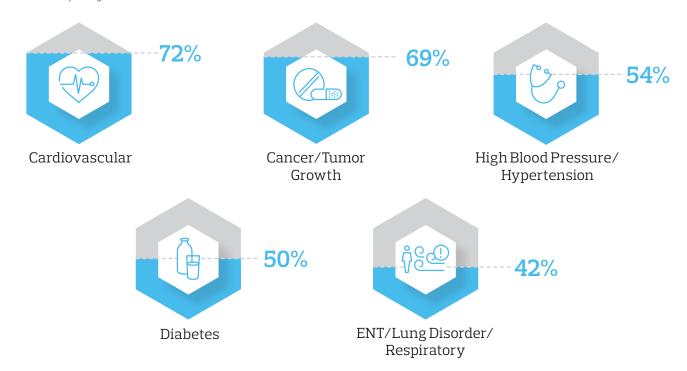
| North A | America | ADAC | | Furono | | LAC | | MEA | | | |
|-----------------------------------|------------------------------|-----------------------|------|-----------------------|-------------|-----------------------|----|-----------------------|----|-----|--|
| United States | Canada | APAC | APAC | | APAC Europe | | | LAC | | WEA | |
| Hospitalization | Prescription Drugs | Hospitalization | 94 | Hospitalization | 90 | Hospitalization | 92 | Clinics/Labs | 89 | | |
| Physician Services | Dental | Clinics/Labs | 83 | Clinics/Labs | 76 | Prescription Drugs | 92 | Hospitalization | 89 | | |
| Prescription Drugs | Preventative Care | Physician Services | 83 | Physician Services | 69 | Clinics/Labs | 79 | Prescription Drugs | 81 | | |
| Clinics/Labs | Biologic Immunomodulators | Prescription Drugs | 83 | Dental | 41 | Physician Services | 75 | Physician Services | 70 | | |
| Outpatient Services/ Surgeries | Vision | Maternity | 33 | Prescription Drugs | 38 | Maternity | 42 | Maternity | 63 | | |

Key Conditions Driving Adverse Medical Claim Experience

The figures below represent the percentages of responses from Aon offices that reported the indicated medical condition as a contributing factor in adverse claims experience in their respective countries.

Exhibit 7: Top Global Medical Conditions Driving Medical Plan Costs

% of countries responding



The leading medical conditions per region as reported by Aon offices were:

Exhibit 8: Leading Medical Conditions Per Region

| North America | | APAC | | Europe | | LAC | | MEA | |
|--------------------------------------|-----------------------|--------------------------------------|----|---|----|---|----|---|----|
| United States | Canada | AFAC | | | | | | | |
| Musculoskeletal/ Back | Cardiovascular | Cardiovascular | 95 | Cancer/Tumor Growth | 77 | Cancer/Tumor Growth | 88 | High Blood Pressure/ Hypertension | 59 |
| Cardiovascular | Mental Health | Cancer/Tumor Growth | 74 | Cardiovascular | 68 | Cardiovascular | 75 | Cardiovascular | 56 |
| Diabetes | Musculoskeletal/ Back | Gastrointestinal | 47 | High Blood Pressure/ Hypertension | 52 | High Blood Pressure/ Hypertension | 75 | ENT/Lung Disorder/ Respiratory | 56 |
| Cancer/Tumor Growth | Diabetes | Diabetes | 42 | Musculoskeletal/ Back | 52 | Diabetes | 71 | Diabetes | 52 |
| High Blood Pressure/ Hypertension | Gastrointestinal | ENT/Lung Disorder/ Respiratory | 42 | Diabetes | 35 | ENT/Lung Disorder/ Respiratory | 42 | Cancer/Tumor Growth | 41 |

Risk Factors Driving Supplementary Medical Plan Costs

The figures below represent the percentages of responses from Aon offices that reported the indicated risk as becoming a leading factor in future adverse claims experience in their respective countries.

Exhibit 9: Top Global Risk Factors

% of countries responding



The figures below represent the percentages of Aon offices reporting the indicated risk factors in their respective regions.

Exhibit 10: Indicated Risk Factors in Respective Regions

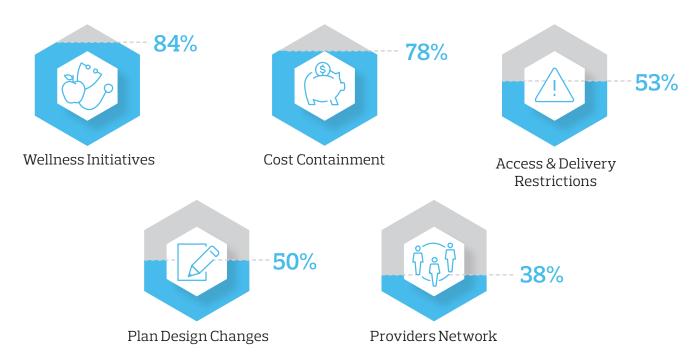
| North A | North America | | APAC | | Europo | | LAC | | |
|---------------------------|---------------------------|------------------------|-------------|---------------------------|--------|------------------------|-----|---|----|
| United States | Canada | APAC | APAC Europe | | LAC | | MEA | | |
| Physical Inactivity | Ageing | High Blood Pressure | 74 | High Blood Pressure | 83 | High Blood Pressure | 88 | High Blood Pressure | 81 |
| Bad Nutrition | Physical Inactivity | Obesity | 53 | Physical Inactivity | 57 | Bad Nutrition | 75 | High Cholesterol | 56 |
| Obesity | Bad Nutrition | Physical Inactivity | 53 | Poor Stress Management | 57 | High Cholesterol | 71 | High Blood Glucose | 52 |
| Poor Stress Management | Obesity | Bad Nutrition | 42 | Smoking | 53 | High Blood Glucose | 54 | Lack of Health Screening | 33 |
| Ageing | Poor Stress Management | High Cholesterol | 42 | High Cholesterol | 43 | Obesity | 50 | Unsafe water, sanitation, hygiene | 33 |

Mitigation Initiatives to Control Medical Plan Cost Escalation

The figures below represent the percentages of responses from Aon offices that reported the methods that aim to best mitigate the increase in costs of a medical plan.

Exhibit 11: Top Global Mitigation Methods

% of countries responding



The figures below represent the percentages of Aon offices reporting the risk mitigation methods in their respective region.

Exhibit 12: Risk Mitigation Methods in Respective Regions

| North A | America | APAC | | ADAC Furance | | LAC | | MEA | |
|-----------------------------------|---|-----------------------------------|----|--|----|--|----|--------------------------------------|----|
| United States | Canada | APAC | | Europe | | LAC | | MEA | |
| Cost Containment | Cost Containment | Wellness Initiatives | 95 | Wellness Initiatives | 83 | Wellness Initiatives | 83 | Cost Containment | 77 |
| Wellness Initiatives | Flexible Benefit Plans to Cap Overall Benefit Costs | Cost Containment | 89 | Cost Containment | 76 | Cost Containment | 71 | Access & Delivery Restrictions | 77 |
| Changes in Funding | Wellness Initiatives | Access & Delivery Restrictions | 53 | Plan Design Changes | 55 | Plan Design Changes | 50 | Wellness Initiatives | 77 |
| Access & Delivery Restrictions | Plan Design Changes | Changes in Funding | 47 | Flexible Benefit Plans to Cap Overall Benefit Costs | 48 | Access & Delivery Restrictions | 46 | Plan Design Changes | 50 |
| Plan Design Changes | Changes in Funding | Provided Network | 37 | Providers Network | 45 | Flexible Benefit Plans to Cap Overall Benefit Costs | 42 | Providers Network | 35 |

Average Medical Trend Rate Table

Exhibit 13: Region (Avg%)

| | 2018 | | | | | | |
|----------------------------|----------------|----------------------------|-----|--|--|--|--|
| Global & Regional Averages | Annual General | Annual Medical Trend Rates | | | | | |
| | Inflation Rate | Gross | Net | | | | |
| Global | 3.1 | 8.4 | 5.3 | | | | |
| North America | 2.4 | 6.9 | 4.5 | | | | |
| APAC | 3.0 | 8.9 | 5.9 | | | | |
| Europe | 2.0 | 5.8 | 3.8 | | | | |
| LAC | 5.2 | 13.9 | 8.7 | | | | |
| MEA | 7.6 | 15.3 | 7.7 | | | | |

| 2019 | | | | | | | |
|----------------|----------------------------|-----|--|--|--|--|--|
| Annual General | Annual Medical Trend Rates | | | | | | |
| Inflation Rate | Gross | Net | | | | | |
| 2.9 | 7.8 | 4.9 | | | | | |
| 2.4 | 6.4 | 4.0 | | | | | |
| 2.8 | 8.6 | 5.8 | | | | | |
| 2.1 | 5.1 | 3.0 | | | | | |
| 4.7 | 13.2 | 8.5 | | | | | |
| 6.1 | 13.7 | 7.6 | | | | | |

Exhibit 14: Region/Country (Avg%)

| | 2018 | | | | | |
|-----------------------------|----------------|---------------|----------------|--|--|--|
| Regional & Country Averages | Annual General | Annual Medica | al Trend Rates | | | |
| | Inflation Rate | Gross | Net | | | |
| North America | 2.4 | 6.9 | 4.5 | | | |
| Canada | 2.1 | 6.0 | 3.9 | | | |
| United States | 2.4 | 7.0 | 4.6 | | | |
| APAC | 3.0 | 8.9 | 5.9 | | | |
| Australia | 2.4 | 5.3 | 2.9 | | | |
| Bangladesh | 5.8 | 7.4 | 1.6 | | | |
| China | 2.3 | 5.5 | 3.2 | | | |
| Hong Kong | 2.7 | 6.2 | 3.5 | | | |
| India | 5.1 | 9.0 | 3.9 | | | |
| Indonesia | 4.5 | 15.0 | 10.5 | | | |
| Japan | 0.6 | 0.7 | 0.1 | | | |
| Kazakhstan | 7.2 | 7.2 | 0.0 | | | |

| 2019 | | | | | | | |
|----------------|----------------------------|-----|--|--|--|--|--|
| Annual General | Annual Medical Trend Rates | | | | | | |
| Inflation Rate | Gross | Net | | | | | |
| 2.4 | 6.4 | 4.0 | | | | | |
| 2.2 | 6.0 | 3.8 | | | | | |
| 2.4 | 6.5 | 4.1 | | | | | |

| 2.8 | 8.6 | 5.8 |
|-----|------|-----|
| 2.4 | 3.8 | 1.4 |
| 6.0 | 7.7 | 1.7 |
| 2.6 | 6.0 | 3.4 |
| 2.1 | 8.3 | 6.2 |
| 5.0 | 9.0 | 4.0 |
| 3.4 | 13.0 | 9.6 |
| 1.1 | 2.7 | 1.6 |
| 5.6 | 11.7 | 6.1 |

| | 2018 | | | |
|-----------------------------|----------------|---------------|----------------|--|
| Regional & Country Averages | Annual General | Annual Medica | al Trend Rates | |
| - | Inflation Rate | Gross | Net | |
| APAC (continued) | | | | |
| Malaysia | 2.9 | 15.3 | 12.4 | |
| Mongolia | 5.1 | 6.5 | 1.4 | |
| New Zealand | 2.0 | 6.0 | 4.0 | |
| Pakistan | 5.0 | 16.8 | 11.8 | |
| Papua New Guinea | 6.5 | 7.0 | 0.5 | |
| Philippines | 3.3 | 10.0 | 6.7 | |
| Singapore | 1.8 | 10.0 | 8.2 | |
| South Korea | 1.9 | 11.0 | 9.1 | |
| Taiwan | 1.3 | 8.0 | 6.7 | |
| Thailand | 1.5 | 8.5 | 7.0 | |
| Vietnam | 5.0 | 23.2 | 18.2 | |

| 2019 | | | |
|----------------|----------------------------|------|--|
| Annual General | Annual Medical Trend Rates | | |
| Inflation Rate | Gross | Net | |
| | | | |
| 2.4 | 16.0 | 13.6 | |
| 6.8 | 11.9 | 5.1 | |
| 2.1 | 6.5 | 4.4 | |
| 5.2 | 16.5 | 11.3 | |
| 2.5 | 4.0 | 1.5 | |
| 3.8 | 10.0 | 6.2 | |
| 1.0 | 10.0 | 9.0 | |
| 1.9 | 9.0 | 7.1 | |
| 1.3 | 8.0 | 6.7 | |
| 0.7 | 9.0 | 8.3 | |
| 4.0 | 12.0 | 8.0 | |

| Europe | 2.0 | 5.8 | 3.8 |
|----------------|-----|------|-----|
| Austria | 1.8 | 2.3 | 0.5 |
| Belgium | 1.7 | 3.8 | 2.1 |
| Bulgaria | 1.8 | 10.1 | 8.3 |
| Croatia | 1.1 | 1.2 | 0.1 |
| Cyprus | 1.4 | 1.5 | 0.1 |
| Czech Republic | 1.8 | 3.6 | 1.8 |
| Denmark | 1.1 | 1.3 | 0.2 |
| Finland | 1.6 | 5.0 | 3.4 |
| France | 1.2 | 3.0 | 1.8 |
| Germany | 1.7 | 10.0 | 8.3 |
| Greece | 1.4 | 6.0 | 4.6 |

| 2.1 | 5.1 | 3.0 |
|-----|------|-----|
| 2.2 | 3.0 | 0.8 |
| 1.8 | 3.8 | 2.0 |
| 2.1 | 10.3 | 8.2 |
| 1.5 | 1.5 | 0.0 |
| 1.6 | 1.6 | 0.0 |
| 2.0 | 5.0 | 3.0 |
| 1.7 | 4.0 | 2.3 |
| 1.7 | 4.0 | 2.3 |
| 1.6 | 3.5 | 1.9 |
| 1.7 | 5.0 | 3.3 |
| 1.1 | 5.0 | 3.9 |

| | 2018 | | |
|--------------------------------|----------------|---------------|----------------|
| Regional & Country Averages | Annual General | Annual Medica | al Trend Rates |
| - | Inflation Rate | Gross | Net |
| Europe (continued) | | | |
| Hungary | 3.3 | 4.0 | 0.7 |
| Ireland | 2.4 | 8.0 | 5.6 |
| Italy | 1.3 | 4.0 | 2.7 |
| Latvia | 2.5 | 8.0 | 5.5 |
| Lithuania | 2.0 | 15.0 | 13.0 |
| Luxembourg | 1.3 | 1.9 | 0.6 |
| Norway | 2.5 | 7.0 | 4.5 |
| Poland | 2.3 | 5.0 | 2.7 |
| Portugal | 1.4 | 4.0 | 2.6 |
| Romania | 3.2 | 5.0 | 1.8 |
| Russia | 4.2 | 12.0 | 7.8 |
| Serbia | 3.0 | 8.0 | 5.0 |
| Slovakia | 1.5 | 20.0 | 18.5 |
| Slovenia | 2.0 | 2.6 | 0.6 |
| Spain | 1.4 | 2.9 | 1.5 |
| Sweden | 1.6 | 1.7 | 0.1 |
| Switzerland | 0.7 | 4.0 | 3.3 |
| The Netherlands | 1.4 | 4.0 | 2.6 |
| Turkey | 9.1 | 13.0 | 3.9 |
| Ukraine | 9.5 | 12.0 | 2.5 |
| United Kingdom | 2.6 | 8.0 | 5.4 |

| 2019 | | | |
|----------------|--------------|----------------|--|
| Annual General | Annual Medic | al Trend Rates | |
| Inflation Rate | Gross | Net | |
| | | | |
| 3.3 | 7.0 | 3.7 | |
| 1.3 | 0.0 | (1.3) | |
| 1.3 | 4.0 | 2.7 | |
| 2.5 | 10.0 | 7.5 | |
| 2.2 | 15.0 | 12.8 | |
| 1.8 | 1.8 | 0.0 | |
| 2.0 | 5.0 | 3.0 | |
| 2.5 | 8.0 | 5.5 | |
| 1.6 | 3.5 | 1.9 | |
| 3.1 | 8.0 | 4.9 | |
| 3.8 | 11.0 | 7.2 | |
| 3.0 | 12.0 | 9.0 | |
| 1.9 | 4.9 | 3.0 | |
| 2.0 | 1.7 | (0.3) | |
| 1.6 | 5.0 | 3.4 | |
| 1.6 | 1.6 | 0.0 | |
| 1.0 | 4.0 | 3.0 | |
| 2.2 | 5.5 | 3.3 | |
| 10.5 | 15.0 | 4.5 | |
| 8.0 | 11.0 | 3.0 | |
| 2.2 | 6.0 | 3.8 | |

| | 2018 | | |
|--------------------------------|----------------|--------------|----------------|
| Regional & Country Averages | Annual General | Annual Medic | al Trend Rates |
| | Inflation Rate | Gross | Net |
| LAC | 5.2 | 13.9 | 8.7 |
| Argentina | 18.7 | 25.0 | 6.3 |
| Bahamas | 1.5 | 10.0 | 8.5 |
| Barbados | n/a | n/a | n/a |
| Bermuda | n/a | n/a | n/a |
| Bolivia | 5.0 | 10.0 | 5.0 |
| Brazil | 4.3 | 19.0 | 14.7 |
| Chile | 3.0 | 6.5 | 3.5 |
| Colombia | 3.2 | 6.8 | 3.6 |
| Costa Rica | 3.0 | 14.0 | 11.0 |
| Dominican Republic | 4.2 | 6.0 | 1.8 |
| Ecuador | 0.6 | 10.0 | 9.4 |
| El Salvador | 2.3 | 10.0 | 7.7 |
| Grenada | n/a | n/a | n/a |
| Guatemala | 4.0 | 10.0 | 6.0 |
| Honduras | 4.5 | 15.0 | 10.5 |
| Jamaica | 5.3 | 10.0 | 4.7 |
| Mexico | 3.2 | 11.8 | 8.6 |
| Nicaragua | 7.4 | 12.0 | 4.6 |
| Panama | 2.3 | 12.0 | 9.7 |
| Peru | 2.6 | 7.0 | 4.4 |
| Puerto Rico | 0.5 | 7.2 | 6.7 |
| Trinidad & Tobago | 2.4 | 10.0 | 7.6 |
| Uruguay | 7.5 | 8.8 | 1.3 |
| Venezuela | 2,068.5 | 1,000.0 | (1,068.5) |
| MEA | 7.6 | 15.3 | 7.7 |
| Angola | 17.8 | 25.0 | 7.2 |
| Bahrain | 3.4 | 13.0 | 9.6 |
| Botswana | 4.2 | 8.7 | 4.5 |
| | | | |

| 2019 | | | |
|----------------|---------------|----------------|--|
| Annual General | Annual Medica | al Trend Rates | |
| Inflation Rate | Gross | Net | |
| 4.7 | 13.2 | 8.5 | |
| 15.4 | 25.0 | 9.6 | |
| 2.5 | 8.0 | 5.5 | |
| 2.9 | 10.0 | 7.1 | |
| 2.2 | 8.0 | 5.8 | |
| 4.5 | 8.0 | 3.5 | |
| 4.2 | 17.0 | 12.8 | |
| 3.0 | 7.0 | 4.0 | |
| 3.4 | 7.4 | 4.0 | |
| 3.0 | 14.0 | 11.0 | |
| 3.5 | 5.5 | 2.0 | |
| 1.4 | 10.0 | 8.6 | |
| 1.9 | 10.0 | 8.1 | |
| 1.8 | 1.8 | 0.0 | |
| 3.7 | 10.0 | 6.3 | |
| 4.5 | 13.0 | 8.5 | |
| 5.0 | 10.0 | 5.0 | |
| 3.1 | 13.0 | 9.9 | |
| 7.2 | 13.0 | 5.8 | |
| 2.5 | 13.0 | 10.5 | |
| 2.0 | 8.5 | 6.5 | |
| 0.8 | 1.0 | 0.2 | |
| 2.1 | 10 | 7.9 | |
| 6.1 | 7.1 | 1.0 | |
| 12,874.6 | 100,000.0 | 87,125.4 | |
| | | | |

| 6.1 | 13.7 | 7.6 |
|------|------|-----|
| 17.0 | 20.0 | 3.0 |
| 4.9 | 13.0 | 8.1 |
| 3.8 | 8.0 | 4.2 |

| Particular C | 2018 | | |
|----------------------------------|----------------|---------------|-----------------|
| Regional & Country Averages | Annual General | Annual Medica | cal Trend Rates |
| J | Inflation Rate | Gross | Net |
| MEA (continued) | | | |
| Democratic Republic of the Congo | 10.0 | 12.0 | 2.0 |
| Egypt | 16.9 | 35.0 | 18.1 |
| Ethiopia | 7.5 | 12.5 | 5.0 |
| Ghana | 9.0 | 15.0 | 6.0 |
| Israel | n/a | n/a | n/a |
| Ivory Coast | 2.0 | 9.0 | 7.0 |
| Jordan | n/a | n/a | n/a |
| Kenya | 2.4 | 12.0 | 9.6 |
| Kuwait | 3.6 | 12.0 | 8.4 |
| Lebanon | 2.0 | 16.0 | 14.0 |
| Malawi | 10.6 | 14.0 | 3.4 |
| Nigeria | 17.5 | 22.5 | 5.0 |
| Qatar | 5.7 | 15.0 | 9.3 |
| Saudi Arabia | 5.1 | 13.5 | 8.4 |
| Senegal | 2.0 | 0.5 | (1.5) |
| Sierra Leone | 8.5 | 10.0 | 1.5 |
| South Africa | 5.5 | 10.4 | 4.9 |
| Sultanate of Oman | 3.0 | 7.5 | 4.5 |
| Tunisia | 3.8 | 8.0 | 4.2 |
| Uganda | 6.0 | 15.0 | 9.0 |
| United Arab Emirates | 3.7 | 10.0 | 6.3 |
| Zambia | 8.0 | 10.0 | 2.0 |
| Zimbabwe | 6.6 | 12.0 | 5.4 |

| 2019 | | | |
|----------------|----------------------------|------|--|
| Annual General | Annual Medical Trend Rates | | |
| Inflation Rate | Gross | Net | |
| | | | |
| 13.7 | 13.7 | 0.0 | |
| 13.0 | 25.0 | 12.0 | |
| 8.6 | 9.0 | 0.4 | |
| 8.0 | 16.0 | 8.0 | |
| 1.3 | 6.5 | 5.2 | |
| 2.0 | 18.0 | 16.0 | |
| 2.5 | 13.0 | 10.5 | |
| 5.0 | 12.5 | 7.5 | |
| 3.7 | 10.0 | 6.3 | |
| 3.0 | 15.0 | 12.0 | |
| 7.6 | 20 | 12.4 | |
| 14.8 | 19.8 | 5.0 | |
| 3.5 | 12.5 | 9.0 | |
| 2.0 | 10.0 | 8.0 | |
| 1.5 | 2.5 | 1.0 | |
| 11.2 | 15.0 | 3.8 | |
| 5.3 | 11.0 | 5.7 | |
| 3.5 | 7.5 | 4.0 | |
| 6.1 | 10.5 | 4.4 | |
| 4.3 | 20.0 | 15.7 | |
| 2.5 | 10.5 | 8.0 | |
| 8.0 | 10.0 | 2.0 | |
| 6.3 | 15.0 | 8.7 | |

Notes:

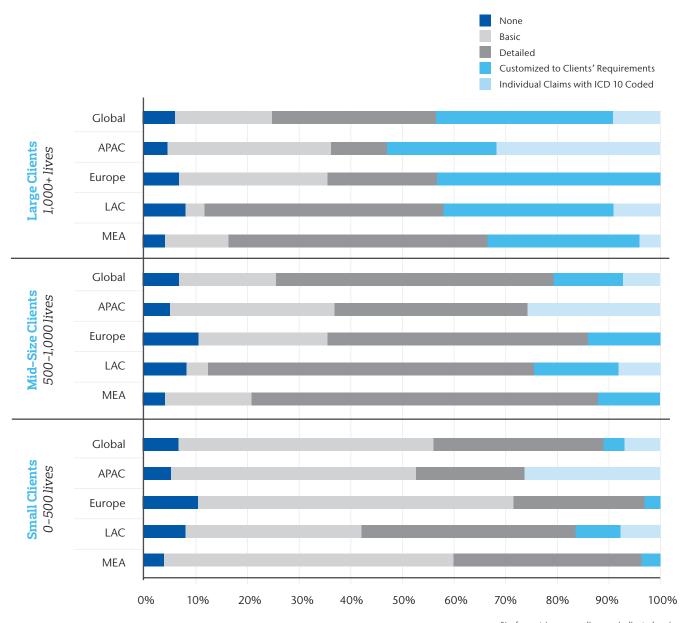
- "Net" indicates medical trend rates net of domestic general inflation rates.
- The 2019 medical trend rate for the United States was obtained from Aon's Health Value Initiative database as applicable to PPO plans and adjusted to reflect expected increases prior to any plan, program, or carrier changes for cost containment.
- Venezuela has been excluded from region and global averages in both the 2018 and 2019 figures.

Other Survey Results

Level of Claims Information Available from Carriers

A deep understanding of the specific factors driving a company's medical plan cost is fundamental for the development of a sound mitigation strategy. The figures below represent the prevalence and level of claims information available by client size reported by Aon offices in their respective region.

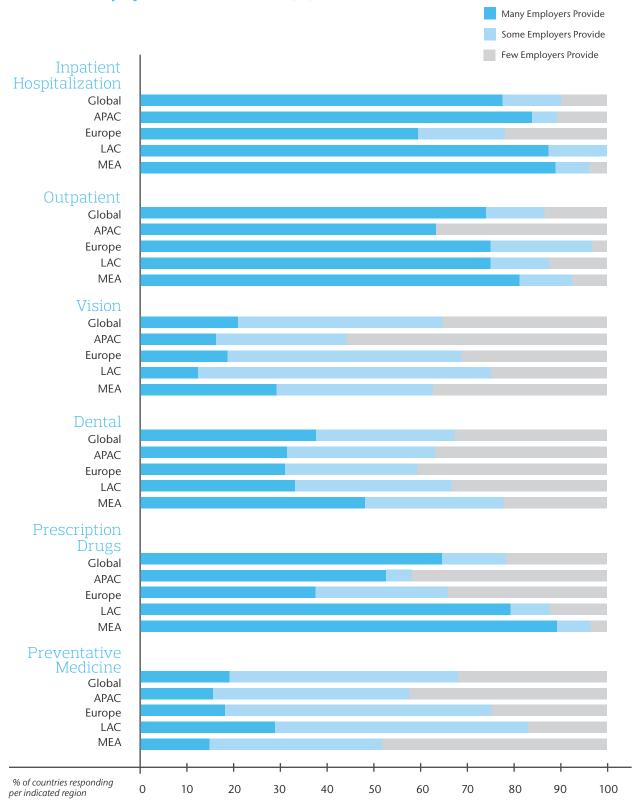
Exhibit 15: Level of Claims Information Available



Prevalence of Medical Plan Features and Derivative Benefits

The surveyed countries reported on typical medical benefit provision practices. The main results are summarized in the following tables:

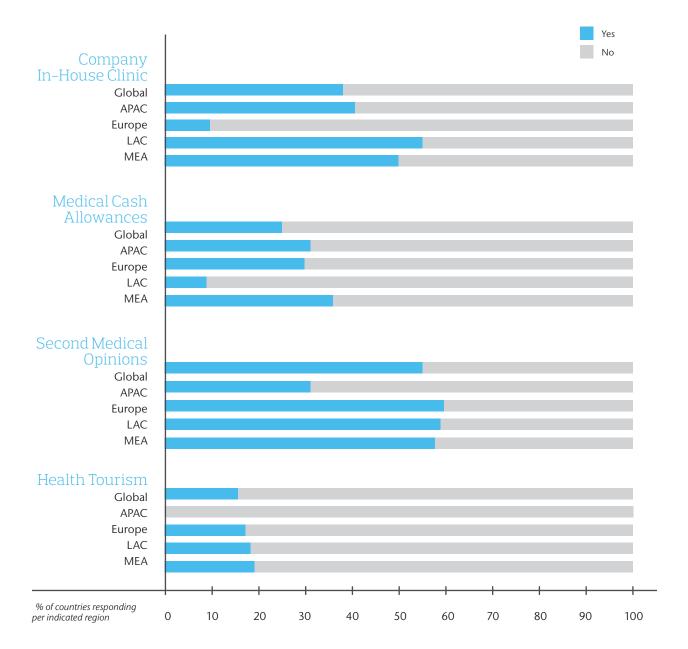
Exhibit 16: Employer Provided Benefits (%)



Alternative/Innovative Delivery Mechanisms

Aon offices reported prevalence of the following delivery mechanisms supporting medical benefit plans:

Exhibit 17: Delivery Mechanisms Supporting Medical Benefits Plans (%)



Regional Summary of Practices on Employee Cost Sharing on Premiums

The table below shows the prevalence of most common practices in terms of required employee contributions under the typical medical plan in each country in regard to premiums assessed to cover the employee, spouse and/or dependents.

Exhibit 18: Offices Reporting Most Common Practices

| | Global | APAC | Europe | LAC | MEA |
|--|--------|------|--------|-----|-----|
| EE Only | 2 | 5 | 3 | 0 | 0 |
| Spouse Only | 0 | 0 | 0 | 0 | 0 |
| Children Only | 0 | 0 | 0 | 0 | 0 |
| EE + Spouse Only | 1 | 0 | 0 | 0 | 4 |
| EE + Children Only | 0 | 0 | 0 | 0 | 0 |
| Spouse + Children Only | 33 | 37 | 52 | 22 | 22 |
| All-EE + Spouse + Children | 42 | 26 | 39 | 69 | 30 |
| Plan requires some form of premium contribution from employees | 78 | 68 | 94 | 91 | 56 |

% of countries responding per indicated region

Regional Summary of Country Practices on Employee Cost Sharing on Claim Outlays (Please refer to Glossary of Terms for definition of indicated element.)

The table below shows the most common practices per country reported by Aon offices in regard to financial contributions required of employees toward meeting the costs of claims incurred.

Exhibit 19: Offices Reporting Indicated Plan Design Element

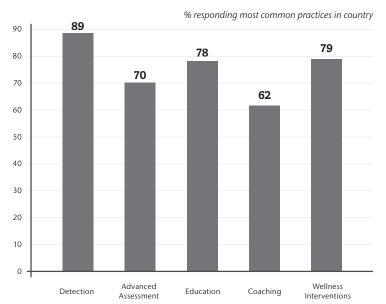
| | Global | APAC | Europe | LAC | MEA |
|--|--------|------|--------|-----|-----|
| Deductible Only | 8 | 0 | 19 | 9 | 0 |
| Copay Only | 6 | 0 | 10 | 0 | 11 |
| Coinsurance Only | 17 | 21 | 19 | 9 | 19 |
| Deductible + Copay Only | 3 | 5 | 6 | 0 | 0 |
| Deductible + Coinsurance Only | 14 | 11 | 3 | 22 | 19 |
| Copay + Coinsurance Only | 13 | 26 | 6 | 9 | 15 |
| All-Deductible + Copay + Coinsurance | 23 | 11 | 13 | 43 | 22 |
| Plan requires some form of employee contribution toward claims* | 93 | 89 | 84 | 96 | 100 |

 $^{{}^*} Includes \ respondents \ that \ reported \ employee \ contribution \ toward \ medical \ expenses \ above \ allowable \ limits.$

Global Wellness and Health Promotion Initiatives

The figures below represent the percentages of responses from Aon offices that reported the indicated wellness program as commonly provided by employers in their respective countries.

Exhibit 20: Wellness Programs Reported as Commonly Provided



| Detection | |
|--------------------|---------------------------|
| Vision Screening | 67 |
| Hearing Screening | 45 |
| Mammograms | 55 |
| Physical Check-ups | 84 |
| | % of countries responding |

| Advanced Assessmen | L |
|--------------------|---------------------------|
| Advanced Check-ups | 39 |
| Heart Health | 51 |
| Nutrition | 38 |
| Substance Use | 23 |
| Level of Fitness | 37 |
| | % of countries responding |

| Education | |
|-------------------------------------|---------------------------|
| Communication Materials on Wellness | 72 |
| Wellness Kits | 62 |
| Informational Web Services | 57 |
| Fitness Education | 49 |
| | % of countries responding |

| Coaching | |
|--------------------------------------|---------------------------|
| Health Specialist | 31 |
| Health Coaching Management System | 23 |
| Incentive Programs | 56 |
| | % of countries responding |

| Interventions | |
|---------------------------------|---------------------------|
| Healthy Eating | 63 |
| Quitting Smoking/Tobacco Use | 52 |
| Physical Activity | 63 |
| Healthy Weight | 51 |
| Back Care | 40 |
| Reducing Risk for Heart Disease | 46 |
| Employee Assistance Program | 49 |
| | % of countries responding |

Exhibit 21: Asia Pacific

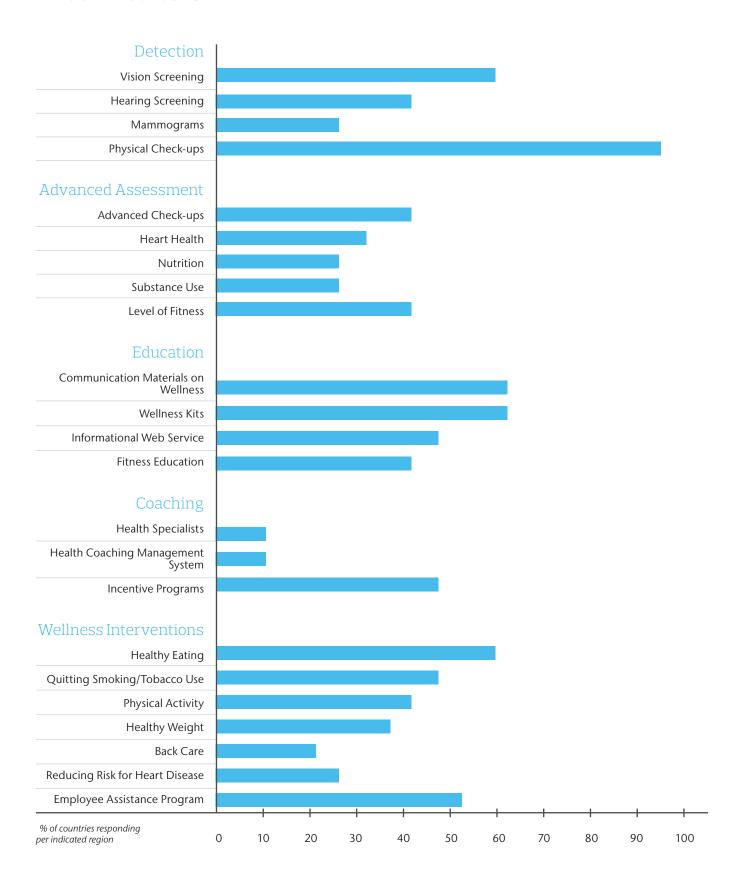


Exhibit 22: Europe

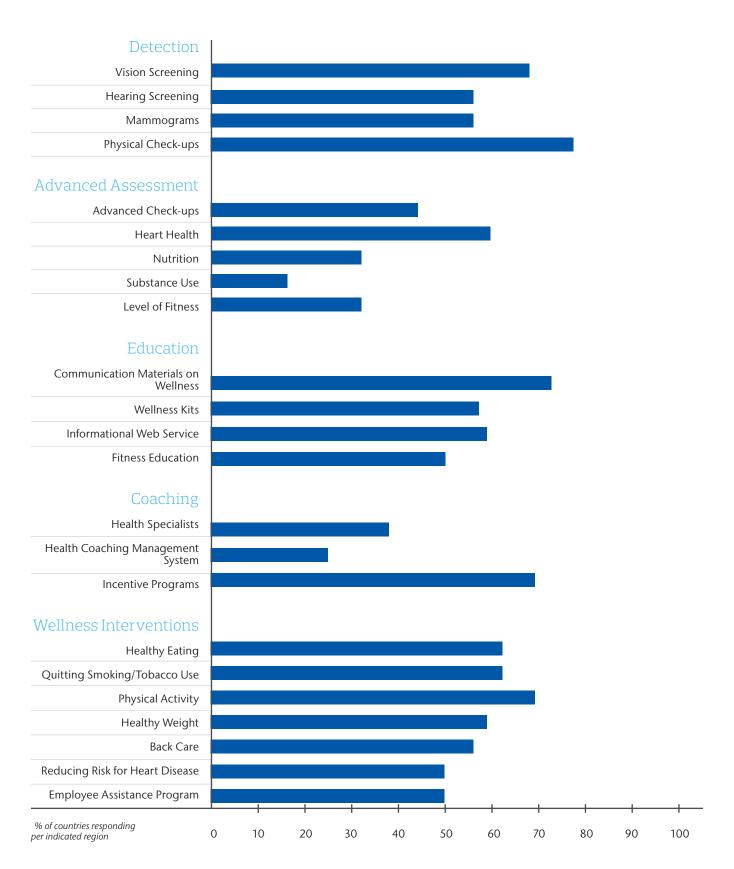


Exhibit 23: Latin America & Caribbean

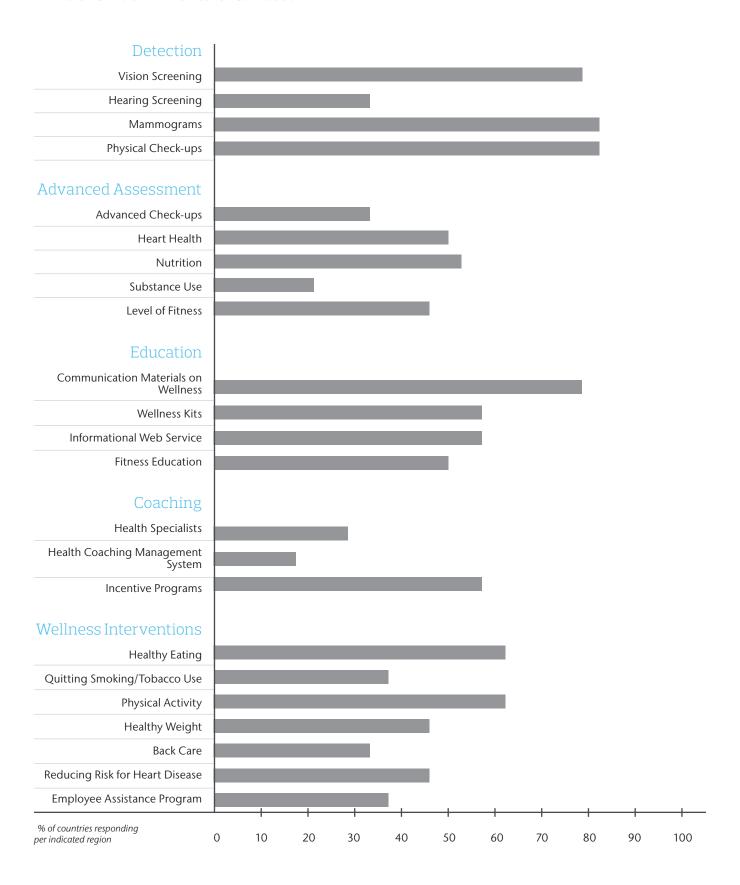


Exhibit 24: Middle Eastern Africa

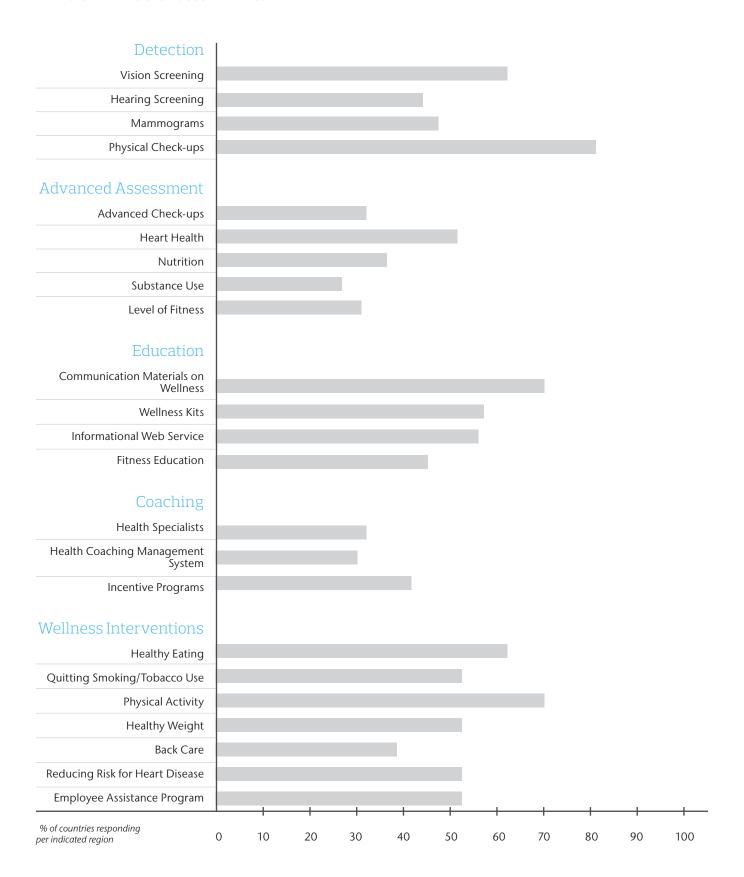


Exhibit 25: Wellness Programs

Reported as Commonly Provided by Geographical Regions

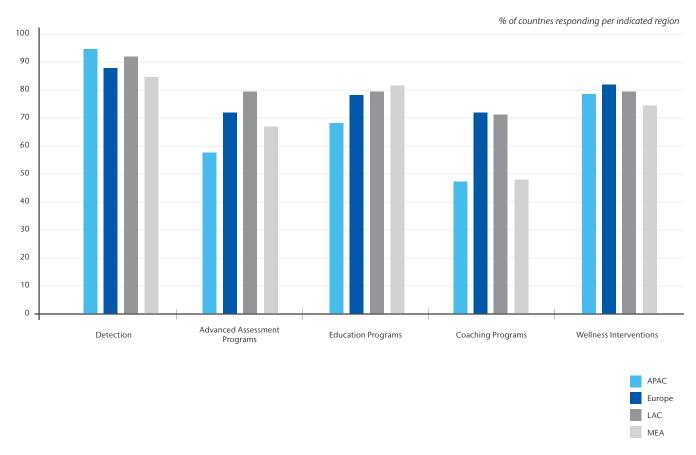


Exhibit 26: Detection Programs

Reported as Commonly Provided by Geographical Region

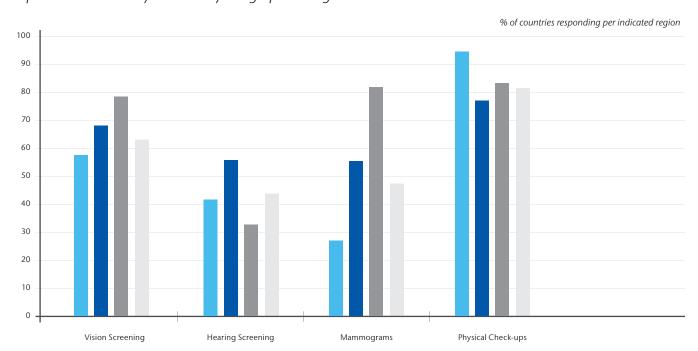


Exhibit 27: Advanced Assessment Programs

Reported as Commonly Provided by Geographical Region

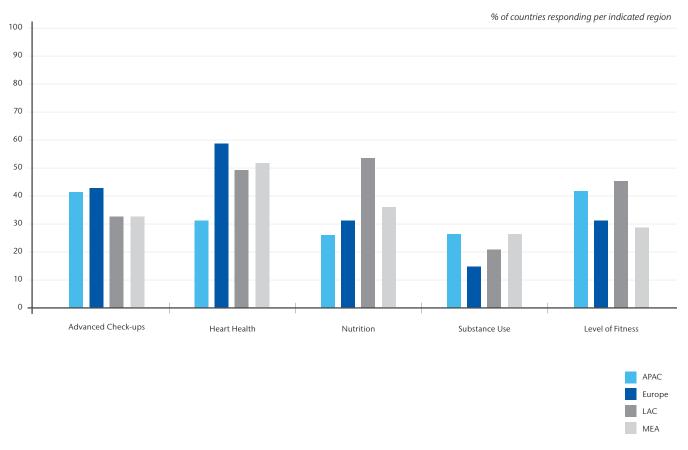


Exhibit 28: Education Programs

Reported as Commonly Provided by Geographical Region

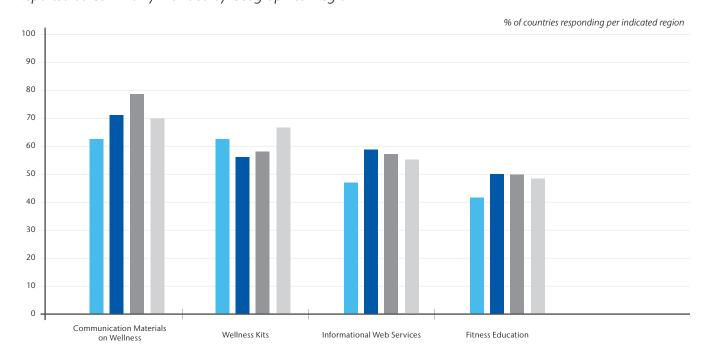


Exhibit 29: Coaching Programs

Reported as Commonly Provided by Geographical Region

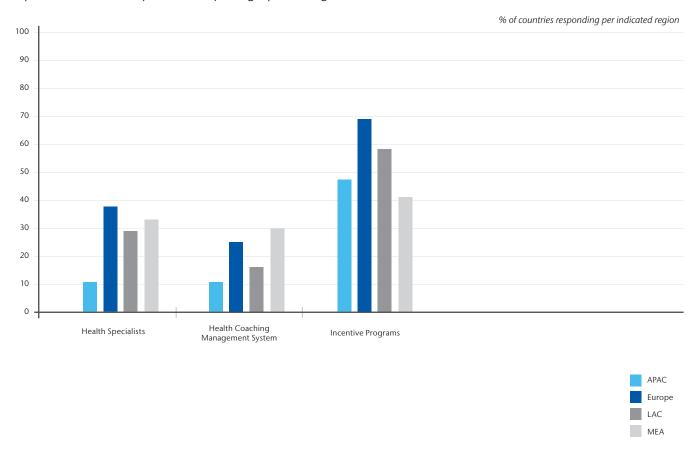
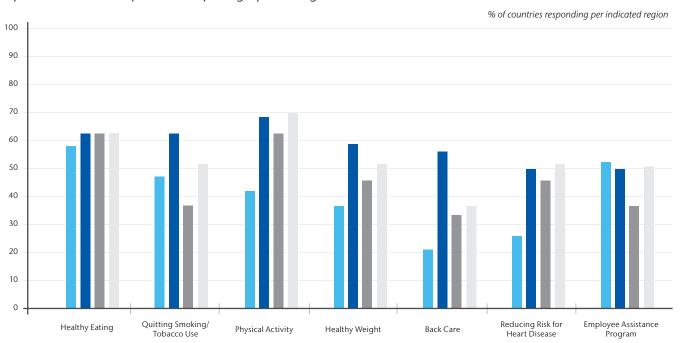


Exhibit 30: Wellness Interventions Programs

Reported as Commonly Provided by Geographical Region



Glossary of Terms

Coinsurance: A form of medical cost sharing in a health insurance plan that requires an insured person to pay a stated percentage of medical expenses after the deductible amount, if any, was paid. In health insurance, an equivalent term is "percentage participation."

Copayment (Copay): A form of medical cost sharing in a health insurance plan that requires an insured person to pay a fixed dollar amount when a medical service is received. The insurer is responsible for the rest of the reimbursement. There may be separate copayments for different services. Some plans require that a deductible first be met for some specific services before a copayment applies.

Access & Delivery Restrictions: Measures designed to incentivize plan members to seek care in a cost-effective manner (e.g., restrictions on the use of expensive hospitals, mandated use of general physicians prior to using specialists, avoidance of emergency rooms for non-emergency situations, etc.)

Cost Containment Measures: Initiatives aimed at reducing or controlling over-utilization such as introduction of deductible, copays, coinsurance in plan design, required use of referrals for expensive surgeries, limitations on reimbursement per type of expense or medical service.

Deductible: A fixed dollar amount during the benefit period - usually a year - that an insured person pays before the insurer starts to make payments for covered medical services. Plans may have both per individual and family deductibles. Some plans may have separate deductibles for specific services.

Preferred Provider Organization (PPO) (Medical Provider Network):

An indemnity medical plan where coverage is provided to participants through a network of selected health care providers (such as hospitals and physicians). The plan participants may go outside the network, but would incur larger costs in the form of higher deductibles, higher coinsurance rates, or non-discounted charges from the providers.

Self-Insured Plan: A plan offered by employers who directly assume the major cost of health insurance for their employees. Some self-insured plans bear the entire risk. Some self-insured employers insure against large claims by purchasing stop-loss coverage. Some self-insured employers contract with insurance carriers or third party administrators (TPA) for claims processing and other administrative services; other self-insured plans are self-administered.

Stop Loss: A type of reinsurance designed to transfer the loss from the ceding company to the reinsurer at a given point. A provision in a policy designed to cut off the insurance company's loss at a given point. Aggregate benefits and maximum benefits are an example.

Third Party Administrator (TPA): An individual or firm hired by an employer to handle claims processing, pay providers, and manage other functions related to the operation of health insurance. The TPA is not the policyholder or the insurer.

Mitigate: To make less severe; steps to eliminate further damage after a loss occurs.

Appendix

Technical Note

The trend rates shown in this report represent national averages and are the predicted increase in premium costs. Trend increases for a specific company may vary significantly from these trend rates due to regional cost variations, company plan design, company demographics, and other factors. In addition, insured rate increases may be higher or lower than these trend rates based on an insurance company's profitability, the plan's claims-loss ratio, the plan design, insured demographics, and other factors. It is important to note that these trend rates might not be appropriate for other purposes.

Medical trend rate is defined as the percentage of change in the cost of health care prior to any cost containment measure undertaken by plan sponsors.

The components of health care trends that we have considered include:

- Price inflation. This is the projected annual change in the domestic retail consumer price index of the
 health care element in each country. In the absence of information on projected inflation for the medical
 plan component in any given country, we have used the change in the overall consumer price index.
- Leveraging impact on fixed-amount elements of plan design. This is the additional cost added to a health plan due to the leveraging effect of increasing expected claims on unchanging deductible, copays, or out-of-pocket maximums.
- **Utilization.** This component reflects an increase in the demand for medical care services in response to factors such as increased access to medical services, plan design, participant age, and new medical technology and services.
- **Technology advances.** This reflects the change in cost due to new procedures, information, experience, and equipment replacing older techniques.
- **Cost shifting.** This reflects a provider of medical services, such as a government social health care program, transferring its cost to private-sector supplementary plans.

Who to Contact

Francois Choquette

Executive Vice President, Global Benefits +1.415.816.1212 francois.choguette@aon.com

Timothy N. Nimmer

Global Chief Actuary, Aon Health +1.303.782.3388 timothy.nimmer@aon.com

Wil J. Gaitan

Senior Vice President and Global Consulting Actuary +1.312.381.5008 wil.gaitan@aon.com

Janine Heijckers

Global Benefits Practice Director - EMEA +31 (0) 6 429 854 14 janine.heijckers@aon.nl

Simon Godfrey

Head of Global Benefits Asia-Pacific +852 2917 7955 simon.godfrey@aon.com

Stephen Caulk

Senior Vice President and Consulting Actuary +1.303.782.3314 Stephen.Caulk@aon.com

Carl Redondo

Global Benefits Leader, UK +44 (0)20 7086 0797

Max Maggio

Chief Commercial Officer, LATAM +1.305.961.5924 max.maggio@aon.com

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