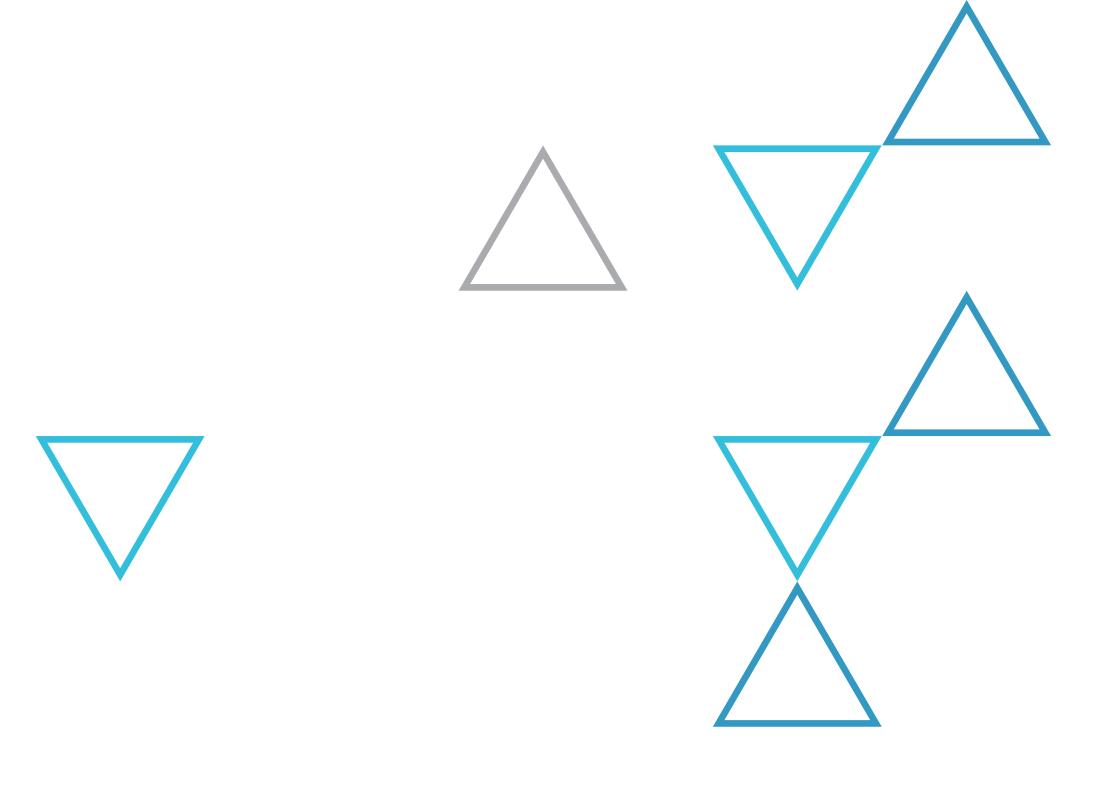


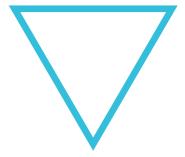
Medical Trends
Around the World
2017







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The Mercer Marsh Benefits (MMB) annual medical trend survey, *Medical Trends Around the World*, provides information about the cost of healthcare and top claims in markets around the world to help plan sponsors understand medical plan costs and design their overall health and well-being strategies. Medical trend rates are an essential element in MMB's insurance rate analysis as we assist clients to design plans to help control cost and meet the needs of their diverse workforces.

For the third straight year, we surveyed insurers around the world from March to April 2017. A total of 220 insurers across 63 countries participated in the survey. Once again, about half of the participating insurers are network affiliates of multinational pools. We received sufficient response in 48 countries to publish medical trend rates.

Our findings emphasize that though the actual percentage of change is somewhat stable, medical cost continues to exceed inflation rates and thus puts pressure on operating expenses for employers and purchasing power for their employees.

Though global trends have changed little in past years, we have seen some regional variation, due in part to currency fluctuations and other country variables.

This report will discuss three areas for further consideration by employers:

- Medical trend remains high. Do employers
  have opportunities to drive better value
  by reviewing healthcare consumer choice
  options to ensure that higher costs are also
  resulting in better outcomes?
- Cancer and circulatory disease continue to account for the top claims. Do employers have opportunities to drive better value by ensuring their benefits design addresses the precursors to these claims? Can they allocate resources to mitigate high-cost care that drives inflationary trends, and also create incentives for health maintenance and prevention scenarios?
- Insurers predict high consumer medical spend will continue. Do employers have the right incentives and health culture in place to positively impact the workforce health and curb demand?

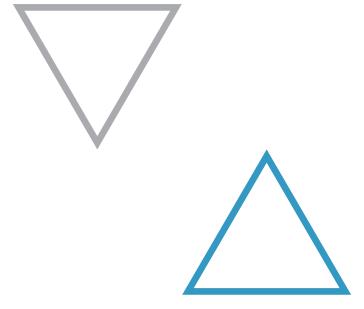
We thank all of the participating insurers for taking the time to respond to this year's survey. (For a full list of participating countries and the names of insurers who have agreed to be mentioned, please refer to the Appendix.)

# Introduction

Top Trends Shaping Employer-Sponsored Medical Plans Please note that the US is excluded from this report because it is a unique healthcare market. For information on US trends, see Mercer's separate National Survey of Employer-Sponsored Health Plans 2016 report.

### ABOUT MERCER MARSH BENEFITS

Mercer Marsh Benefits provides clients with a single source for managing the costs, people risks, and complexities of employee benefits. The network is a combination of Mercer and Marsh local offices around the world, plus country correspondents who have been selected based on specific criteria. Our benefits professionals, located in 135 countries and servicing clients in more than 150 countries, are deeply knowledgeable about their local markets. Through our locally established businesses, we have a unique common platform which allows us to serve clients with global consistency and locally unique solutions.





Based on your block of group or overall medical insurance business, what actual medical trend rate did you experience in 2016 and are you projecting for 2017? All aspects of health care including hospitalization, outpatient, medications, maternity and vision can be included in your assessment but where possible, please exclude dental. The trend rate should account for per person increases in cost due to medical inflation, changes in utilization patterns and other factors like changes in government regulation.

Our survey data revealed no change in the average global medical trend rates as compared with last year's survey even with some variance in country participation. The average global medical trend rates continue to hold steady at just under 10%. Projections for 2017 are only 0.2% less than last year, fueled by lower trend rates projected mainly in Latin America and Europe.

The 2016 medical trend rate continues to outpace inflation at a rate of more than three times. And yet, general inflation is estimated to be lower across surveyed countries compared with the 2015 estimated inflation average.<sup>1</sup>

Global*         9.9%         3.1         9.7%         3.6           North America (average)         6.0%         1.4%         11.0%         2.0%           Canada         6.0%         1.4%         11.0%         2.0%           Asia (average)         10.7%         2.0%         10.2%         2.8%           China         10.0%         2.0%         11.0%         2.4%           Hong Kong         8.4%         2.6%         8.3%         2.6%           India         15.3%         4.9%         14.0%         4.8%           India         15.3%         4.9%         14.0%         4.5%           Malaysia         11.5%         2.1%         12.7%         2.7%           Philippines         11.8%         1.8%         11.1%         3.6%           Singapore         10.0%         -0.5%         9.4%         1.1%           South Korea         7.6%         1.0%         6.0%         1.4%		2016 medical trend rate experience*	2016 estimated inflation <sup>†</sup>	2017 projected medical trend rate*	2017 forecast inflation rate <sup>†</sup>
Canada         6.0%         1.4%         11.0%         2.0%           Asia (average)         10.7%         2.0%         10.2%         2.8%           China         10.0%         2.0%         11.0%         2.4%           Hong Kong         8.4%         2.6%         8.3%         2.6%           India         15.3%         4.9%         14.0%         4.8%           India         15.3%         4.9%         14.0%         4.8%           Indonesia         13.1%         3.5%         13.1%         4.5%           Malaysia         11.5%         2.1%         12.7%         2.7%           Philippines         11.8%         1.8%         11.1%         3.6%           Singapore         10.0%         -0.5%         9.4%         1.1%           South Korea         7.6%         1.0%         6.0%         1.8%           Taiwan         7.7%         1.4%         9.2%         1.4%           Thailand         9.4%         0.2%         9.5%         1.4%           Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%	Global <sup>‡</sup>	9.9%	3.1	9.7%	3.6
Asia (average)         10.7%         2.0%         10.2%         2.8%           China         10.0%         2.0%         11.0%         2.4%           Hong Kong         8.4%         2.6%         8.3%         2.6%           India         15.3%         4.9%         14.0%         4.8%           Indonesia         13.1%         3.5%         13.1%         4.5%           Malaysia         11.5%         2.1%         12.7%         2.7%           Philippines         11.8%         1.8%         11.1%         3.6%           Singapore         10.0%         -0.5%         9.4%         1.1%           South Korea         7.6%         1.0%         6.0%         1.8%           Taiwan         7.7%         1.4%         9.2%         1.4%           Thailand         9.4%         0.2%         9.5%         1.4%           Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%	North America (average)	6.0%	1.4%	11.0%	2.0%
China         10.0%         2.0%         11.0%         2.4%           Hong Kong         8.4%         2.6%         8.3%         2.6%           India         15.3%         4.9%         14.0%         4.8%           India         15.3%         4.9%         14.0%         4.8%           Indonesia         13.1%         3.5%         13.1%         4.5%           Malaysia         11.5%         2.1%         12.7%         2.7%           Philippines         11.8%         1.8%         11.1%         3.6%           Singapore         10.0%         -0.5%         9.4%         1.1%           South Korea         7.6%         1.0%         6.0%         1.8%           Taiwan         7.7%         1.4%         9.2%         1.4%           Thailand         9.4%         0.2%         9.5%         1.4%           Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%	Canada	6.0%	1.4%	11.0%	2.0%
Hong Kong         8.4%         2.6%         8.3%         2.6%           India         15.3%         4.9%         14.0%         4.8%           Indonesia         13.1%         3.5%         13.1%         4.5%           Malaysia         11.5%         2.1%         12.7%         2.7%           Phillippines         11.8%         1.8%         11.1%         3.6%           Singapore         10.0%         -0.5%         9.4%         1.1%           South Korea         7.6%         1.0%         6.0%         1.8%           Taiwan         7.7%         1.4%         9.2%         1.4%           Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%           Australia         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%           Bulgaria         12.3%         -1.3%         13.5%         1.0%           Denmark         5.9%         0.3%         4.3%         0.7%	Asia (average)	10.7%	2.0%	10.2%	2.8%
India 15.3% 4.9% 14.0% 4.8% Indonesia 13.1% 3.5% 13.1% 4.5% Malaysia 11.5% 2.1% 12.7% 2.7% Phillippines 11.8% 1.8% 11.1% 3.6% Singapore 10.0% -0.5% 9.4% 1.1% South Korea 7.6% 1.0% 6.0% 1.8% Taiwan 7.7% 1.4% 9.2% 1.4% Thailand 9.4% 0.2% 9.5% 1.4% Vietnam 12.5% 2.7% 7.9% 4.9% Pacific (average) 6.4% 1.3% 6.8% 2.0% Australia 6.4% 1.3% 6.8% 2.0% Europe (average) 7.1% 1.6% 6.7% 2.6% Belgium 4.5% 1.8% 4.4% 2.0% Bulgaria 12.3% -1.3% 13.5% 1.0% Denmark 5.9% 0.3% 4.3% 0.7% France 2.1% 0.3% 2.1% 1.4% Greece 5.0% 0.0% 5.0% 1.3% Ireland 5.0% -0.2% 5.5% 0.9% Italy 2.0% -0.1% 2.2% 1.3% Netherlands 2.7% 0.1% 1.9% 0.9% Norway 7.2% 3.6% 10.3% 2.6% Poland 14.2% -0.6% 12.9% 2.3% Portugal 1.4% 0.6% 1.5% 1.5% 1.2%	China	10.0%	2.0%	11.0%	2.4%
Indonesia         13.1%         3.5%         13.1%         4.5%           Malaysia         11.5%         2.1%         12.7%         2.7%           Phillippines         11.8%         1.8%         11.1%         3.6%           Singapore         10.0%         -0.5%         9.4%         1.1%           South Korea         7.6%         1.0%         6.0%         1.8%           Taiwan         7.7%         1.4%         9.2%         1.4%           Thailand         9.4%         0.2%         9.5%         1.4%           Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%           Australia         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%           Bulgaria         12.3%         -1.3%         13.5%         1.0%           Denmark         5.9%         0.3%         4.3%         0.7%           France         2.1%         0.3%         2.1%         1.4%	Hong Kong	8.4%	2.6%	8.3%	2.6%
Malaysia         11.5%         2.1%         12.7%         2.7%           Phillippines         11.8%         1.8%         11.1%         3.6%           Singapore         10.0%         -0.5%         9.4%         1.1%           South Korea         7.6%         1.0%         6.0%         1.8%           Taiwan         7.7%         1.4%         9.2%         1.4%           Thailand         9.4%         0.2%         9.5%         1.4%           Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%           Australia         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%           Bulgaria         12.3%         -1.3%         13.5%         1.0%           Denmark         5.9%         0.3%         4.3%         0.7%           France         2.1%         0.3%         2.1%         1.4%           Greece         5.0%         0.0%         5.0%         1.3%           H	India	15.3%	4.9%	14.0%	4.8%
Philippines         11.8%         1.8%         11.1%         3.6%           Singapore         10.0%         -0.5%         9.4%         1.1%           South Korea         7.6%         1.0%         6.0%         1.8%           Taiwan         7.7%         1.4%         9.2%         1.4%           Thailand         9.4%         0.2%         9.5%         1.4%           Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%           Australia         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%           Bulgaria         12.3%         -1.3%         13.5%         1.0%           Denmark         5.9%         0.3%         4.3%         0.7%           France         2.1%         0.3%         2.1%         1.4%           Greece         5.0%         0.0%         5.0%         1.3%           Hungary         7.4%         0.4%         7.2%         2.5%           Irela	Indonesia	13.1%	3.5%	13.1%	4.5%
Singapore       10.0%       -0.5%       9.4%       1.1%         South Korea       7.6%       1.0%       6.0%       1.8%         Taiwan       7.7%       1.4%       9.2%       1.4%         Thailand       9.4%       0.2%       9.5%       1.4%         Vietnam       12.5%       2.7%       7.9%       4.9%         Pacific (average)       6.4%       1.3%       6.8%       2.0%         Australia       6.4%       1.3%       6.8%       2.0%         Europe (average)       7.1%       1.6%       6.7%       2.6%         Belgium       4.5%       1.8%       4.4%       2.0%         Bulgaria       12.3%       -1.3%       13.5%       1.0%         Denmark       5.9%       0.3%       4.3%       0.7%         France       2.1%       0.3%       2.1%       1.4%         Greece       5.0%       0.0%       5.0%       1.3%         Hungary       7.4%       0.4%       7.2%       2.5%         Ireland       5.0%       -0.2%       5.5%       0.9%         Italy       2.0%       -0.1%       2.2%       1.3%         Netherlands       2.7%	Malaysia	11.5%	2.1%	12.7%	2.7%
South Korea         7.6%         1.0%         6.0%         1.8%           Taiwan         7.7%         1.4%         9.2%         1.4%           Thailand         9.4%         0.2%         9.5%         1.4%           Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%           Australia         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%           Bulgaria         12.3%         -1.3%         13.5%         1.0%           Denmark         5.9%         0.3%         4.3%         0.7%           France         2.1%         0.3%         2.1%         1.4%           Greece         5.0%         0.0%         5.0%         1.3%           Hungary         7.4%         0.4%         7.2%         2.5%           Ireland         5.0%         -0.2%         5.5%         0.9%           Netherlands         2.7%         0.1%         1.9%         0.9%           Norway <td>Philippines</td> <td>11.8%</td> <td>1.8%</td> <td>11.1%</td> <td>3.6%</td>	Philippines	11.8%	1.8%	11.1%	3.6%
Taiwan         7.7%         1.4%         9.2%         1.4%           Thailand         9.4%         0.2%         9.5%         1.4%           Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%           Australia         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%           Bulgaria         12.3%         -1.3%         13.5%         1.0%           Denmark         5.9%         0.3%         4.3%         0.7%           France         2.1%         0.3%         2.1%         1.4%           Greece         5.0%         0.0%         5.0%         1.3%           Hungary         7.4%         0.4%         7.2%         2.5%           Ireland         5.0%         -0.2%         5.5%         0.9%           Italy         2.0%         -0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland	Singapore	10.0%	-0.5%	9.4%	1.1%
Thailand         9.4%         0.2%         9.5%         1.4%           Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%           Australia         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%           Bulgaria         12.3%         -1.3%         13.5%         1.0%           Denmark         5.9%         0.3%         4.3%         0.7%           France         2.1%         0.3%         2.1%         1.4%           Greece         5.0%         0.0%         5.0%         1.3%           Hungary         7.4%         0.4%         7.2%         2.5%           Ireland         5.0%         -0.2%         5.5%         0.9%           Italy         2.0%         -0.1%         2.2%         1.3%           Netherlands         2.7%         0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland	South Korea	7.6%	1.0%	6.0%	1.8%
Vietnam         12.5%         2.7%         7.9%         4.9%           Pacific (average)         6.4%         1.3%         6.8%         2.0%           Australia         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%           Bulgaria         12.3%         -1.3%         13.5%         1.0%           Denmark         5.9%         0.3%         4.3%         0.7%           France         2.1%         0.3%         2.1%         1.4%           Greece         5.0%         0.0%         5.0%         1.3%           Hungary         7.4%         0.4%         7.2%         2.5%           Ireland         5.0%         -0.2%         5.5%         0.9%           Italy         2.0%         -0.1%         2.2%         1.3%           Netherlands         2.7%         0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland         14.2%         -0.6%         12.9%         2.3%           Portugal	Taiwan	7.7%	1.4%	9.2%	1.4%
Pacific (average)         6.4%         1.3%         6.8%         2.0%           Australia         6.4%         1.3%         6.8%         2.0%           Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%           Bulgaria         12.3%         -1.3%         13.5%         1.0%           Denmark         5.9%         0.3%         4.3%         0.7%           France         2.1%         0.3%         2.1%         1.4%           Greece         5.0%         0.0%         5.0%         1.3%           Hungary         7.4%         0.4%         7.2%         2.5%           Ireland         5.0%         -0.2%         5.5%         0.9%           Italy         2.0%         -0.1%         2.2%         1.3%           Netherlands         2.7%         0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland         14.2%         -0.6%         12.9%         2.3%           Portugal         1.4%         0.6%         1.5%         1.2%	Thailand	9.4%	0.2%	9.5%	1.4%
Australia       6.4%       1.3%       6.8%       2.0%         Europe (average)       7.1%       1.6%       6.7%       2.6%         Belgium       4.5%       1.8%       4.4%       2.0%         Bulgaria       12.3%       -1.3%       13.5%       1.0%         Denmark       5.9%       0.3%       4.3%       0.7%         France       2.1%       0.3%       2.1%       1.4%         Greece       5.0%       0.0%       5.0%       1.3%         Hungary       7.4%       0.4%       7.2%       2.5%         Ireland       5.0%       -0.2%       5.5%       0.9%         Italy       2.0%       -0.1%       2.2%       1.3%         Netherlands       2.7%       0.1%       1.9%       0.9%         Norway       7.2%       3.6%       10.3%       2.6%         Poland       14.2%       -0.6%       12.9%       2.3%         Portugal       1.4%       0.6%       1.5%       1.2%	Vietnam	12.5%	2.7%	7.9%	4.9%
Europe (average)         7.1%         1.6%         6.7%         2.6%           Belgium         4.5%         1.8%         4.4%         2.0%           Bulgaria         12.3%         -1.3%         13.5%         1.0%           Denmark         5.9%         0.3%         4.3%         0.7%           France         2.1%         0.3%         2.1%         1.4%           Greece         5.0%         0.0%         5.0%         1.3%           Hungary         7.4%         0.4%         7.2%         2.5%           Ireland         5.0%         -0.2%         5.5%         0.9%           Italy         2.0%         -0.1%         2.2%         1.3%           Netherlands         2.7%         0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland         14.2%         -0.6%         12.9%         2.3%           Portugal         1.4%         0.6%         1.5%         1.2%	Pacific (average)	6.4%	1.3%	6.8%	2.0%
Belgium       4.5%       1.8%       4.4%       2.0%         Bulgaria       12.3%       -1.3%       13.5%       1.0%         Denmark       5.9%       0.3%       4.3%       0.7%         France       2.1%       0.3%       2.1%       1.4%         Greece       5.0%       0.0%       5.0%       1.3%         Hungary       7.4%       0.4%       7.2%       2.5%         Ireland       5.0%       -0.2%       5.5%       0.9%         Italy       2.0%       -0.1%       2.2%       1.3%         Netherlands       2.7%       0.1%       1.9%       0.9%         Norway       7.2%       3.6%       10.3%       2.6%         Poland       14.2%       -0.6%       12.9%       2.3%         Portugal       1.4%       0.6%       1.5%       1.2%	Australia	6.4%	1.3%	6.8%	2.0%
Bulgaria       12.3%       -1.3%       13.5%       1.0%         Denmark       5.9%       0.3%       4.3%       0.7%         France       2.1%       0.3%       2.1%       1.4%         Greece       5.0%       0.0%       5.0%       1.3%         Hungary       7.4%       0.4%       7.2%       2.5%         Ireland       5.0%       -0.2%       5.5%       0.9%         Italy       2.0%       -0.1%       2.2%       1.3%         Netherlands       2.7%       0.1%       1.9%       0.9%         Norway       7.2%       3.6%       10.3%       2.6%         Poland       14.2%       -0.6%       12.9%       2.3%         Portugal       1.4%       0.6%       1.5%       1.2%	Europe (average)	7.1%	1.6%	6.7%	2.6%
Denmark         5.9%         0.3%         4.3%         0.7%           France         2.1%         0.3%         2.1%         1.4%           Greece         5.0%         0.0%         5.0%         1.3%           Hungary         7.4%         0.4%         7.2%         2.5%           Ireland         5.0%         -0.2%         5.5%         0.9%           Italy         2.0%         -0.1%         2.2%         1.3%           Netherlands         2.7%         0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland         14.2%         -0.6%         12.9%         2.3%           Portugal         1.4%         0.6%         1.5%         1.2%	Belgium	4.5%	1.8%	4.4%	2.0%
France         2.1%         0.3%         2.1%         1.4%           Greece         5.0%         0.0%         5.0%         1.3%           Hungary         7.4%         0.4%         7.2%         2.5%           Ireland         5.0%         -0.2%         5.5%         0.9%           Italy         2.0%         -0.1%         2.2%         1.3%           Netherlands         2.7%         0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland         14.2%         -0.6%         12.9%         2.3%           Portugal         1.4%         0.6%         1.5%         1.2%	Bulgaria	12.3%	-1.3%	13.5%	1.0%
Greece         5.0%         0.0%         5.0%         1.3%           Hungary         7.4%         0.4%         7.2%         2.5%           Ireland         5.0%         -0.2%         5.5%         0.9%           Italy         2.0%         -0.1%         2.2%         1.3%           Netherlands         2.7%         0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland         14.2%         -0.6%         12.9%         2.3%           Portugal         1.4%         0.6%         1.5%         1.2%	Denmark	5.9%	0.3%	4.3%	0.7%
Hungary       7.4%       0.4%       7.2%       2.5%         Ireland       5.0%       -0.2%       5.5%       0.9%         Italy       2.0%       -0.1%       2.2%       1.3%         Netherlands       2.7%       0.1%       1.9%       0.9%         Norway       7.2%       3.6%       10.3%       2.6%         Poland       14.2%       -0.6%       12.9%       2.3%         Portugal       1.4%       0.6%       1.5%       1.2%	France	2.1%	0.3%	2.1%	1.4%
Ireland         5.0%         -0.2%         5.5%         0.9%           Italy         2.0%         -0.1%         2.2%         1.3%           Netherlands         2.7%         0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland         14.2%         -0.6%         12.9%         2.3%           Portugal         1.4%         0.6%         1.5%         1.2%	Greece	5.0%	0.0%	5.0%	1.3%
Italy         2.0%         -0.1%         2.2%         1.3%           Netherlands         2.7%         0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland         14.2%         -0.6%         12.9%         2.3%           Portugal         1.4%         0.6%         1.5%         1.2%	Hungary	7.4%	0.4%	7.2%	2.5%
Netherlands         2.7%         0.1%         1.9%         0.9%           Norway         7.2%         3.6%         10.3%         2.6%           Poland         14.2%         -0.6%         12.9%         2.3%           Portugal         1.4%         0.6%         1.5%         1.2%	Ireland	5.0%	-0.2%	5.5%	0.9%
Norway     7.2%     3.6%     10.3%     2.6%       Poland     14.2%     -0.6%     12.9%     2.3%       Portugal     1.4%     0.6%     1.5%     1.2%	Italy	2.0%	-0.1%	2.2%	1.3%
Poland         14.2%         -0.6%         12.9%         2.3%           Portugal         1.4%         0.6%         1.5%         1.2%	Netherlands	2.7%	0.1%	1.9%	0.9%
Portugal 1.4% 0.6% 1.5% 1.2%	Norway	7.2%	3.6%	10.3%	2.6%
3	Poland	14.2%	-0.6%	12.9%	2.3%
Romania 5.5% -1.6% 6.0% 1.3%	Portugal	1.4%	0.6%	1.5%	1.2%
	Romania	5.5%	-1.6%	6.0%	1.3%

	2016 medical	2016	2017 projected	2017
	trend rate experience*	estimated inflation <sup>†</sup>	medical trend rate*	forecast inflation rate <sup>†</sup>
Russia	10.2%	7.0%	9.3%	4.5%
Serbia	23.0%	1.1%	12.6%	2.6%
Spain	4.7%	-0.2%	4.6%	2.4%
Sweden	5.2%	1.1%	3.9%	1.4%
Switzerland	3.6%	-0.4%	3.9%	0.4%
Turkey	9.0%	7.8%	10.2%	10.1%
Ukraine	13.0%	13.9%	12.5%	11.5%
United Kingdom	5.9%	0.6%	6.1%	2.5%
MEA (average)	12.4%	3.7%	14.9%	6.1%
Bahrain	10.8%	2.8%	14.0%	1.3%
Egypt	26.4%	10.2%	37.3%	22.0%
Oman	6.7%	1.1%	5.6%	4.1%
Qatar	13.3%	2.7%	16.2%	2.6%
Saudi Arabia	5.6%	3.5%	5.5%	3.8%
United Arab Emirates	11.8%	1.8%	11.0%	2.8%
Latin America (average)	15.1%	8.6%	13.5%	5.6%
Argentina	50.3%	40.7%**	32.2%	21.5%**
Brazil	19.7%	6.4%	17.1%	4.1%
Chile	8.1%	2.7%	11.7%	2.7%
Colombia	10.0%	7.9%	12.9%	5.2%
Dominican Republic	4.5%	3.3%	4.6%	1.2%
Mexico <sup>◊</sup>	13.0%	3.4%	12.1%	4.9%
Panama	9.7%	1.5%	11.1%	1.9%
Peru	5.8%	3.2%	6.5%	3.3%

<sup>\*</sup>The above medical trend rates reflect insurer survey results and may not be MMB's view.

<sup>†</sup> Sources for inflation rates include:

<sup>·</sup> International Monetary Fund, World Economic Outlook Database, April 2017

International Labour Organization, World Employment and Social Outlook - Trends 2016

<sup>&</sup>lt;sup>‡</sup> Average of 48 participating countries with an acceptable number of responses

<sup>\*\*</sup> Source, Mercer Argentina Spot Survey (March 2017) . The source of the inflation data is LatinFocus Consensus Forecast.

 $<sup>^{\</sup>circ}\,\text{Macroeconomic}$  variables in Mexico are likely to affect stated trend rates.

Inflation rate information is strictly for general reference purpose; Mercer gives no guarantees as to their accuracy and will not accept liability for decisions based on them.

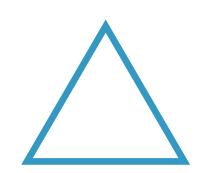
While some markets are seeing medical inflation rates stabilize, others continue to experience very high costs for health care. MMB country leaders were consulted in each market where insurers report considerably higher trends. The most prevalent causes for increased medical spend were higher costs for medicines and technologies. The introduction of new medications and technologies can offer new hope for better treatments, but the adoption of new technologies also introduces challenges for employers, payers, policymakers and regulators in assessing the value these technologies bring at the higher price point. A recent report from the Organization for Economic Co-operation and Development (OECD) articulates the inherent tension in these decisions:

"The prices paid for technologies must reflect their real-world health benefits compared to alternatives, and be adjusted based on evidence about their actual impact. Payers must be equipped with the necessary powers to adjust prices and withdraw payment for ineffective technologies. And more debate is needed on ways to deal with the budget impact of highly effective, but very costly treatments. Developing the 'right' type of innovation — safe, effective and affordable, aligned to population health needs — must be actively encouraged."<sup>2</sup>

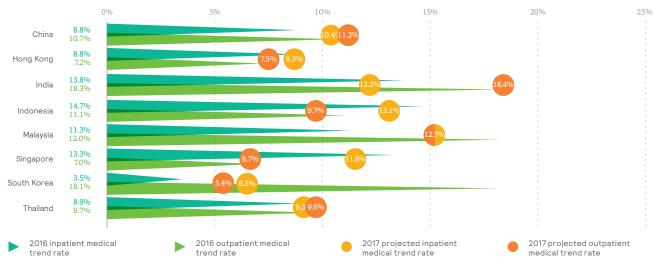


Access and demand for more innovation will continue. Employers act as advocates for their employees, and they wish to ensure that care is reimbursed based on established outcomes and that it embraces disruptive, value-based models. Depending on region, employers are beginning to explore new options for guaranteeing affordable access to quality care for their employees, such as evidence-based benefits design, centers of excellence, medical audits, second medical opinions and new patient care technologies.

For a closer look into medical spend in Asia, surveyed insurers provided data on the medical trend rates they are experiencing and projecting for inpatient and outpatient services:



# Asia Medical Trend Rates: Inpatient vs. Outpatient



## Examples of Changes in Medical Trend Rates Across Various Regions

Regional trends show small but meaningful changes in shifts from inpatient to outpatient. Regulatory activity triggers both positive and negative trends and will be a major area of

attention in the US for 2017. Lastly, currency fluctuations are a cause for higher spend in several countries including Mexico and Egypt.

The trend reported by Canadian carriers is very conservative, as can be seen in the 11% projected medical trend rate. This could be attributed to two factors: 1) the expectation of a flood of specialty drugs; and 2) higher utilization of paramedical practitioners (for example, massage therapists).

In Ireland, the favorable drivers of premiums in 2016 could have been the stabilizing effect of Lifetime Community rating and social security resources integration (HSE), which was introduced in 2015 and ushered in 70,000 new members to the private health insurance market. Similarly, the recovering economy has also had a positive effect on the health insurance market, with the number of insured people increasing by 8.1% by January 1, 2017. This jump has reduced the average age of those insured, and hence somewhat reduced the pressure for price increases. However, price increases still have significant drivers (for example, public hospital charges/aging population) and these will continue in 2017 and beyond.

In Mexico, approximately 30%–40% of total health cost is estimated to come from an uncoordinated private healthcare system focused on disease treatments rather than on prevention, relying on imported technologies and medicines utilization. We will monitor other macroeconomic variables in Mexico more closely over the next couple of years, incorporating the impact of the devaluation of the peso over the past year.

In 2015, Malaysia experienced a surge in medical costs as a result of the implementation of government service taxes and an increase in physician fees. The trend stabilized in 2016, and carriers expect it to continue in 2017.

For information on US health trends, refer to Mercer's National Survey of Employer-Sponsored Health Plans 2015 report.

In the US, health benefit cost growth slowed in 2016, due in part to continued emphasis on consumer-driven healthcare and other cost-management efforts by employers. However, employers expect sharper cost growth in 2017.

Medical plan cost trends for the US are drawn from Mercer's National Survey of Employer-Sponsored Health Plans, which uses a national probability sample. Our most recent survey was fielded in mid-2016 and attracted the participation of 2,544 employers. In 2016, the average total health benefit cost per employee rose by just 2.4%, the lowest increase since 2013 and, before that, since 1997. One factor of this small increase was the movement of employees into consumer-directed high-deductible health plans (HDHPs) - enrollment in these low-cost plans jumped to 29% of all covered workers in 2016, up from 25% in 2015. Adding HDHPs has been a key strategy for employers concerned about avoiding the excise tax on high-cost plans, a provision in the Affordable Care Act (ACA) that has been twice delayed but is still slated to go into effect in 2020. At the time of writing, lawmakers were working on bills to repeal and replace the ACA, so the fate of the excise tax is unclear.

Employers predict that in 2017 their total health benefit cost per employee will rise by 4.1% on average. This increase reflects changes employers will make to hold down cost, such as switching carriers, adding lower-cost medical plans or changing plan designs. If they made no changes to their current plans, they estimate that cost would rise by an average of 6.3%. This "underlying trend" is several times the rate of inflation and growth in workers' earnings — which is why at least half of US employers typically make changes to their plans each year to hold down cost growth to a more sustainable level.



90%

Globally, cancer and diseases of the circulatory system remain the top two most costly claims reported by most insurers, although respiratory conditions have replaced gastrointestinal diseases as the third-top claim category in terms of cost.

The condition/illness with the highest frequency of claims globally was respiratory conditions, followed by circulatory system and gastrointestinal disease.

In Asia, where inpatient and outpatient claims are tracked more readily by many insurers, cancer remains the leading inpatient claim category in terms of cost. The outpatient data confirm the growing incidence of respiratory conditions and a noticeable rise in infectious diseases, now the third most costly claim behind gastrointestinal diseases.

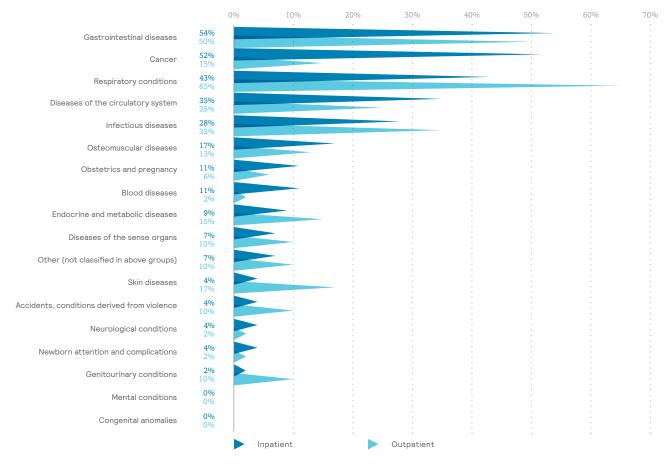
Cancer and circulatory disease are associated with aging populations, and higher costs are associated with delayed diagnosis. Experts are looking for ways to advance prevention and promotion strategies.<sup>3</sup> Given the complexity and increasing personalization of cancer care, guaranteeing that employees have access to second opinions and centers of excellence can ensure better outcomes. It is well appreciated that there is a high degree of variability in hospital outcomes, and treatment options reflect the center of care, not the personal characteristics of the patient. Employers are looking for payers to offer them and their

employees better transparency on outcomes and not just costs.4

Changes to lifestyles can alter or delay the costs associated with chronic disease. Diabetes prevention programs that address physical activity and nutrition were first described

in Finland and now broadly adopted in many countries. They can delay the onset of diabetes by 58%. Web-based and phone-based options have allowed for quicker access with the same results. CMS, the largest health care payer in the US, has authorized reimbursement for digital programs.<sup>5</sup>



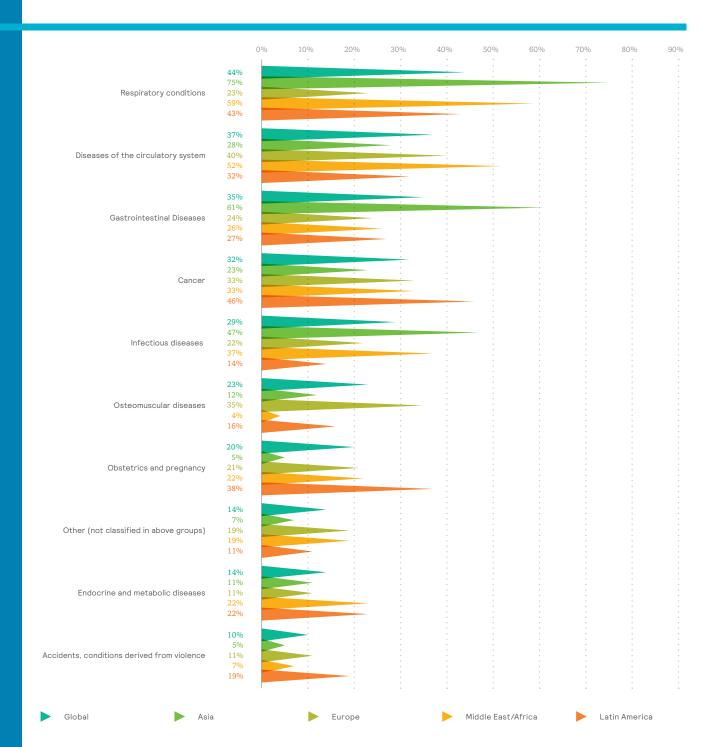


<sup>3.</sup> Coe C, de Beyer J. "The Imperative for Health Promotion in Universal Health Coverage," Global Health: Science and Practice, Volume 2:1 (2014), pp. 10-22.

<sup>4.</sup> Greenburg C, Lipsitz S, Hughes M et al. "Institutional Variation in the Surgical Treatment of Breast Cancer," 2011, available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3428030.

<sup>5.</sup> National Institute of Diabetes and Digestive and Kidney Diseases. "Questions & Answers about the Diabetes Prevention Program Outcomes Study," 2009, available at https://www.niddk.nih.gov/news/for-reporters/diabetes-prevention-program-outcomes-study/Pages/default.aspx

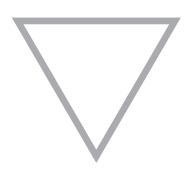
Based on (frequency) incidence of claims, what were the top three causes of claims in 2016 based on your book of group or overall business?



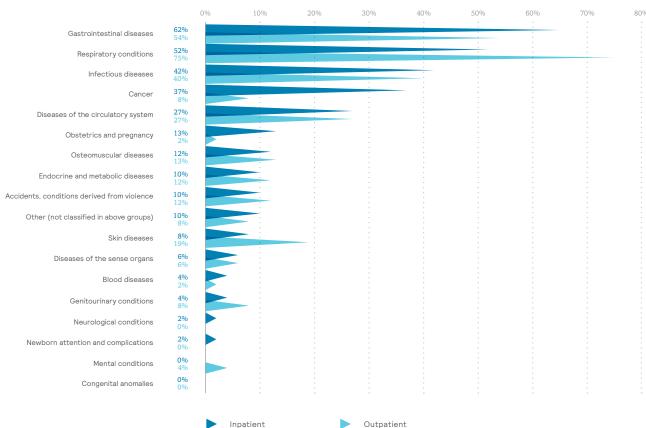
In Asia, infectious diseases are now among the top three most frequent claims, with diseases of the circulatory system and cancer reported less frequently than reported in our previous year's survey. Infectious diseases also rose in terms of frequency in the Middle East.

Latin America's data show a noticeable change in frequency of claims, with cancer now leading. This could be attributed to the way in which new medicines and technologies are used in the treatment of cancer. (Refer to chart on page 12.)

In Europe, the five primary claims categories in terms of frequency remained unchanged, with diseases of the circulatory system leading the list this year.



# Asia Frequency of Claims: Inpatient vs. Outpatient





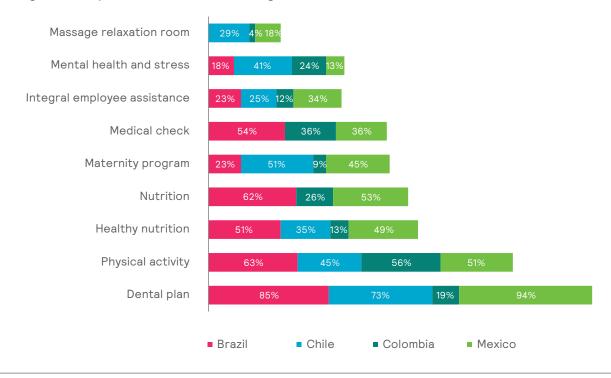


	Global	Asia	Europe	MEA	LATAM
1	Metabolic and cardiovascular risk	Metabolic and cardiovascular risk	Metabolic and cardiovascular risk	Metabolic and cardiovascular risk	Metabolic and cardiovascular risk
2	Dietary risk	Dietary risk	Emotional/mental risks	Dietary risk	Dietary risk
3	Emotional/mental risks	Environmental risk	Dietary risk	Environmental risk	Occupational risk
4	Occupational risk	Occupational risk	Occupational risk	Childhood and maternal undernutrition, including maternity-care-related risks	Emotional/mental risks
5	Environmental risk	Emotional/mental risks	Tobacco smoke	Tobacco smoke	Environmental risk

Insurers view metabolic and cardiovascular risk as the greatest influence on cost. Metabolic risk is often defined as a prediabetic state in which weight, blood pressure and genetics play a role. Diabetes prevention programs offered through government entities, carriers or employers have all shown success in managing this risk.<sup>6</sup>

In Europe, emotional/mental risks are perceived as a higher health risk than poor diet by almost 20% of responding insurers. Employees are looking for employer support in maintaining healthy physical and emotional lives. We noted that in our *Benchmark MMB Benefits 2015–2016* survey of organizations across Latin America, the prevalence of work/life and other voluntary health programs continues to increase, as shown in the chart to the right.

### Regional Comparison: Prevalence of Integral Health Benefits



<sup>6.</sup> Adams S, Wiley D, Fargeix A et al. "Employer-Based Screening for Diabetes and Prediabetes in an Integrated Health Care Delivery System." 2016, available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4636035/.

Vojta D, Koehler T, Longjohn M et al. "A Coordinated National Model for Diabetes Prevention," American Journal of Preventative Medicine, Volume 44:4 (2013), pp. S301-S306,

available at http://www.ajpmonline.org/article/S0749-3797(13)00026-3/fulltext . Earnest C, Church T. "Evaluation of a Voluntary Worksite Weight Loss Program on Metabolic Syndrome," Metabolic Syndrome and Related Disorders, Volume 13:9 (2015), available at http://online.liebertpub.com/doi/full/10.1089/met.2015.0075

# The Importance of Personalizing Health

Thomsons Online's UK Employee Benefits Watch 2016/17 report found that "employers are struggling to transform outdated approaches to benefits and fully support workers' financial, physical and mental wellness. Over half of employees would prefer an allowance to support their wellness needs, but only 4% of UK employers are offering this and 76% are not even considering the approach".8 The report found that changing the way they think about employee wellness to focus on prevention rather than cure has been difficult for UK employers — many don't offer the flexibility in benefits that encourage employees to make choices that support good health. Understanding this struggle is the first step employers can take to improving benefit offerings that can improve health, simply through employee life choices.

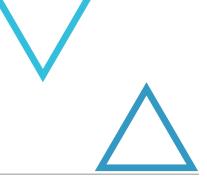
"MMB believes that in order to move forward into this new world of healthcare, you must use data, technology and information in ways you've never used them before to develop programs personalized to the health situation of every individual," says Jean Moore, US Leader of Specialty and Innovations in Mercer's Health Management Consulting practice.

"Personalizing your healthcare design means your employees get the services or support they need, whether they are caring for a family member with cancer or are simply trying to lose weight and get healthy. Everybody has a different healthcare issue. At MMB, we're working to develop programs you can offer your employees that meet their individual needs and those of their families."

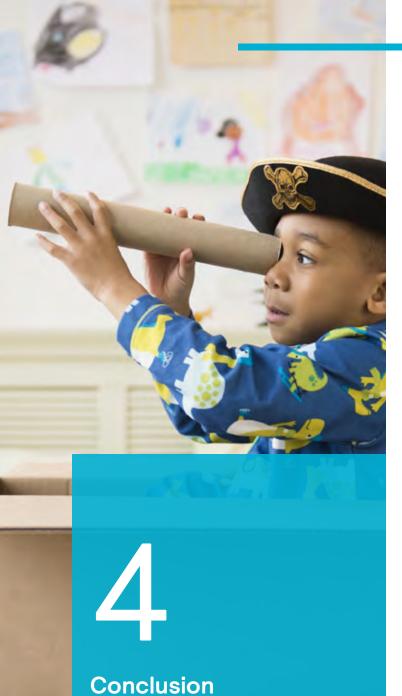
Taking this further, personalization should also be designed to address prevention, early diagnosis and timely attention to long-term care. As Diego Ramirez, a leader in MMB's global health consulting team points out, "Employees are not experts in health, so marketplace options must be cleverly curated by employers working closely with their advisors in this area."







<sup>8.</sup> Thomsons Online. UK Employee Benefits Watch 2016/17, 2017, available at https://www.thomsons.com/resources/whitepapers/uk-employee-benefits-watch-201617

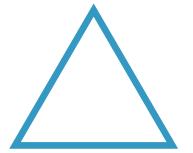


Although medical trend rates on average remain high, employers have a role in influencing this trend. Employers and their employees can affect both cost and outcomes and ensure access and quality with a strategy that asks the following questions:

- Are we paying for value? Ensure plan designs incentivize the results: do we cover prevention? Do we pay for crisis care?
- Is our plan driving increased access but overlooking ways to ensure quality?
- Do our benefits address the risks present in our employee population? Leverage better data and technology to cleverly design and integrate resources (including public system health care resources).
- Are our employees engaged? Are we using technology to enhance the employee benefits experience? Obtain a third-party audit, along with advocacy and quality assurance to help employees navigate a cost-effective health benefits system.

As global medical trend rates continue to rise at an average annual rate of 9.9 % — more than three times the rate of inflation — now is the time for employers to take action and play a role in shaping the healthcare market.





Insurers from 63 countries participated in this year's survey.

Region	Country
Asia Pacific	Australia
	China
	Hong Kong
	India
	Indonesia
	Japan
	Malaysia
	New Zealand
	Philippines
	Singapore
	South Korea
	Taiwan
	Thailand
	Vietnam
Americas	Argentina
	Brazil
	Canada
	Chile
	Colombia
	Dominican Republic
	Guatemala
	Mexico
	Panama
	Peru
	Venezuela
Middle East & Africa	Bahrain
	Egypt
	Ghana
	Jordan
	Kenya
	Lebanon
	Nigeria
	Oman
	Qatar
	Saudi Arabia
	United Arab Emirates

Region	Country
Europe	Austria
	Belgium
	Bulgaria
	Czech Republic
	Denmark
	France
	Greece
	Hungary
	Ireland
	Italy
	Kazakhstan
	Latvia
	Lithuania
	Montenegro
	Netherlands
	Norway
	Poland
	Portugal
	Romania
	Russia
	Serbia
	Spain
	Sweden
	Switzerland
	Turkey
	Ukraine
	United Kingdom

# **About This Survey**

Appendix

The following insurers agreed to having their names published as participants in the survey; a further 93 insurers participated on a confidential basis.

Country	Insurance company
Argentina	SMG ART
Argentina	Medife
Australia	nib Health Funds
Belgium	Allianz Benelux
Belgium	DKV Belgium
Belgium	AG Insurance
Brazil	NotreDame Intermédica Saúde S/A
Brazil	Care Plus Medicina Assistencial LTDA
Bulgaria	ZAD Bulgaria AD
Bulgaria	UNIQA Life plc
Canada	Green Shield Canada
Chile	Metlife
China	Ping An Annuity Insurance Company,Ltd. SH Branch
China	Sunlife Everbright Life Insurance Co.Itd (Shanghai branch)
China	AIA
China	Generali China Life Insurance Company
China	Taiping Pension Co., Ltd
Colombia	Generali Colombia
Colombia	AXA Colaptria
Colombia	Pan American Life de Colombia
Colombia	Seguros Bolivar
Czech Republic	Ceska Pojistovna
Denmark	PFA Pension
Denmark	Mølholm Forsikring A/S
Denmark	Dansk Sundhedssikring
Egypt	Orient Takaful Insurance Company
Egypt	Prime Health
Egypt	Misr Ins. Company
Egypt	AROPE insurance company
Ghana	Metropolitan Health Insurance Ghana Limited
Greece	Groupama
Greece	Generali Hellas
Greece	INTERAMERICAN
Guatemala	Aseguradora General
Hong Kong	Sun Life Hong Kong Limited
Hong Kong	Generali Hong Kong
Hong Kong	MassMutual Asia Ltd
Hong Kong	Manulife
Hong Kong	Blue Cross (Asia-Pacific) Insurance Limited
Hungary	Generali Biztosító Zrt.
Hungary	Vienna Life Vienna Insurance Group Biztosító zrt.
India	Star Health and Allied Insurance Company Limited

Country	Insurance company
Indonesia	PT Avrist Assurance
Indonesia	PT Hanwha Life Insurance Indonesia
Indonesia	PT Lippo General Insurance TBK
Indonesia	PT Generali Indonesia Life
Indonesia	PT. Asuransi Sinar Mas
Indonesia	PT Asuransi Reliance Indonesia
Ireland	Laya Healthcare
Ireland	Vhi Healthcare
Italy	Reale Mutua di Assicurazioni
Italy	AXA Assicurazioni
Kazakhstan	Interteach
Kenya	UAP Insurance Company Limited
Latvia	ERGO Life Insurance SE Latvian Branch
Lebanon	Allianz SNA s.a.l.
Lithuania	Compensa Life Vienna Insurance Group SE Lithuanian Branch
Malaysia	AmMetLife Insurance Berhad
Malaysia	AIA Bhd.
Malaysia	Tokio Marine Life Insurance (Malaysia) Bhd
Malaysia	Great Eastern Life Insurance (Malaysia) Berhad
Mexico	AXA Seguros
Mexico	Seguros Monterrey New York Life
Mexico	Seguros Atlas, S.A.
Mexico	Allianz seguros
New Zealand	UniMed
Nigeria	Healthcare International Nigeria Limited
Norway	Protector Forsikring ASA
Norway	If
Oman	Oman Insurance Company (Oman)
Oman	Oman United Insurance Company SAOG
Oman	Al Madina Insurance Company SAOG
Panama	Generali Panama
Panama	Assicurazioni Generali
Panama	ASSA Compañía de Seguros, S.A.
Panama	MAPFRE Panama
Panama	Blue Cross Blue Shield of Panama
Peru	RIMAC Seguros
Peru	MAPFRE Peru
Peru	Pacifico
Philippines	First Life Financial Company, Inc.
Philippines	The Insular Life Assurance Company, LTD.
Philippines	Medicard Philippines Inc.
Poland	TU ZDROWIE S.A.

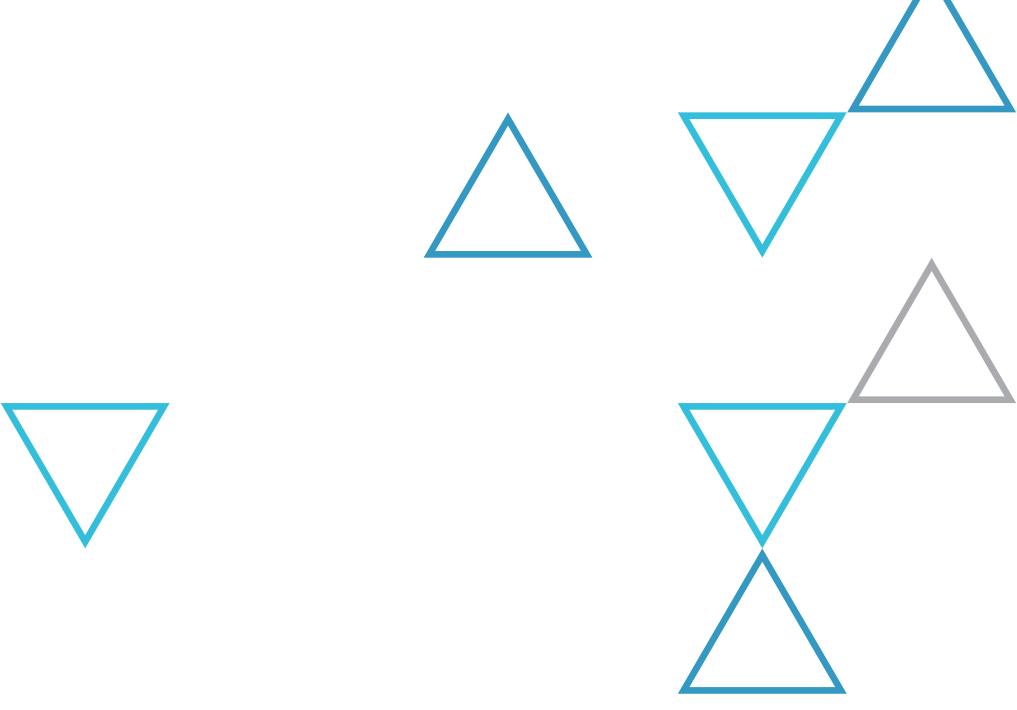
Country	Insurance company
Poland	Allianz Poland
Poland	Medicover
Poland	Compensa
Poland	Signal Iduna
Poland	PZU Życie SA
Portugal	Seguradoras Unidas, SA
Romania	Groupama Asigurari SA
Russia	VTB Inshurance
Russia	Renaissance Insurance
Russia	RESO-Garantia
Russia	MetLife
Russia	Ingosstrakh Insurance Company
Russia	AlfaStrakhovanie PLC
Saudi Arabia	Allianz Saudi Fransi Cooperative Insurance Company
Serbia	Uniqa insurance
Serbia	Generali Osiguranje Serbia
Singapore	Aviva Ltd
Spain	AXA Seguros Generales
Spain	Cigna Life Insurance Company of Europe
Sweden	Euro Accident Health & Care Insurance AB
Sweden	Länsförsäkringar
Switzerland	Helsana Versicherungen AG
Taiwan	Fubon Life Insurance Co., Ltd.
Taiwan	Nan Shan
Taiwan	AIA International Limited Taiwan Branch
Thailand	Tokio Marine Life Insurance (Thailand) PCL
Thailand	Krungthai-AXA Life Insurance Co,Ltd
Thailand	Allianz Ayudhya Assurance Pcl.
Thailand	Muang Thai Life Assurance PCL.
Thailand	Bangkok Life Assurance (PCL)
Turkey	Allianz Sigorta A.Ş.
UAE	Qtar Insurance Company
UAE	Oman Insurance Company
UK	VitalityHealth
UK	AXA PPP Healthcare
UK	Aviva Health UK
UK	BUPA
Ukraine	PZU Ukraine
Ukraine	INGO Ukraine
Ukraine	AXA Insurance (Ukraine)
Venezuela	Mapfre
Venezuela	Mercantil Seguros
Vietnam	Baoviet Insurance Corporation

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