# **GBD PROFILE: IRELAND**

## GLOBAL BURDEN OF DISEASES, INJURIES, AND RISK FACTORS STUDY 2010

The Global Burden of Disease Study 2010 (GBD 2010) is a collaborative project of nearly 500 researchers in 50 countries led by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington. It is the largest systematic scientific effort in history to quantify levels and trends of health loss due to diseases, injuries, and risk factors. GBD serves as a global public good to inform evidence-based policymaking and health systems design.

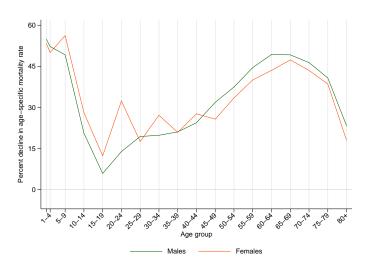
#### PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Ireland, ischemic heart disease, trachea, bronchus, and lung cancers, and cerebrovascular disease were the highest ranking causes in 2010.
- Of the 25 most important causes of burden, as measured by disability-adjusted life years (DALYs), ischemic heart disease showed the largest decrease, falling by 40% from 1990 to 2010.
- The leading risk factor in Ireland is dietary risks.

### ALL-CAUSE MORTALITY RATE

- This chart shows the decline in mortality rate at every age range. The higher points on the chart indicate that declines in mortality rates were faster in those age groups between 1990 and 2010.
- The greatest reductions in all-cause mortality rate were experienced by females aged 5-9 years (56%). Males aged 15-19 years saw the smallest decrease in mortality rate (6%).

Percent decline in age-specific mortality rate by sex from 1990-2010 in Ireland



#### CAUSES OF PREMATURE DEATH

Years of life lost (YLLs) quantify premature mortality by weighting younger deaths more than older deaths.

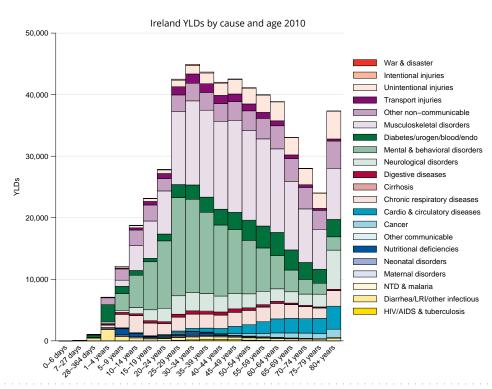
	Ranks for top 25 cause	s of YLLs 1990-2010.	Ireland		
# YLLs in thous				# YLLs in thousa	nds
(% of total)	Rank and disorder 1990		Rank and disorder 2010	(% of total)	% change
142 (25.1%)	1 Ischemic heart disease		1 Ischemic heart disease	81 (16.8%)	-44
44 (7.7%)	2 Stroke	}	2 Lung cancer	30 (6.3%)	6
29 (5.2%)	3 Lung cancer		3 Stroke	27 (5.7%)	-39
27 (4.8%)	4 COPD	}- <u>-</u>	4 Self-harm	22 (4.5%)	40
23 (4.1%)	5 Lower respiratory infections	}/	5 Colorectal cancer	19 (3.9%)	4
22 (3.8%)	6 Road injury		6 COPD	18 (3.7%)	-34
18 (3.2%)	7 Colorectal cancer	<b>/</b> //	7 Lower respiratory infections	17 (3.5%)	-27
17 (2.9%)	8 Congenital anomalies	<b>}</b> /	8 Breast cancer	15 (3.2%)	3
16 (2.9%)	9 Self-harm	Y >>< `	9 Road injury	13 (2.7%)	-45
15 (2.6%)	10 Breast cancer		10 Congenital anomalies	11 (2.2%)	-36
11 (2.0%)	11 Preterm birth complications	<b>.</b> /	11 Pancreatic cancer	9 (1.8%)	23
9 (1.6%)	12 Other cardio & circulatory		12 Cirrhosis	9 (1.8%)	134
9 (1.6%)	13 Stomach cancer	トノニナ	13 Other cardio & circulatory	8 (1.7%)	-12
7 (1.2%)	14 Diabetes		14 Preterm birth complications	8 (1.7%)	-30
7 (1.2%)	15 Pancreatic cancer		15 Brain cancer	7 (1.5%)	16
6 (1.1%)	16 Brain cancer		16 Alzheimers disease	7 (1.5%)	164
6 (1.1%)	17 Prostate cancer	}	17 Drug use disorders	7 (1.5%)	870
6 (1.0%)	18 Chronic kidney disease	\	18 Prostate cancer	7 (1.4%)	15
5 (1.0%)	19 Leukemia	$\mathbb{N} \setminus \mathbb{N}$	19 Diabetes	6 (1.3%)	-7
5 (0.9%)	20 Esophageal cancer	}` <b>-</b>	20 Stomach cancer	6 (1.3%)	-28
5 (0.8%)	21 Ovarian cancer	/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	21 Esophageal cancer	6 (1.2%)	21
4 (0.8%)	22 Non-Hodgkin lymphoma		22 Falls	6 (1.2%)	38
4 (0.8%)	23 Falls	1 The second	23 Leukemia	6 (1.2%)	2
4 (0.8%)	24 Cirrhosis		24 Ovarian cancer	5 (1.1%)	18
4 (0.7%)	25 SIDS	1-/-	25 Non-Hodgkin lymphoma	5 (1.1%)	21
	34 Alzheimers disease	1/	26 Chronic kidney disease		
	67 Drug use disorders	/	·43 SIDS		

This chart shows the change in the top 25 causes of YLLs due to premature mortality from 1990 to 2010. Solid lines indicate a cause has moved up in rank or stayed the same. Broken lines indicate a cause has moved down in rank. The causes are color coded by blue for non-communicable diseases, green for injuries, and red for communicable, maternal, neonatal, and nutritional causes of death.

## YEARS LIVED WITH DISABILITY (YLDs)

Years lived with disability (YLDs) are estimated by weighting the prevalence of different conditions based on severity. The top five leading causes of YLDs in Ireland are low back pain, major depressive disorder, neck pain, other musculoskeletal disorders, and falls.

The size of the colored portion in each bar represents the number of YLDs attributable to each cause. The height of each bar shows which age groups had the most YLDs in 2010. The causes are aggregated. For example, musculoskeletal disorders include low back pain and neck pain.



# DISABILITY-ADJUSTED LIFE YEARS (DALYS)

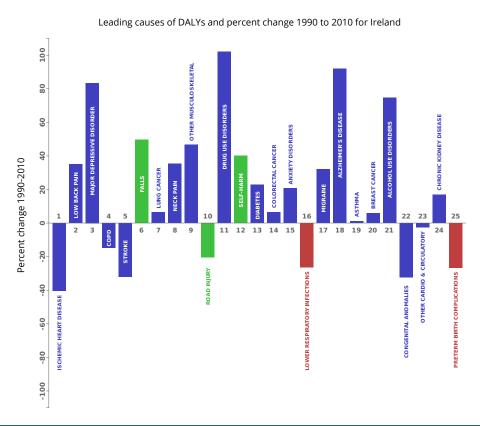
Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Ireland, the top three causes of DALYs in 2010 were ischemic heart disease, low back pain, and major depressive disorder. The only cause to appear in the 10 leading causes of DALYs in 2010 and not 1990 was other musculoskeletal disorders.

The top 25 causes of DALYs are ranked from left to right in order of the number of DALYs they contributed in 2010. Bars going up show the percent by which DALYs have increased since 1990. Bars going down show the percent by which DALYs have decreased. Globally, non-communicable diseases and injuries are generally on the rise, while communicable, maternal, neonatal, and nutritional causes of DALYs are generally on the decline.

Communicable, maternal, neonatal, and nutritional

Non-communicable

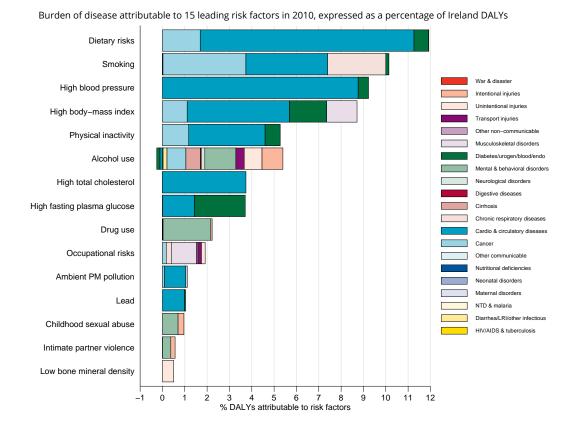
Injuries



#### **RISK FACTORS**

Overall, the three risk factors that account for the most disease burden in Ireland are dietary risks, tobacco smoking, and high blood pressure. The leading risk factors for children under 5 and adults aged 15-49 years were tobacco smoking and dietary risks, respectively, in 2010. Tobacco smoking as a risk factor for children is due to second-hand smoke exposure.

The graph shows the top 15 risk factors for Ireland. The colored portion of each bar represents the specific diseases attributable to that risk factor while bar size represents the percentage of DALYs linked to specific risk factors.



#### COUNTRY BENCHMARKING OF BURDEN OF DISEASE

Understanding the relative performance of Ireland against other comparator countries provides key insight into public health successes and areas where Ireland might be falling behind. The table identifies Ireland's rank across 14 other comparator countries, selected and ordered by income per capita, for five metrics of interest, with 1 indicating the best rank and 15 indicating the worst rank.

- Age-standardized rates are used to make meaningful comparisons across time by adjusting for changes in population size and age structure.
- Life expectancy incorporates mortality, and health-adjusted life expectancy further incorporates years lived in less than ideal health.
- In 2010, Ireland ranked 8th for health-adjusted life expectancy and 9th for age-standardized death rate.

Age-sta	Age-standardized death rates, YLL rates, YLD rates, and life expectancy at birth and health-adjusted life expectancy at birth for 1990 and 2010									10, both										
	Age-standardized death rate (per 100,000)				Age-standardized YLL rate (per 100,000)				Age-standardized YLD rate (per 100,000)				Life	expecta	ncy at bi	rth	Health-adjusted life expectancy at birth			
Country	1990		2010		19	1990		2010		1990		2010		1990		2010		1990		10
	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	LE	Rank	LE	Rank	HALE	Rank	HALE	Rank
Brunei	705	14	576	14	15,283	14	11,525	13	10,711	4	10,502	2	74.4	14	77.2	14	64.9	14	67.3	13
Singapore	665	12	425	7	14,747	12	8,192	6	10,079	1	9,827	1	75.3	10	81	5	66.4	5	71.1	1
United Arab Emirates	795	15	615	15	18,366	15	13,157	15	12,272	15	11,951	15	72.7	15	76.3	15	62.2	15	65.1	15
Kuwait	489	1	511	12	11,796	3	12,133	14	12,022	14	11,867	14	77.8	1	77.4	13	66.1	7	65.9	14
United States	639	10	516	13	15,130	13	11,447	12	10,503	2	10,509	3	75.2	11	78.2	12	65.6	10	67.9	11
Switzerland	532	2	369	2	11,825	4	7,071	2	10,663	3	10,807	4	77.5	4	82.2	2	67.5	1	70.8	2
Netherlands	572	7	426	8	11,847	5	7,988	5	11,355	12	11,492	13	77	6	80.6	8	66.5	4	69.1	7
Ireland	692	13	453	9	14,298	10	8,764	9	11,024	7	11,138	9	74.8	13	79.9	9	65.2	13	68.9	8
Iceland	548	4	365	1	11,310	2	6,675	1	10,763	5	11,108	8	77.6	2	82.2	1	65.5	11	68.4	10
Australia	568	6	389	3	12,381	7	7,722	4	11,153	10	10,979	7	76.9	7	81.5	3	66.4	6	70.1	3
Canada	558	5	422	6	12,079	6	8,546	8	10,806	6	10,845	5	77.2	5	80.6	6	67	2	69.6	5
Austria	622	9	418	5	13,732	9	8,401	7	11,052	8	11,381	11	75.7	9	80.6	7	65.8	8	69.1	6
Sweden	539	3	403	4	11,196	1	7,296	3	11,378	13	11,250	10	77.6	3	81.4	4	66.8	3	69.6	4
Denmark	656	11	504	11	14,383	11	9,592	11	11,209	11	11,456	12	75.2	12	78.9	11	65.3	12	67.9	12
Belgium	615	8	460	10	13,458	8	9,381	10	11,119	9	10,933	6	75.9	8	79.5	10	65.7	9	68.5	9

## COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Ireland relative to the same comparator countries for the leading causes of DALYs in 1990 (top) and 2010 (bottom).

- The columns are ordered by the absolute number of DALYs in Ireland for that particular year, with greatest burden on the left.
- The numbers indicate the rank across countries for each cause in terms of age-standardized DALY rates, with 1 as the best performance and 15 as the worst.

Ranking of leading age	-star	ndard	ized ı	rates	of di	sabili	ty-ad	juste	d life	year	s (DA	LYs) ı	relati	ve to	comp	arato	or cou	ıntrie	s in 1	L990					
Country	Ischemic heart disease	Low back pain	Stroke	COPD	Road injury	Lung cancer	Lower respiratory infections	Major depressive disorder	Neck pain	Falls	Other musculoskeletal	Colorectal cancer	Congenital anomalies	Diabetes	Asthma	Self-harm	Breast cancer	Anxiety disorders	Migraine	Preterm birth complications	Other cardio & circulatory	Drug use disorders	Chronic kidney disease	Stomach cancer	Alzheimer's disease
Brunei	3	5	14	13	10	4	13	8	5	11	11	3	14	15	14	3	3	10	4	6	8	6	15	13	4
Singapore	9	1	13	6	1	10	15	12	7	3	12	14	9	12	6	10	4	11	1	4	7	3	14	15	1
United Arab Emirates	15	4	15	15	15	2	14	15	1	9	1	2	10	13	13	2	1	9	2	15	15	15	9	8	3
Kuwait	12	3	11	2	13	1	11	14	2	4	2	1	15	14	9	1	2	14	3	13	9	2	13	1	2
United States	13	2	3	11	11	14	9	7	15	1	15	7	5	11	8	6	7	15	5	14	10	13	12	2	9
Switzerland	1	6	4	10	8	5	4	10	13	15	6	6	11	7	5	15	10	5	13	1	5	8	3	7	13
Netherlands	4	9	7	7	3	12	3	13	9	5	10	9	8	5	1	4	13	13	8	7	13	1	5	10	6
Ireland	14	13	10	14	5	9	12	1	12	10	9	13	12	4	11	5	11	7	10	10	12	5	11	11	7
Iceland	7	11	2	3	4	8	10	4	14	8	5	4	1	1	3	8	12	2	11	5	2	9	4	12	8
Australia	6	7	5	9	9	7	1	2	6	6	13	12	3	2	15	7	6	12	15	11	3	14	7	4	11
Canada	5	10	1	5	6	11	6	3	8	2	14	8	4	8	10	9	8	3	7	8	1	10	10	3	14
Austria	10	12	12	4	12	6	2	6	11	14	7	10	7	9	2	13	9	6	9	12	11	12	6	14	5
Sweden	8	14	6	1	2	3	8	11	3	7	4	5	6	3	12	12	5	8	14	2	6	4	2	5	10
Denmark	11	15	9	12	7	13	5	5	4	13	8	15	13	10	7	14	15	4	6	3	4	11	1	6	12
Belgium	2	8	8	8	14	15	7	9	10	12	3	11	2	6	4	11	14	1	12	9	14	7	8	9	15
Ranking of leading age	-star	dard	ized ı	rates	of di	sahili	tv-ad	liuste	d life	vear	s (DA	I Ve l	relati	ve to	comr	arato	or col	ıntrie	s in 2	2010					
							,					- 5/	Clac												S
Country	Ischemic heart disease	Low back pain	Major depressive disorder	COPD	Stroke	Falls	Lung cancer	Neck pain	Other musculoskeletal	Road injury	Drug use disorders	Self-harm	Diabetes	Colorectal cancer	Anxiety disorders	Lower respiratory infections	Migraine	Alzheimer's disease	Asthma	Breast cancer	Alcohol use disorders	Congenital anomalies	Other cardio & circulatory	Chronic kidney disease	Preterm birth complications
Brunei	13	رم Low back pain	رم Major depressive disorder	COPD	Stroke	Palls	رم Lung cancer	Neck pain	Other musculoskeletal	Road injury	Drug use disorders	ω Self-harm	Diabetes	رم Colorectal cancer	م Anxiety disorders	Lower respiratory infections	2 Migraine	Alzheimer's disease	Asthma	ν Breast cancer	Alcohol use	Congenital	ر Other cardio &	14	9 Preterm birth
Brunei Singapore	13 11	Low back pain	Major depressive disorder	QQOO 11 1	14 Stroke	Falls	7 Lung cancer	9 G Neck pain	Cther musculoskeletal	T Road injury	Drug use disorders	9 w Self-harm	Diabetes 21	Colorectal cancer	0 Anxiety disorders	Lower respiratory infections	7 Migraine	Alzheimer's disease	1 6 Asthma	Breast cancer	esn loquol nse	Congenital 3	2 Other cardio &	14	Dreterm birth
Brunei	13 11 15	T Cow back pain	Major depressive disorder	2dOO) 11 1 1 13	9 14 12 15	Ealls 5	5 Trung cancer	Neck pain	11 Other musculoskeletal	11 Road injury	Drug use disorders	Self-harm	15 Diabetes 12 13	Colorectal cancer	0 Anxiety disorders	14 Lower respiratory infections	2 Migraine	2 Alzheimer's disease	1 6 Asthma	Breast cancer	asn loued as a 1	Congenital	3 1 15	14 11 13	10 Preterm birth
Brunei Singapore	13 11 15 14	T F Cow back bain	Major depressive disorder	QQOO 11 1 13 4	9 14 12 15 13	4 3 5 7	7 Lung cancer	9 G Neck pain	13 11 1 2	11 15 14	3 1 14 6	Self-harm	15 12 13 14	Colorectal cancer	Anxiety disorders	Tower respiratory infections	7 Migraine	Alzheimer's disease	9 1 6 11	Breast cancer	esn loquol nse	14 3 13 15	3 1 15 10	14 11 13 15	10 2 13 15
Brunei Singapore United Arab Emirates	13 11 15 14 12	Tow back bain	Major depressive disorder	GOO 11 1 13 4 15	9 14 12 15 13 9	slle3 4 3 5 7 2	5 7 2 1 12	5 6 1 2 2 15	13 11 1 1 1 1 1 1	11 15 14 12	3 1 14 6 15	Self-harm	15 12 13 14 14	Colorectal cancer	9 Anxiety disorders	Tower respiratory infections	2	4 Alzheimer's disease	9 1 6 11 10	Breast cancer	9 Alcohol use 12	14 3 13 15 10	3 1 15 10 12	14 11 13 15 12	10 2 13 15 14
Brunei Singapore United Arab Emirates Kuwait	13 11 15 14	T F Cow back bain	Major depressive disorder	QQOO 11 1 13 4	9 14 12 15 13	4 3 5 7	5 Trung cancer	Neck pain	13 11 1 2	11 15 14	3 1 14 6	Self-harm	15 12 13 14	Colorectal cancer	Anxiety disorders	Tower respiratory infections	5 Migraine	Alzheimer's disease	9 1 6 11	Breast cancer	4 2 1 3	14 3 13 15	3 1 15 10	14 11 13 15	10 2 13 15
Brunei Singapore United Arab Emirates Kuwait United States	13 11 15 14 12	Tow back bain	Major depressive disorder	GOO 11 1 13 4 15	9 14 12 15 13 9	slle3 4 3 5 7 2	5 7 2 1 12	5 6 1 2 2 15	13 11 1 1 1 1 1 1	11 15 14 12	3 1 14 6 15	Self-harm	15 12 13 14 14	5 Colorectal cancer 1 6	9 Anxiety disorders	Tower respiratory infections	2	4 Alzheimer's disease	9 1 6 11 10	2 Breast cancer 3 9	9 Alcohol use 12	14 3 13 15 10	3 1 15 10 12	14 11 13 15 12	10 2 13 15 14
Brunei Singapore United Arab Emirates Kuwait United States Switzerland	13 11 15 14 12 2	F Cow back bain 2 6	Major depressive disorder  Major depressive disorder	11 1 13 4 15 12	9 14 12 15 13 9 3	Sleg. 4 3 5 7 2	5 7 2 1 12 6	5 6 1 2 15 14	13 11 2 15 3	11 15 14 12 6	Suppose disorders  Duag use disorders	3 6 2 1 9 14	15 12 13 14 11 7	5 Colorectal cancer 6 4	9 4 Anxiety disorders 5 5	Tower respiratory infections 10 3	2 3 4 Migraine	4 Alzheimer's disease	e Wathma 9 1 10 8	2 Breast cancer 9 Breast cancer 10	4 2 1 3 12 8	14 3 13 15 10	3 1 15 10 12 2	14 11 13 15 12 2	10 2 13 15 14 4
Brunei Singapore United Arab Emirates Kuwait United States Switzerland Netherlands	13 11 15 14 12 2	Tow pack bain 2 5 1 4 3 2 6 10	Major depressive disorder 4	11 1 13 4 15 12 9	eyouts 14 12 15 13 9 3 7	SIRE 4 3 5 7 2 15 9	5 7 2 1 12 6 14	uied young 5 6 1 2 15 14 8	13 11 1 2 15 3 8	11 15 14 12 6 4	supposed as a supposed suppose	Self-harm 2 Self-harm 4	September 2	2 Colorectal cancer 6 4 14	9 9 10 7 13 15 5 11	Superior of the state of the st	12 3 4 Migraine	4 Alzheimer's disease 5 6 9	9 1 6 11 10 8 3	2 Breast cancer 2 Breast cancer 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 2 1 3 12 8 6	14 3 13 15 10 11 6	3 1 15 10 12 2 13	14 11 13 15 12 2 4	10 2 13 15 14 4 6
Brunei Singapore United Arab Emirates Kuwait United States Switzerland Netherlands Ireland	13 11 15 14 12 2 1	uiew pack pairs 5 1 4 3 2 6 10 12	January Major depressive disorder 12 14 3	QQOO 11 1 1 13 4 15 12 9 8	eyouts 14 12 15 13 9 3 7	\$\frac{1}{12}\$	5 7 2 1 12 6 14 10	S 6 1 2 15 14 8 12	13 11 1 2 15 3 8 9	11 15 14 12 6 4 7	suppose of suppose sup	8 Self-harm 2 Self-harm 3 Self-harm 4 Self-harm 4 Self-harm 2 Self	septemon 15 12 13 14 11 7 2 4	5 Colorectal cancer 1 6 4 14 13	9 10 7 13 15 5 11 6	14	auisaius 5 1 2 3 4 11 8 11 1	4 Alzheimer's disease 6 7	ewuhse 9 1 6 11 10 8 3 12	2 4 1 3 9 10 14 12	95	14 3 13 15 10 11 6 12	3 1 15 10 12 2 13 <b>9</b>	14 11 13 15 12 2 4	10 2 13 15 14 4 6 8
Brunei Singapore United Arab Emirates Kuwait United States Switzerland Netherlands Ireland Iceland Australia	13 11 15 14 12 2 1 10	uied Name of the part of the p	Major depressive disorder 17 17 17 17 17 17 17 17 17 17 17 17 17	04 00 11 1 13 4 15 12 9 8 2	9 4 14 12 15 13 9 3 7 8	sley 4 3 5 7 2 15 9	5 7 2 1 12 6 14 10 8	S	13 11 1 2 15 3 8 9	11 1 15 14 12 6 4 7 7 2	suppose para suppo	Self-harm	September 15 12 13 14 11 7 2 4 1 1	5 Colorectal cancer 1 6 4 14 13 3	9 10 7 13 15 5 11 6 14	14	9 augustianis with the second	4 2 3 1 15 6 9 7 14	ewuyse 9 1 6 11 10 8 3 12 5	2 4 1 3 9 10 14 12 5	4 2 1 3 12 8 6 10 9	14 3 13 15 10 11 6 12 1	3 1 15 10 12 2 13 9 5	14 11 13 15 12 2 4 8	10 2 13 15 14 4 6 8 3
Brunei Singapore United Arab Emirates Kuwait United States Switzerland Netherlands Ireland Iceland	13 11 15 14 12 2 1 10 4	uined ypaq ypaq ypaq ypaq ypaq ypaq ypaq ypaq	5 11 15 13 6 12 14 3 7 1	OO 111 1 13 4 15 12 9 8 2 6	9 yets 14 12 15 13 9 3 7 8 1 2	4 3 5 7 2 15 9 12 8 6	5 7 2 1 12 6 14 10 8 4	S 6 1 2 15 14 8 12 13 7	13 11 1 2 15 3 8 9 4	11 1 15 14 12 6 4 7 7 2 10	supposed as a supposed suppose	Berlands	September 15	5 Colorectal Cancer 1	Superior Sup	14 15 12 13 10 3 8 11 4 2	9 euieseijw 5 1 2 3 4 12 8 11 10 15	4 2 3 1 15 6 9 7 14 8	ewuhsey 9 1 6 11 10 8 3 12 5 15	2 4 1 3 9 10 14 12 5 8	98	14 3 13 15 10 11 6 12 1 5	3 1 15 10 12 2 13 9 5 6	14 11 13 15 12 2 4 8 3	10 2 13 15 14 4 6 8 8 9
Brunei Singapore United Arab Emirates Kuwait United States Switzerland Netherlands Ireland Iceland Australia Canada Austria	13 11 15 14 12 2 1 10 4 3 7	uied ypeq MoJ 5 1 4 3 2 6 10 11 7 8 8 13	5 11 15 13 6 12 14 3 7	11 1 13 4 15 12 9 8 2 6 5 7	9yo.ts 14 12 15 13 9 3 7 8 1 2 4 6	Sley 4 3 5 7 2 15 9 12 8 6 1 1 14	Japones Bung 5 7 2 1 12 6 14 10 8 4 11 9	Lied X > 2	11 1 2 15 3 8 9 4 12 14 6	Anniui peou 11 1 15 14 12 6 4 7 7 2 10 5 9	3 1 14 6 15 4 2 10 8 13 12	## Heq-ylass   14	Saperical Saperi	5 10 2 1 6 4 14 13 3 12 9 7	9 10 7 13 15 5 11 6 14 12 1 3	Section   Sect	euicubi <sub>W</sub> 5 1 2 3 4 12 8 11 10 15 7 9	4 2 3 1 15 6 9 7 14 8 13 5	emutse 9 1 6 11 10 8 3 12 5 15 13 2	2 4 1 3 9 10 14 12 5 8 11 7	95   13   19   19   19   19   19   19   19	14 3 13 15 10 11 6 12 1 5 9	3 1 15 10 12 2 13 9 5 6 4	14 11 13 15 12 2 4 8 3 5	10 2 13 15 14 4 6 8 3 9 11
Brunei Singapore United Arab Emirates Kuwait United States Switzerland Netherlands Ireland Iceland Australia Canada Austria Sweden	13 11 15 14 12 2 1 10 4 3 7	Lued your pack pack pack pack pack pack pack pack	5 11 15 13 6 12 14 4 9 8	GOO 111 1 1 13 4 15 12 9 8 2 6 6 5 7 7 3 3	9 14 12 15 13 9 3 7 8 1 2 4 6 5	S  E    4   3   5   7   2   15   9   12   8   6   1   14   10   10   10   10   10   10	Jaboues 6un 7 5 7 2 1 12 6 14 10 8 4 11 9 3	ued your 5 6 1 2 15 14 8 12 13 7 11 9 3	11 1 2 15 3 8 9 4 12 14 6 5 5	Linitui peool 11 1 1 15 14 12 6 4 4 7 2 110 5 9 3	3 1 14 6 15 4 2 10 8 13 12 11 5	### ### ##############################	Sapageia 15 12 13 14 11 7 2 4 1 1 3 9 8 5 5	5 10 2 1 6 4 14 13 3 12 9 7	9 10 7 13 15 5 11 6 14 12 1 3 8	14 15 12 13 10 3 8 11 4 2 6 6 1 5 5	9 in a single si	9 4 2 3 1 15 6 9 7 14 8 13 5 11	emutsey 9 1 6 11 10 8 3 12 5 15 13 2 14	2 4 1 3 9 10 14 12 5 8 11 7 6	95 Proposition of the state of	14 3 13 15 10 11 6 12 1 5 9 8 2	3 1 15 10 12 2 13 9 5 6 4 11 7	14 11 13 15 12 2 4 8 3 5 10 9	10 2 13 15 14 4 6 8 3 9 11 12 1
Brunei Singapore United Arab Emirates Kuwait United States Switzerland Netherlands Ireland Lecland Australia Canada Austria Sweden Denmark	13 11 15 14 12 2 1 10 4 3 7 9 5	Lued your pack pack pack pack pack pack pack pack	5 11 15 13 6 12 14 3 7 1 4 9 8 10	2000 111 1 133 4 155 122 9 8 8 2 6 6 5 7 7 3 3 14	9 3 7 8 1 2 4 6 6 5 11	S   FE   S   S   S   S   S   S   S   S   S	5 7 2 1 12 6 14 10 8 4 11 9 3 15	S 6 1 2 15 14 8 12 13 7 11 9 3 4	13 11 1 2 15 3 8 9 4 12 14 6 5 10	Linitui peool 11 1 1 15 14 12 6 4 4 7 7 2 10 5 9 3 8 8	3 1 14 6 15 4 2 10 8 13 12 11 5 9	### ### ##############################	Sapet	5 10 2 1 6 4 14 13 3 12 9 7 8	9 10 7 13 15 5 11 6 14 12 1 3 8 4	14 15 12 13 10 3 8 11 4 2 6 6 1 5 7	9 auicabijw 5 1 2 2 3 4 12 8 11 10 15 7 9 14 6	eseases 4 2 3 1 15 6 9 7 14 8 13 5 11 10	emutsey 9 1 6 11 10 8 3 12 5 15 13 2 14 7	2 4 1 3 9 10 14 12 5 8 11 7 6 13	95 plots of the second of the	14 3 13 15 10 11 6 12 1 5 9 8 2 7	3 1 15 10 12 2 13 9 5 6 4 11 7 8	14 11 13 15 12 2 4 8 3 5 10 9	10 2 13 15 14 4 6 8 3 9 11 12 1
Brunei Singapore United Arab Emirates Kuwait United States Switzerland Netherlands Ireland Iceland Australia Canada Austria Sweden	13 11 15 14 12 2 1 10 4 3 7	Lued your pack pack pack pack pack pack pack pack	5 11 15 13 6 12 14 4 9 8	GOO 111 1 1 13 4 15 12 9 8 2 6 6 5 7 7 3 3	9 14 12 15 13 9 3 7 8 1 2 4 6 5	S  E    4   3   5   7   2   15   9   12   8   6   1   14   10   10   10   10   10   10	Jaboues 6un 7 5 7 2 1 12 6 14 10 8 4 11 9 3	ued your 5 6 1 2 15 14 8 12 13 7 11 9 3	11 1 2 15 3 8 9 4 12 14 6 5 5	Linitui peool 11 1 1 15 14 12 6 4 4 7 2 110 5 9 3	3 1 14 6 15 4 2 10 8 13 12 11 5	### ### ##############################	Sapageia 15 12 13 14 11 7 2 4 1 1 3 9 8 5 5	5 10 2 1 6 4 14 13 3 12 9 7	9 10 7 13 15 5 11 6 14 12 1 3 8	14 15 12 13 10 3 8 11 4 2 6 6 1 5 5	9 in a single si	9 4 2 3 1 15 6 9 7 14 8 13 5 11	emutsey 9 1 6 11 10 8 3 12 5 15 13 2 14	2 4 1 3 9 10 14 12 5 8 11 7 6	95 Proposition of the state of	14 3 13 15 10 11 6 12 1 5 9 8 2	3 1 15 10 12 2 13 9 5 6 4 11 7	14 11 13 15 12 2 4 8 3 5 10 9	10 2 13 15 14 4 6 8 3 9 11 12 1



Telephone: +1-206-897-2800 E-mail: comms@healthmetricsandevaluation.org www.healthmetricsandevaluation.org

