

The following appendices are supplemental to a Commonwealth Fund report, E. C. Schneider, D. O. Sarnak, D. Squires, A. Shah, and M. M. Doty, *Mirror, Mirror 2017: International Comparison Reflects Flaws and Opportunities for Better U.S. Health Care* (The Commonwealth Fund, July 2017), available on the Fund's website at: <http://www.commonwealthfund.org/interactives/2017/july/mirror-mirror/>.

## APPENDIX 1. Eleven-Country Summary Scores on Health System Performance

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
<b>OVERALL PERFORMANCE SCORE</b>	<b>0.36</b>	<b>-0.26</b>	<b>-0.45</b>	<b>0.07</b>	<b>0.27</b>	<b>0.13</b>	<b>0.13</b>	<b>0.08</b>	<b>0.08</b>	<b>0.37</b>	<b>-0.75</b>
<b>Care Process</b>	<b>0.38</b>	<b>0.15</b>	<b>-0.42</b>	<b>-0.12</b>	<b>0.29</b>	<b>0.36</b>	<b>-0.60</b>	<b>-0.82</b>	<b>-0.03</b>	<b>0.56</b>	<b>0.23</b>
Preventive Care	0.06	0.57	-0.38	-0.96	0.43	0.11	-0.34	-0.20	-0.07	0.46	0.25
Safe Care	0.89	0.03	-0.38	0.08	0.18	0.29	-1.08	-0.82	-0.49	1.03	0.29
Coordinated Care	-0.11	-0.23	-0.22	0.37	0.06	0.64	-0.11	-1.07	0.41	0.30	-0.04
Engagement and Patient Preferences	0.69	0.22	-0.71	0.04	0.49	0.40	-0.86	-1.17	0.04	0.45	0.42
<b>Access</b>	<b>0.19</b>	<b>-0.77</b>	<b>-0.14</b>	<b>0.58</b>	<b>0.70</b>	<b>0.02</b>	<b>0.14</b>	<b>0.06</b>	<b>-0.11</b>	<b>0.39</b>	<b>-1.07</b>
Affordability	0.06	-0.31	-0.59	0.67	0.28	0.15	0.46	0.69	-0.52	0.97	-1.87
Timeliness	0.32	-1.23	0.31	0.48	1.13	-0.10	-0.18	-0.56	0.31	-0.19	-0.27
<b>Administrative Efficiency</b>	<b>0.74</b>	<b>0.08</b>	<b>-1.41</b>	<b>0.08</b>	<b>-0.15</b>	<b>0.60</b>	<b>0.54</b>	<b>0.26</b>	<b>-0.12</b>	<b>0.59</b>	<b>-1.21</b>
<b>Equity</b>	<b>-0.14</b>	<b>-0.39</b>	<b>-0.53</b>	<b>0.01</b>	<b>0.46</b>	<b>-0.24</b>	<b>0.14</b>	<b>0.37</b>	<b>0.34</b>	<b>0.93</b>	<b>-0.94</b>
<b>Health Care Outcomes</b>	<b>0.62</b>	<b>-0.35</b>	<b>0.23</b>	<b>-0.18</b>	<b>0.03</b>	<b>-0.12</b>	<b>0.42</b>	<b>0.55</b>	<b>0.32</b>	<b>-0.63</b>	<b>-0.76</b>

Note: "Performance Score" is based on the distance from the 11-country average, measured in standard deviations.

## APPENDIX 2A. Preventive Care

Indicator	Source	Raw Data											Performance Score										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
Talked with provider about things in life that cause worry or stress in the past two years, among those with a history of mental illness	2016 CMWF Survey	74%	63%	--	46%	62%	67%	62%	58%	72%	58%	64%	1.45	0.05	--	-2.11	-0.08	0.56	-0.08	-0.58	1.19	-0.58	0.18
Talked with provider about healthy diet, exercise and physical activity in the past two years	2016 CMWF Survey	38%	41%	16%	17%	24%	37%	20%	21%	28%	33%	59%	0.59	0.82	-1.11	-1.03	-0.49	0.51	-0.80	-0.72	-0.18	0.20	2.22
Talked with provider about health risks of smoking and ways to quit in the past two years, among smokers	2016 CMWF Survey	56%	71%	49%	17%	53%	59%	25%	49%	36%	57%	74%	0.36	1.21	-0.04	-1.85	0.19	0.53	-1.40	-0.04	-0.77	0.42	1.38
Talked with provider about alcohol use in the past two years	2016 CMWF Survey	25%	23%	9%	8%	25%	23%	9%	20%	11%	25%	33%	0.68	0.45	-1.20	-1.32	0.68	0.45	-1.20	0.10	-0.96	0.68	1.63
Women age 50-69 with mammography screening in the past year	OECD 2016	54%	72%	75%	71%	80%	72%	75%	--	47%	75%	81%	-1.47	0.16	0.44	0.07	0.89	0.16	0.44	--	-2.11	0.44	0.98
Older adults (age 65 plus) with influenza vaccination in the past year	OECD 2016	--	63%	49%	59%	72%	69%	27%	50%	46%	73%	68%	--	0.37	-0.59	0.10	0.99	0.78	-2.10	-0.52	-0.79	1.06	0.71
Avoidable hospital admissions for diabetes, age-sex standardized rates per 100,000	OECD 2015	141	95	181	216	68	187	76	111	44	64	198	-0.25	0.49	-0.89	-1.47	0.93	-0.99	0.80	0.24	1.33	1.00	-1.18
Avoidable hospital admissions for asthma, age-sex standardized rates per 100,000	OECD 2015	65	15	30	23	31	72	26	23	13	61	103	-0.79	0.93	0.40	0.67	0.37	-1.05	0.56	0.66	1.01	-0.64	-2.12
Avoidable hospital admissions for congestive heart failure, age-sex standardized rates per 100,000	OECD 2015	240	179	238	382	199	229	175	300	174	99	367	-0.06	0.65	-0.04	-1.72	0.41	0.07	0.70	-0.76	0.70	1.58	-1.54
<b>Subdomain Score for Preventive Care</b>													<b>0.06</b>	<b>0.57</b>	<b>-0.38</b>	<b>-0.96</b>	<b>0.43</b>	<b>0.11</b>	<b>-0.34</b>	<b>-0.20</b>	<b>-0.07</b>	<b>0.46</b>	<b>0.25</b>

Note: "Performance Score" is based on the distance from the 11-country average, measured in standard deviations.

## APPENDIX 2B. Safe Care

Indicator	Source	Raw Data											Performance Score										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
Experienced a medical, medication, or lab mistake in the past two years	2016 CMWF Survey	11%	15%	8%	7%	10%	16%	21%	17%	14%	11%	19%	0.56	-0.32	1.23	1.45	0.78	-0.54	-1.65	-0.76	-0.10	0.56	-1.21
Primary care physician reports electronic clinical decision support in practice	2015 CMWF Survey	72%	28%	28%	13%	22%	70%	28%	16%	13%	81%	60%	1.26	-0.43	-0.43	-1.00	-0.66	1.18	-0.43	-0.89	-1.00	1.61	0.80
Health care professional did not review medications in past year, among those taking two or more prescription medications	2016 CMWF Survey	22%	22%	54%	34%	27%	29%	45%	41%	36%	21%	17%	0.83	0.83	-1.94	-0.20	0.40	0.23	-1.16	-0.81	-0.38	0.92	1.27
<b>Subdomain Score for Safe Care</b>													<b>0.89</b>	<b>0.03</b>	<b>-0.38</b>	<b>0.08</b>	<b>0.18</b>	<b>0.29</b>	<b>-1.08</b>	<b>-0.82</b>	<b>-0.49</b>	<b>1.03</b>	<b>0.29</b>

Note: "Performance Score" is based on the distance from the 11-country average, measured in standard deviations.

## APPENDIX 2C. Coordinated Care

Indicator	Source	Raw Data											Performance Score										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
Primary care doctor always or often receives timely and relevant information when needed after patient sees specialist	2015 CMWF Survey	58%	61%	80%	61%	63%	69%	66%	37%	78%	47%	62%	-0.33	-0.08	1.46	-0.08	0.08	0.57	0.33	-2.03	1.30	-1.22	0.00
Primary care doctor always or often receives information about changes to a patient's medication or care plan after patient sees specialist	2015 CMWF Survey	83%	78%	94%	73%	66%	94%	88%	53%	88%	86%	72%	0.27	-0.12	1.14	-0.52	-1.07	1.14	0.67	-2.10	0.67	0.51	-0.60
Specialist lacked medical history or regular doctor not informed about specialist care in the past two years	2016 CMWF Survey	20%	27%	25%	19%	28%	17%	36%	31%	27%	21%	31%	0.96	-0.23	0.11	1.13	-0.40	1.47	-1.76	-0.91	-0.23	0.79	-0.91
Experienced gaps in hospital discharge planning in the past two years	2016 CMWF Survey	29%	40%	60%	28%	47%	31%	61%	52%	45%	28%	22%	0.82	0.02	-1.44	0.90	-0.49	0.68	-1.51	-0.86	-0.35	0.90	1.34
Doctor is always notified when patient is seen in ED and when patient is discharged from the hospital	2015 CMWF Survey	14%	23%	16%	16%	59%	43%	25%	4%	21%	32%	26%	-0.75	-0.16	-0.62	-0.62	2.23	1.17	-0.02	-1.42	-0.29	0.44	0.04
Practice routinely communicates with home care provider about patient's needs and services	2015 CMWF Survey	29%	32%	36%	51%	56%	28%	63%	53%	55%	34%	52%	-1.22	-0.98	-0.67	0.52	0.91	-1.30	1.46	0.67	0.83	-0.82	0.60
Practice frequently coordinates care with social services or community providers	2015 CMWF Survey	45%	50%	35%	63%	42%	58%	51%	42%	60%	65%	43%	-0.54	-0.04	-1.55	1.27	-0.84	0.77	0.06	-0.84	0.97	1.48	-0.74
<b>Subdomain Score for Coordinated Care</b>													<b>-0.11</b>	<b>-0.23</b>	<b>-0.22</b>	<b>0.37</b>	<b>0.06</b>	<b>0.64</b>	<b>-0.11</b>	<b>-1.07</b>	<b>0.41</b>	<b>0.30</b>	<b>-0.04</b>

Note: "Performance Score" is based on the distance from the 11-country average, measured in standard deviations.

## APPENDIX 2D. Engagement and Patient Preferences

Indicator	Source	Raw Data											Performance Score										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
Regular doctor always or often knew important information about their medical history	2016 CMWF Survey	79%	83%	75%	89%	91%	86%	74%	57%	77%	84%	81%	-0.07	0.36	-0.50	1.01	1.22	0.69	-0.61	-2.44	-0.28	0.47	0.15
Regular doctor always or often spent enough time with them and explained things in a way they could understand	2016 CMWF Survey	88%	74%	64%	78%	88%	83%	70%	62%	79%	79%	77%	1.33	-0.30	-1.46	0.17	1.33	0.75	-0.76	-1.69	0.29	0.29	0.05
With same doctor for five years or more	2016 CMWF Survey	61%	63%	42%	65%	76%	67%	60%	54%	63%	69%	49%	0.02	0.23	-1.98	0.44	1.60	0.65	-0.09	-0.72	0.23	0.86	-1.24
Specialist always or often told patient about treatment choices and involved patient in decisions about care and treatment, among adults age 65 and older	2014 CMWF Survey	74%	66%	62%	58%	67%	63%	40%	50%	64%	79%	81%	0.83	0.17	-0.17	-0.50	0.25	-0.08	-2.00	-1.17	0.00	1.25	1.42
Doctors always treated the patient with courtesy and respect during their hospital stay	2016 CMWF Survey	80%	73%	69%	48%	79%	80%	73%	75%	72%	76%	74%	0.83	0.04	-0.41	-2.77	0.72	0.83	0.04	0.27	-0.07	0.38	0.15
Nurses always treated the patient with courtesy and respect during their hospital stay	2016 CMWF Survey	81%	65%	51%	52%	81%	74%	76%	80%	69%	81%	71%	0.91	-0.54	-1.81	-1.72	0.91	0.27	0.45	0.82	-0.18	0.91	0.00
Chronically ill patients discussed with health professional their main goals and priorities in caring for their condition in the past two years	2016 CMWF Survey	71%	56%	66%	67%	59%	62%	41%	26%	64%	61%	63%	1.01	-0.14	0.62	0.70	0.09	0.32	-1.28	-2.43	0.47	0.24	0.40
Chronically ill patients discussed with health professional their treatment options, including side effects in the past two years	2016 CMWF Survey	67%	57%	61%	60%	57%	62%	32%	30%	59%	54%	60%	1.04	0.21	0.54	0.46	0.21	0.63	-1.86	-2.03	0.38	-0.04	0.46
Had a written plan describing treatment they want at the end of life, among adults age 65 and older	2014 CMWF Survey	31%	46%	5%	58%	16%	23%	4%	5%	25%	20%	55%	0.25	1.02	-1.09	1.63	-0.52	-0.16	-1.14	-1.09	-0.06	-0.32	1.48
Had a written plan naming someone to make treatment decisions for them if they cannot do so, among adults age 65 and older	2014 CMWF Survey	53%	62%	16%	58%	16%	38%	6%	8%	28%	47%	67%	0.74	1.14	-0.90	0.96	-0.90	0.08	-1.34	-1.25	-0.37	0.48	1.36
<b>Subdomain Score for Engagement and Patient Preferences</b>													<b>0.69</b>	<b>0.22</b>	<b>-0.71</b>	<b>0.04</b>	<b>0.49</b>	<b>0.40</b>	<b>-0.86</b>	<b>-1.17</b>	<b>0.04</b>	<b>0.45</b>	<b>0.42</b>

Note: "Performance Score" is based on the distance from the 11-country average, measured in standard deviations.

## APPENDIX 3. Access

Indicator	Source	Raw Data											Performance Score										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
<b>Affordability</b>																							
Had any cost-related access problem to medical care in the past year	2016 CMWF Survey	14%	16%	17%	7%	8%	18%	10%	8%	22%	7%	33%	0.07	-0.18	-0.31	0.95	0.82	-0.43	0.57	0.82	-0.93	0.95	-2.31
Skipped dental care or check up because of cost in the past year	2016 CMWF Survey	21%	28%	23%	14%	11%	22%	20%	19%	21%	11%	32%	-0.13	-1.20	-0.43	0.95	1.41	-0.28	0.03	0.18	-0.13	1.41	-1.82
Insurance denied payment for medical care or did not pay as much as expected	2016 CMWF Survey	9%	14%	24%	8%	8%	2%	2%	2%	12%	1%	27%	0.10	-0.46	-1.59	0.22	0.22	0.89	0.89	0.89	-0.24	1.00	-1.93
Had serious problems paying or was unable to pay medical bills	2016 CMWF Survey	5%	6%	23%	4%	7%	5%	8%	5%	11%	1%	20%	0.53	0.38	-2.09	0.68	0.24	0.53	0.09	0.53	-0.34	1.11	-1.66
Doctors report patients often have difficulty paying for medications or out-of-pocket costs	2015 CMWF Survey	25%	30%	17%	13%	52%	30%	3%	6%	9%	12%	60%	-0.09	-0.36	0.34	0.56	-1.54	-0.36	1.10	0.93	0.77	0.61	-1.97
Out-of-pocket expenses for medical bills more than \$1,000 in the past year, US\$ equivalent	2016 CMWF Survey	16%	15%	7%	5%	7%	7%	13%	4%	46%	4%	36%	-0.10	-0.03	0.54	0.69	0.54	0.54	0.11	0.76	-2.26	0.76	-1.54
<b>Subdomain Score for Affordability</b>													<b>0.06</b>	<b>-0.31</b>	<b>-0.59</b>	<b>0.67</b>	<b>0.28</b>	<b>0.15</b>	<b>0.46</b>	<b>0.69</b>	<b>-0.52</b>	<b>0.97</b>	<b>-1.87</b>
<b>Timeliness</b>																							
Have a regular doctor or place	2016 CMWF Survey	94%	93%	99%	99%	100%	96%	98%	92%	90%	94%	88%	-0.21	-0.46	1.06	1.06	1.31	0.30	0.81	-0.71	-1.22	-0.21	-1.73
Regular doctor always or often answers the same day when contacted with question	2016 CMWF Survey	86%	66%	86%	87%	87%	83%	76%	75%	88%	78%	72%	0.76	-1.94	0.76	0.90	0.90	0.36	-0.59	-0.73	1.03	-0.32	-1.13
Saw a doctor or nurse on the same or next day, last time they needed medical care	2016 CMWF Survey	67%	43%	56%	53%	77%	76%	43%	49%	57%	57%	51%	0.84	-1.21	-0.10	-0.36	1.69	1.61	-1.21	-0.70	-0.02	-0.02	-0.53
Somewhat or very difficult to obtain after-hours care	2016 CMWF Survey	44%	63%	64%	64%	25%	44%	40%	64%	58%	49%	51%	0.59	-0.91	-0.99	-0.99	2.09	0.59	0.91	-0.99	-0.52	0.19	0.04
Waited two hours or more for care in emergency room	2016 CMWF Survey	23%	50%	9%	18%	20%	30%	34%	39%	26%	32%	25%	0.44	-2.01	1.70	0.89	0.71	-0.20	-0.56	-1.01	0.16	-0.38	0.25
Doctors report patients often experience difficulty getting specialized tests (e.g., CT, MRI)	2015 CMWF Survey	11%	40%	54%	27%	6%	54%	7%	15%	1%	19%	29%	0.69	-0.86	-1.61	-0.17	0.96	-1.61	0.90	0.48	1.22	0.26	-0.27
Doctors report patients often experience long wait times to receive treatment after diagnosis	2015 CMWF Survey	23%	21%	17%	17%	10%	33%	18%	28%	1%	31%	9%	-0.42	-0.21	0.20	0.20	0.91	-1.44	0.09	-0.93	1.83	-1.24	1.01
Waited two months or longer for specialist appointment	2016 CMWF Survey	13%	30%	4%	3%	7%	20%	28%	19%	9%	19%	6%	0.14	-1.65	1.09	1.20	0.78	-0.60	-1.44	-0.49	0.57	-0.49	0.88
Waited four month or longer for elective/non-emergency surgery	2016 CMWF Survey	8%	18%	2%	0%	4%	15%	15%	12%	7%	12%	4%	0.14	-1.54	1.14	1.48	0.81	-1.04	-1.04	-0.53	0.30	-0.53	0.81
Practice has arrangement for patients to see doctor or nurse after hours without going to ED	2015 CMWF Survey	78%	48%	71%	85%	94%	92%	80%	75%	69%	89%	39%	0.20	-1.52	-0.20	0.60	1.11	1.00	0.31	0.03	-0.32	0.83	-2.03
<b>Subdomain Score for Timeliness</b>													<b>0.32</b>	<b>-1.23</b>	<b>0.31</b>	<b>0.48</b>	<b>1.13</b>	<b>-0.10</b>	<b>-0.18</b>	<b>-0.56</b>	<b>0.31</b>	<b>-0.19</b>	<b>-0.27</b>
<b>Domain Score for Access</b>													<b>0.19</b>	<b>-0.77</b>	<b>-0.14</b>	<b>0.58</b>	<b>0.70</b>	<b>0.02</b>	<b>0.14</b>	<b>0.06</b>	<b>-0.11</b>	<b>0.39</b>	<b>-1.07</b>

Note: "Performance Score" is based on the distance from the 11-country average, measured in standard deviations.

## APPENDIX 4. Administrative Efficiency

Indicator	Source	Raw Data											Performance Score										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
Doctors report time spent on administrative issues related to insurance or claims is a major problem	2015 CMWF Survey	21%	20%	63%	52%	60%	20%	9%	27%	50%	21%	54%	0.77	0.82	-1.37	-0.81	-1.22	0.82	1.38	0.46	-0.71	0.77	-0.91
Doctors report time spent getting patients needed medications or treatment because of coverage restrictions is a major problem	2015 CMWF Survey	11%	21%	27%	38%	32%	12%	6%	6%	14%	15%	54%	0.70	0.03	-0.37	-1.10	-0.70	0.63	1.03	1.03	0.50	0.43	-2.17
Doctors report time spend on administrative issues related to reporting clinical or quality data to government or other agencies is a major problem	2015 CMWF Survey	8%	10%	43%	23%	51%	16%	13%	25%	33%	22%	33%	1.25	1.11	-1.30	0.16	-1.88	0.67	0.89	0.01	-0.57	0.23	-0.57
Visited ED for a condition that could have been treated by a regular doctor, had he/she been available	2016 CMWF Survey	6%	17%	7%	5%	6%	7%	11%	12%	9%	7%	16%	0.81	-1.85	0.57	1.06	0.81	0.57	-0.40	-0.64	0.09	0.57	-1.61
Tests results or medical records were not available at the time of patient's scheduled medical care appointment in the past two years	2016 CMWF Survey	5%	8%	13%	6%	5%	7%	7%	8%	6%	6%	11%	0.98	-0.22	-2.21	0.58	0.98	0.18	0.18	-0.22	0.58	0.58	-1.42
Doctors ordered a medical test that patient felt was unnecessary because the test had already been done in the past two years	2016 CMWF Survey	6%	6%	20%	6%	3%	4%	6%	5%	9%	5%	11%	0.29	0.29	-2.67	0.29	0.92	0.71	0.29	0.50	-0.35	0.50	-0.77
Spent a lot of time on paperwork or disputes related to medical bills	2016 CMWF Survey	5%	5%	28%	5%	8%	3%	5%	3%	11%	0%	16%	0.39	0.39	-2.52	0.39	0.01	0.65	0.39	0.65	-0.37	1.03	-1.00
<b>Domain Score for Administrative Efficiency</b>													<b>0.74</b>	<b>0.08</b>	<b>-1.41</b>	<b>0.08</b>	<b>-0.15</b>	<b>0.60</b>	<b>0.54</b>	<b>0.26</b>	<b>-0.12</b>	<b>0.59</b>	<b>-1.21</b>

Note: "Performance Score" is based on the distance from the 11-country average, measured in standard deviations.

## APPENDIX 5. Equity

Indicator	Source	Raw Data											Raw Data										
		Below-Average Income											Above-Average Income										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
Rated medical care from regular provider as fair or poor	2016 CMWF Survey	5%	10%	19%	6%	9%	2%	11%	19%	4%	5%	12%	2%	7%	5%	0%	5%	4%	7%	14%	2%	8%	5%
<b>CARE PROCESS—Preventive Care</b>																							
Talked with provider about healthy diet, exercise and physical activity in the past two years	2016 CMWF Survey	40%	40%	16%	15%	24%	44%	19%	21%	28%	38%	52%	35%	44%	31%	21%	24%	32%	20%	21%	25%	30%	63%
<b>CARE PROCESS—Coordinated Care</b>																							
Specialist lacked medical history or regular doctor not informed about specialist care in the past two years	2016 CMWF Survey	24%	33%	25%	--	30%	23%	32%	33%	29%	27%	38%	12%	21%	29%	--	29%	14%	37%	31%	26%	16%	23%
<b>CARE PROCESS—Patient Engagement</b>																							
Regular doctor always or often spent enough time with them and explained things in a way they could understand	2016 CMWF Survey	86%	70%	63%	67%	88%	73%	67%	59%	76%	81%	72%	91%	79%	68%	88%	89%	88%	73%	64%	82%	80%	81%
Regular doctor always or often knew important information about their medical history	2016 CMWF Survey	77%	79%	62%	82%	91%	80%	68%	58%	78%	81%	77%	82%	86%	89%	96%	91%	88%	78%	55%	73%	86%	86%
<b>ACCESS—Affordability</b>																							
Had any cost-related access problem to medical care in the past year	2016 CMWF Survey	21%	26%	23%	10%	13%	29%	15%	13%	30%	7%	44%	10%	7%	12%	6%	6%	13%	6%	5%	15%	4%	26%
Skipped dental care or check up because of cost in the past year	2016 CMWF Survey	29%	41%	34%	17%	18%	34%	31%	27%	29%	12%	45%	19%	17%	17%	18%	8%	23%	12%	13%	13%	7%	21%
Had serious problems paying or was unable to pay medical bills	2016 CMWF Survey	8%	12%	41%	11%	15%	12%	12%	11%	19%	3%	29%	2%	2%	7%	1%	4%	1%	4%	1%	5%	0%	11%
<b>ACCESS—Timeliness</b>																							
Have a regular doctor or place of care	2016 CMWF Survey	91%	92%	99%	98%	100%	97%	98%	93%	91%	95%	84%	96%	94%	99%	99%	100%	98%	98%	91%	89%	98%	93%
Somewhat or very difficult to obtain after-hours care	2016 CMWF Survey	51%	68%	75%	65%	29%	56%	45%	66%	61%	51%	57%	37%	60%	69%	61%	25%	39%	36%	62%	59%	52%	47%
Waited two months or longer for specialist appointment	2016 CMWF Survey	19%	31%	2%	--	6%	29%	29%	21%	10%	16%	8%	9%	29%	10%	--	5%	15%	27%	17%	9%	30%	4%

Indicator	Source	Percentage-Point Difference Between Above-Average and Below-Average Income Respondents*											Performance Score										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
Rated medical care from regular provider as fair or poor	2016 CMWF Survey	3%	3%	14%	6%	4%	-2%	4%	5%	2%	-3%	7%	0.20	0.20	-2.23	-0.46	-0.02	1.31	-0.02	-0.24	0.42	1.53	-0.68
<b>CARE PROCESS—Preventive Care</b>																							
Talked with provider about healthy diet, exercise and physical activity in the past two years	2016 CMWF Survey	-5%	4%	15%	6%	0%	-12%	1%	0%	-3%	-8%	11%	0.73	-0.40	-1.78	-0.65	0.10	1.61	-0.02	0.10	0.48	1.11	-1.28
<b>CARE PROCESS—Coordinated Care</b>																							
Specialist lacked medical history or regular doctor not informed about specialist care in the past two years	2016 CMWF Survey	12%	12%	-4%	--	1%	9%	-5%	2%	3%	11%	15%	-0.90	-0.90	1.35	--	0.65	-0.48	1.49	0.51	0.37	-0.76	-1.32
<b>CARE PROCESS—Patient Engagement</b>																							
Regular doctor always or often spent enough time with them and explained things in a way they could understand	2016 CMWF Survey	5%	9%	5%	21%	1%	15%	6%	5%	6%	-1%	9%	0.38	-0.27	0.38	-2.21	1.03	-1.24	0.22	0.38	0.22	1.36	-0.27
Regular doctor always or often knew important information about their medical history	2016 CMWF Survey	5%	7%	27%	14%	0%	8%	10%	-3%	-5%	5%	9%	0.23	0.00	-2.29	-0.80	0.80	-0.11	-0.34	1.14	1.37	0.23	-0.23
<b>ACCESS—Affordability</b>																							
Had any cost-related access problem to medical care in the past year	2016 CMWF Survey	11%	19%	11%	4%	7%	16%	9%	8%	15%	3%	18%	0.00	-1.47	0.00	1.29	0.74	-0.92	0.37	0.55	-0.74	1.47	-1.29
Skipped dental care or check up because of cost in the past year	2016 CMWF Survey	10%	24%	17%	-1%	10%	11%	19%	14%	16%	5%	24%	0.46	-1.37	-0.45	1.91	0.46	0.33	-0.71	-0.06	-0.32	1.12	-1.37
Had serious problems paying or was unable to pay medical bills	2016 CMWF Survey	6%	10%	34%	10%	11%	11%	8%	10%	14%	3%	18%	0.77	0.28	-2.65	0.28	0.16	0.16	0.52	0.28	-0.21	1.13	-0.70
<b>ACCESS—Timeliness</b>																							
Have a regular doctor or place of care	2016 CMWF Survey	5%	2%	0%	1%	0%	1%	0%	-2%	-2%	3%	9%	-1.08	-0.14	0.48	0.17	0.48	0.17	0.48	1.11	1.11	-0.45	-2.33
Somewhat or very difficult to obtain after-hours care	2016 CMWF Survey	14%	8%	6%	4%	4%	17%	9%	4%	2%	-1%	10%	-1.32	-0.19	0.19	0.57	0.57	-1.89	-0.38	0.57	0.94	1.51	-0.57
Waited two months or longer for specialist appointment	2016 CMWF Survey	10%	2%	-8%	--	1%	14%	2%	4%	1%	-14%	4%	-1.05	-0.05	1.20	--	0.08	-1.55	-0.05	-0.30	0.08	1.96	-0.30
Domain Score for Equity													-0.14 -0.39 -0.53 0.01 0.46 -0.24 0.14 0.37 0.34 0.93 -0.94										

\* A higher number means larger inequity between people with below-average income and those with above-average income. A negative number means better performance among those with below-average income. Note: "Performance Score" is based on the distance from the 11-country average, measured in standard deviations.

## APPENDIX 6. Health Care Outcomes

Indicator	Source	Raw Data											Performance Score										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
<b>Population Health</b>																							
Infant mortality, deaths per 1,000 live births	OECD 2016	3.4	4.8	3.5	3.2	3.6	4.7	2.4	2.2	3.9	3.9	6.0	0.35	-0.94	0.26	0.53	0.17	-0.84	1.27	1.45	-0.11	-0.11	-2.04
Adults age 18 to 64 with at least two of five common chronic conditions	2016 CMWF Survey	10%	16%	12%	8%	9%	9%	12%	10%	10%	10%	21%	0.41	-1.17	-0.12	0.93	0.67	0.67	-0.12	0.41	0.41	0.41	-2.49
Life expectancy at age 60 in years	WHO 2016	25.5	25.0	25.7	23.7	24.2	24.7	24.2	24.6	25.5	24.1	23.6	1.20	0.52	1.48	-1.25	-0.57	0.11	-0.57	-0.02	1.20	-0.71	-1.39
<b>Mortality Amenable to Health Care</b>																							
Mortality amenable to health care, deaths per 100,000	European Observatory on Health Systems and Policies 2017	62	78	61	83	72	87	64	69	55	85	112	0.81	-0.15	0.91	-0.48	0.23	-0.75	0.70	0.40	1.22	-0.61	-2.27
10-year decline in mortality amenable to health care	European Observatory on Health Systems and Policies 2017	29%	26%	28%	28%	34%	32%	32%	26%	29%	37%	16%	0.03	-0.52	-0.15	-0.15	0.95	0.59	0.59	-0.52	0.03	1.50	-2.36
<b>Disease-Specific Health Outcomes</b>																							
30 day in-hospital mortality rate following acute myocardial infarction, deaths per 100 patients	OECD 2015	4.1	6.7	7.2	8.7	7.6	6.6	6.7	4.5	7.7	7.6	5.5	1.79	-0.05	-0.41	-1.47	-0.69	0.02	-0.05	1.51	-0.76	-0.69	0.80
30 day in-hospital mortality rate following ischemic stroke, deaths per 100 patients	OECD 2015	9.3	10.0	7.9	6.4	7.1	8.0	5.4	6.4	6.9	9.2	3.6	-1.08	-1.45	-0.33	0.48	0.10	-0.38	1.01	0.48	0.21	-1.02	1.98
Breast cancer five-year relative survival rate	OECD 2015	88%	88%	--	86%	85%	86%	89%	89%	--	81%	89%	0.46	0.46	--	-0.30	-0.67	-0.30	0.84	0.84	--	-2.19	0.84
Colon cancer five-year relative survival rate	OECD 2015	69%	64%	--	64%	64%	63%	64%	65%	--	56%	64%	1.59	0.10	--	0.10	0.10	-0.20	0.10	0.40	--	-2.29	0.10
<b>Domain Score for Health Care Outcomes</b>													<b>0.62</b>	<b>-0.35</b>	<b>0.23</b>	<b>-0.18</b>	<b>0.03</b>	<b>-0.12</b>	<b>0.42</b>	<b>0.55</b>	<b>0.32</b>	<b>-0.63</b>	<b>-0.76</b>

Note: "Performance Score" is based on the distance from the 11-country average, measured in standard deviations.

## APPENDIX 7. Sample Size of Commonwealth Fund International Health Policy Surveys

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
<b>SAMPLE SIZES</b>											
<b>2014 Commonwealth Fund International Health Policy Survey of Older Adults</b>	1,670	3,147	860	547	582	379	651	5,000	1,084	581	1,116
Older adults who saw or needed to see specialist in the past two years	1,105	1,802	525	463	397	193	400	2,608	712	267	775
<b>2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians</b>	747	2,284	502	559	618	503	864	2,905	1,065	1,001	1,001
<b>2016 Commonwealth Fund International Health Policy Survey of Adults</b>	5,248	4,547	1,103	1,000	1,227	1,000	1,093	7,124	1,520	1,000	2,001
Adults with a regular doctor or place of care	5,061	4,302	1,097	994	1,224	968	1,079	6,742	1,400	946	1,809
Adults who saw or needed to see specialist in the past two years	2,264	2,529	641	437	594	417	618	3,402	875	389	1,157
Adults with a regular doctor or place of care and who saw or needed to see specialist in the past two years	2,235	2,458	637	434	593	415	610	3,301	835	379	1,093
Adults who were hospitalized in past two years	879	692	276	139	207	165	223	1,502	323	150	378
Adults with ED visit in past two years	949	1,818	316	108	242	222	276	2,517	442	234	659
Adults who needed elective surgery in past two years	660	625	155	119	107	135	217	1,144	231	100	302
Adults with at least one of the following chronic conditions: asthma or chronic lung disease; diabetes; heart disease; and hypertension	1,635	1,992	293	306	367	316	457	3,530	466	306	1,007
Adults with a regular doctor or place of care and was ever diagnosed with depression, anxiety, or other mental health problem	529	794	38*	85	94	118	152	1,033	188	106	427
Adults with a regular doctor or place of care and smoke	868	711	313	323	281	160	221	741	283	190	298
Adults who take two or more prescription medications regularly	1,856	2,169	261	267	435	341	494	3,557	471	334	1,018
<b>Equity</b>											
Adults below average income	1,711	1,484	316	387	267	297	393	2,849	643	239	697
Adults above average income	1,495	1,760	255	110	539	350	479	2,462	440	287	799
Adults below average income with a regular doctor or place of care	1,610	1,383	314	384	267	288	388	2,728	597	228	601
Adults above average income with a regular doctor or place of care	1,463	1,684	253	109	537	343	470	2,305	398	283	754
Adults below average income who saw or needed to see specialist in the past two years	804	867	186	194	146	152	224	1,399	372	118	399
Adults above average income who saw or needed to see specialist in the past two years	674	978	154	50*	268	162	276	1,187	254	114	492
<b>RESPONSE RATES</b>											
2016 IHP Survey of General Population	25%	21%	25%	27%	32%	31%	11%	17%	47%	22%	18%
2015 IHP Survey of Primary Care Physicians	25%	32%	8%	19%	41%	28%	44%	47%	39%	39%	31%
2014 IHP Survey of Older Adults	31%	28%	29%	26%	25%	27%	16%	23%	60%	23%	24%

Note: This appendix shows the sample size in each country for each survey, as well as the sample sizes for any indicators with restricted bases. Data for the indicators used in the Equity domain come from the 2016 Commonwealth Fund International Health Policy Survey of Adults and are stratified between respondents who reported having "below-average" and "above-average" income. An asterisk (\*) indicates where countries were excluded from analysis because of small sample size, n<50.



## APPENDIX 8. Mirror, Mirror Measure Descriptions and Source Notes

**Note:** Base includes full sample of survey unless indicated otherwise.

### Appendix 2A. Preventive Care

1. Percent of adults who talked with their doctor or other clinical staff in the past two years about things in their life that cause worry or stress. Sample size was less than 100 in Germany and Netherlands. Sample size was less than 60 in France, which was therefore excluded. Base: Has a regular doctor or place of care and was ever diagnosed with depression, anxiety, or other mental health problem. Source: 2016 Commonwealth Fund International Health Policy Survey.
2. Percent of adults who talked with their doctor or other clinical staff about a healthy diet, exercise and physical activity. Base: Has a regular doctor or place of care. Source: 2016 Commonwealth Fund International Health Policy Survey.
3. Percent of adults who talked with their doctor or other clinical staff in the past two years about health risks of smoking and ways to quit. Base: Has a regular doctor or place of care and smokes. Source: 2016 Commonwealth Fund International Health Policy Survey.
4. Percent of adults who talked with their doctor or other clinical staff in the past two years about alcohol use. Base: Has a regular doctor or place of care. Source: 2016 Commonwealth Fund International Health Policy Survey.
5. Percent of women age 50-69 with mammography screening in past year, 2014. Data from 2013 in the US, and from 2012 in Canada, Germany, and Switzerland. Results from the UK, Norway, New Zealand, and Australia are based on program data, and all other countries based on survey data. No data available for Sweden. Source: OECD, OECD Health Data, December 2016.
6. Percent of adults over age 65-with influenza vaccination in past year, 2014. Data from 2013 in the US, from 2012 in Germany, and 2010 in Switzerland. No data since 2010 in Australia. Source: OECD, OECD Health Data, December 2016.
7. Avoidable hospital admissions for diabetes, age-sex standardized rates per 100,000, 2013. Data from 2012 in New Zealand, Switzerland and the US, and from 2011 in the Netherlands. Source: OECD, OECD Health Care Quality Indicators, 2015.
8. Avoidable hospital admissions for asthma, age-sex standardized rates per 100,000, 2013. Data from 2012 in New Zealand, Switzerland and the US, and from 2011 in the Netherlands. Source: OECD, OECD Health Care Quality Indicators, 2015.
9. Avoidable hospital admissions for congestive heart failure, age-sex standardized rates per 100,000, 2013. Data from 2012 in New Zealand, Switzerland and the US, and from 2011 in Netherlands. Source: OECD, OECD Health Care Quality Indicators, 2015.

### Appendix 2B. Safe Care

10. Percent of adults who reported experiencing a medical, medication or lab mistake in the past two years, including at least one of the following: been given the wrong medication or wrong dose by a doctor, nurse, hospital or pharmacist; reported had a time you thought a medical mistake was made in your treatment or care; experienced delays in being notified about abnormal results; and/or been given incorrect results for diagnostic or lab test. Source: 2016 Commonwealth Fund International Health Policy Survey.
11. Percent of primary care physicians who report their practice has electronic clinical decision support, defined by at least two of these three functions: doctor routinely receives electronic alerts or prompts about a potential problem with drug dose or interaction; doctor routinely receives reminders for guideline-based interventions and/or tests using a computerized system; and/or doctor receives alert or prompt to provide patients with test results using computerized system. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
12. Percent of adults who reported that a health care professional had not reviewed with them all the medications they take in the past year. Base: Taking two or more prescription medications regularly. Source: 2016 Commonwealth Fund International Health Policy Survey.

### Appendix 2C. Coordinated Care

13. Percent of primary care physicians who reported that when a patient has been seen by a specialist, they “always” or “often” receive a report back with all relevant information and they “always” or “often” receive information that is timely and available when needed. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
14. Percent of primary care physicians who reported that when a patient has been seen by a specialist, they “always” or “often” receive information about changes to their medication or care plan. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
15. Percent of adults who reported that, in the past two years, there was a time when: a specialist did not have basic medical information or tests results from their regular doctor about the reason for visit; OR after they saw a specialist, their regular doctor did not seem informed and up to date about the care they received. Base: Regular doctor or place of care and saw or needed to see a specialist in past two years. Source: 2016 Commonwealth Fund International Health Policy Survey.
16. Percent of adults who reported experiencing any hospital discharge coordination problem, including at least one of the following: failure to discuss the purpose of taking a

## APPENDIX 8. Mirror, Mirror Measure Descriptions and Source Notes (continued)

medication, make arrangements for follow-up care with a doctor or other health professional, and receive written information about what to do after returning home and what symptoms to watch for. Base: Hospitalized in past two years. Source: 2016 Commonwealth Fund International Health Policy Survey

17. Percent of primary care physicians who reported they “always” receive notification that a patient has been seen in emergency room and they “always” receive notification that a patient is being discharged from hospital. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
18. Percent of primary care physicians who reported their practice communicates “routinely” with home care providers about their patients’ needs and the services to be provided. Base: Excluding those who responded “not applicable”. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
19. Percent of primary care physicians who reported their practice “frequently” coordinates care with social services or community providers. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.

### Appendix 2D. Engagement and Patient Preferences

20. Percent of adults who reported their regular doctor “always” or “often” knows important information about their medical history. Base: Has a regular doctor or place of care. Source: 2016 Commonwealth Fund International Health Policy Survey.
21. Percent of adults who reported their regular doctor “always” or “often”: spends enough time with them, and explains things in a way they could understand. Base: Has a regular doctor or place of care. Source: 2016 Commonwealth Fund International Health Policy Survey.
22. Percent of adults who reported seeing same regular doctor for 5 years or more. Base: Has a regular doctor or place of care. Source: 2016 Commonwealth Fund International Health Policy Survey.
23. Percent of adults over age 65 who reported that specialists “always” or “often” told them about treatment choices and involved them as much as they wanted in decision about care and treatment. Base: Saw or needed to see specialist in the past two years. Source: 2014 Commonwealth Fund International Health Policy Survey of Older Adults.
24. Percent of adults who reported that doctors “always” treated them with courtesy and respect during their hospital stay. Base: Hospitalized in the past two years. Source: 2016 Commonwealth Fund International Health Policy Survey.
25. Percent of adults who reported that nurses “always” treated them with courtesy and respect during their hospital stay. Base: Hospitalized in the past two years. Source: 2016 Commonwealth Fund International Health Policy Survey.
26. Percent of adults with a chronic condition who reported that a doctor or health care professional discussed with them their main goals or priorities in caring for their condition in the past year. Base: Has at least one of the following chronic conditions: asthma or chronic lung disease; diabetes; heart disease; and hypertension. Source: 2016 Commonwealth Fund International Health Policy Survey.
27. Percent of adults with a chronic condition who reported that a doctor or health care professional discussed with them their treatment options, including side effects, in the past year. Base: Has at least one of the following chronic conditions: asthma or chronic lung disease; diabetes; heart disease; and hypertension. Source: 2016 Commonwealth Fund International Health Policy Survey.
28. Percent of adults over age 65 who reported they had a written plan or document describing the health care treatment they want or do not want at the end of their life. Source: 2014 Commonwealth Fund International Health Policy Survey of Older Adults.
29. Percent of adults over age 65 who reported they had a written document that names someone to make treatment decisions for them if they cannot make decisions for themselves. Source: 2014 Commonwealth Fund International Health Policy Survey of Older Adults.

### Appendix 3. Access

#### Affordability

30. Percent of adults who reported they had a cost-related access problem in the past year, including at least one of the following: did not fill a prescription; skipped recommended medical test, treatment, or follow-up; or had a medical problem but did not visit doctor or clinic in the past year because of cost. Source: 2016 Commonwealth Fund International Health Policy Survey.
31. Percent of adults who skipped dental care or check up because of cost in the past year. Source: 2016 Commonwealth Fund International Health Policy Survey.
32. Percent of adults whose insurance denied payment for medical care or did not pay as much as expected in the past year. Source: 2016 Commonwealth Fund International Health Policy Survey.
33. Percent of adults who had serious problems paying or were unable to pay medical bills in the past year. Source: 2016 Commonwealth Fund International Health Policy Survey.
34. Percent of primary care physicians who reported their patients “often” have difficulty paying for medications or out-of-pocket costs. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.

## APPENDIX 8. Mirror, Mirror Measure Descriptions and Source Notes (continued)

35. Percent of adults whose out-of-pocket expenses for medical bills were more than US\$1,000 in the past year. Source: 2016 Commonwealth Fund International Health Policy Survey.

### *Timeliness*

36. Percent of adults who had a regular doctor or place of care. Source: 2016 Commonwealth Fund International Health Policy Survey.
37. Percent of adults whose regular doctor “always” or “often” answered the same day when contacted with a question. Base: Has a regular doctor or place of care. Source: 2016 Commonwealth Fund International Health Policy Survey
38. Percent of adults who reported that the last time they needed medical attention, they were able to see a doctor or nurse on the same or next day. Base: Excludes those who did not need to make an appointment to see a doctor/nurse. Source: 2016 Commonwealth Fund International Health Policy Survey.
39. Percent of adults who reported it was “very” or “somewhat” difficult to get medical care in the evening, weekend, or on a holiday without going to the emergency room. Base: Excludes those who did not seek after-hours care. Source: 2016 Commonwealth Fund International Health Policy Survey.
40. Percent of adults who reported their waiting time in the emergency room was two hours or more. Base: Used an emergency room in the past two years. Source: 2016 Commonwealth Fund International Health Policy Survey
41. Percent of primary care physicians who reported their patients “often” experience difficulty getting specialized tests (e.g., CT, MRI). Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
42. Percent of primary care physicians who reported their patients “often” experience long wait times to receive treatment after diagnosis. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
43. Percent of adults who reported their waiting time to see a specialist was two months or more. Base: Saw or needed to see a specialist in past two years. Source: 2016 Commonwealth Fund International Health Policy Survey.
44. Percent of adults who reported waiting four months or more for elective/non-emergency surgery. Base: Needed elective surgery in past two years. Source: 2016 Commonwealth Fund International Health Policy Survey.
45. Percent of primary care physicians who reported their practice has an arrangement for patients to see a doctor or nurse after hours without going to the emergency room. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.

## Appendix 4. Administrative Efficiency

46. Percent of primary care physicians who reported the time they and their staff spend on administrative issues related to insurance or claims was a “major” problem. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
47. Percent of primary care physicians who reported the time they and their staff spend getting patients needed medications or treatment because of coverage restrictions was a “major” problem. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
48. Percent of primary care physicians who reported the time they and their staff spend on administrative issues related to reporting clinical or quality care data to government or other external entities such as health insurance plans was a “major” problem. Source: 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
49. Percent of adults who visited the emergency room for a condition that could have been treated by their regular doctor, had he/she been available. Base: Has a regular doctor or place of care. Source: 2016 Commonwealth Fund International Health Policy Survey.
50. Percent of adults who reported that during the past two years there was a time when tests results or medical records were not available at the time of their scheduled medical care appointment. Source: 2016 Commonwealth Fund International Health Policy Survey.
51. Percent of adults who reported that during the past two years there was a time when a doctor ordered a medical test that they felt was unnecessary because the test had already been done. Source: 2016 Commonwealth Fund International Health Policy Survey.
52. Percent of adults who reported spending a lot of time on paperwork or disputes related to medical bills. Source: 2016 Commonwealth Fund International Health Policy Survey.

## Appendix 5. Equity

53. Percent of adults who rated the medical care from their regular doctor or place of care as “fair” or “poor.” Base: Has a regular doctor or place of care. Source: 2016 Commonwealth Fund International Health Policy Survey.
54. See #2.
55. See #15.
56. See #21.
57. See #20.
58. See #30.
59. See #31.

## APPENDIX 8. Mirror, Mirror Measure Descriptions and Source Notes (continued)

60. See #33.
61. See #36.
62. See #39.
63. See #43.
71. Breast cancer five-year relative survival rate. Data are from 2008-13 or latest available year. Data are from 2003-08 in Canada. Source: OECD, OECD Health Data, 2015.
72. Colon cancer five-year relative survival rate. Data are from 2008-13 or latest available year. Source: OECD, OECD Health Data, 2015.

### Appendix 6. Health Care Outcomes

#### *Population Health Outcomes*

64. Infant deaths per 1,000 live births, 2014. Data from 2013 in the US, and from 2012 in Canada and NZ. Source: OECD, OECD Health Data, December 2016.
65. Percent of adults age 18 to 64 with at least two of five common chronic conditions: joint pain or arthritis; asthma or chronic lung disease; diabetes; heart disease; and hypertension. Source: 2016 Commonwealth Fund International Health Policy Survey.
66. Life expectancy at age 60 in years, 2015. Source: WHO Global Health Observatory Data Repository, 2016.

#### *Mortality Amenable to Health Care*

67. Mortality amenable to health care, deaths per 100,000. Trends in amenable mortality for selected countries, 2000-2014. Data for 2014 in all countries except Canada (2011), France (2013), Netherlands (2013), New Zealand (2012), Switzerland (2013), UK (2013). Amenable mortality causes based on Nolte & McKee (2004). Mortality and population data derived from WHO mortality files, September 2016; population data for Canada and the USA derived from the Human Mortality Database. Age-specific rates standardised to the European Standard Population 2013. Contact: [Marina.Karanikolos@lshtm.ac.uk](mailto:Marina.Karanikolos@lshtm.ac.uk). European Observatory on Health Systems and Policies (2017).
68. 10-year decline in mortality amenable to health care. Source: see #67.

#### *Disease-Specific Health Outcomes*

69. 30 day in-hospital mortality rate following acute myocardial infarction, deaths per 100 patients, 2013. Based on admissions data; rates are age-sex standardized for adults age 45 or older. Admissions resulting from transfers included in Australia, the Netherlands, Sweden and the UK. Data from 2012 in Switzerland and US, and 2011 in the Netherlands. Source: OECD, OECD Health Data, 2015.
70. 30 day in-hospital mortality rate following ischemic stroke, deaths per 100 patients, 2013. Based on admissions data; rates are age-sex standardized for adults age 45 or older. Admissions resulting from transfers included in Australia, the Netherlands, Sweden and the UK. Data from 2012 in Switzerland and US, and 2011 in the Netherlands. Source: OECD, OECD Health Data, 2015.

## HOW THIS STUDY WAS CONDUCTED

This edition of *Mirror, Mirror* reflects refinements to methods used in past reports. No report can claim to capture every aspect of the performance of health care systems. Health care systems are complex. Even if a report included thousands of measures, nuances would remain. In that spirit, the report underwent a thorough review by an advisory panel of international, independent performance measurement experts.<sup>1</sup> The framework for *Mirror, Mirror* 2017 was developed in consultation with the advisory panel from January through December 2016.

Using data available from Commonwealth Fund international surveys of the public and physicians and other sources of standardized data on quality and health care outcomes, we identified 72 measures relevant to health care system performance, organizing them into five performance domains: Care Process, Access, Administrative Efficiency, Equity, and Health Care Outcomes. The criteria for selecting measures and grouping within domains included: that the measure be important, that the data to support the measure be standardized across the countries, and that the results be salient to policymakers and relevant to performance improvement efforts. Most of the measures are based on surveys designed to elicit the public's experience of its health care system.

The indicators were carefully selected from among the best-available measures with comparable data across the included countries. The selected measures cover a wide range of

performance domains. *Mirror, Mirror* is unique in its use of survey measures designed to gather the perspectives of patients and professionals—the people who experience health care directly in each country every day.

**DATA** The data for this report were derived from several sources. Survey data are drawn from the 2014, 2015, and 2016 Commonwealth Fund International Health Policy Surveys. Since 1998, in collaboration with international partners, the Commonwealth Fund has supported these surveys of the public's and primary care physicians' experiences of their health care systems. Each year, in collaboration with researchers in the 11 countries, a common questionnaire is developed, translated, adapted, and pretested. The 2016 survey was of the general population; the 2014 survey surveyed adults age 65 and older. The 2016 and 2014 surveys examined patients' views of the health care system, quality of care, care coordination, medical errors, patient-physician communication, waiting times, and access problems. The 2015 survey was administered to primary care physicians, and examined their experiences providing care to patients, the use of information technology, and the use of teams to provide care.

The Commonwealth Fund International Health Policy Surveys (2014, 2015, 2016) are nationally representative samples drawn at random from the populations surveyed. The 2014 and 2016 surveys sampling frames were generated using probability-based overlapping landline and mobile phone sampling designs and in some countries, federal registries; the

2015 survey was drawn from government or private company lists of practicing primary care doctors in each country. [Appendix 7](#) presents the number of respondents and response rates for each survey, and further details of the survey methods are described elsewhere.<sup>2</sup>

In addition to the surveys, other standardized comparative data were drawn from the most recent reports of the Organization for Economic Cooperation and Development (OECD), the European Observatory on Health Systems and Policies, and the World Health Organization (WHO). Our study included data from the OECD on screening, immunization, preventable hospital admissions, population health, and disease-specific outcomes. The WHO and European Observatory data were used to measure population health.

**ANALYSIS** We used the following approach to calculate performance scores and rankings for comparison:

*Measure performance scores:* For each measure, we converted each country's result (e.g., the percentage of survey respondents giving a certain response or a mortality rate) to a measure-specific performance score. This score was calculated as the difference between the country result and the 11-country mean, measured in standard deviations. Normalizing the results based on the standard deviation accounts for differences between measures in the range of variation among country-specific results. A positive performance score indicates the country performs above the 11-country

average; a negative score indicates the country performs below the 11-country average.

The 11 measures in the equity domain were derived from the 2016 population survey and calculated by stratifying the population samples based on reported income (above-average vs. below-average relative to the country's median income). Performance scores were based on the difference between the two groups, with a wider difference interpreted as a measure of lower equity between the two income strata in each country.

*Domain performance scores and ranking:* For each country, we calculated the mean of the measure performance scores in that domain. Then we ranked each country from 1 to 11 based on the mean domain performance score, with 1 representing the highest performance score and 11 representing the lowest performance score.

*Overall performance scores and ranking:* For each country, we calculated the mean of the five domain-specific performance scores. Then, we ranked each country from 1 to 11 based on this summary mean score, again with 1 representing the highest overall performance score and rank 11 representing the lowest overall performance score.

**SENSITIVITY ANALYSES** We tested the stability of this ranking method by running two tests based on Monte Carlo simulation to observe how changes in the measure set or changes in the results on some measures would affect the overall rankings. For the first test, we removed three measure results from

the analysis at random, and then calculated the overall rankings on the remaining 69 measure results, repeating this procedure for 1,000 combinations selected at random. For the second test, we reassigned at random the survey measure results derived from the Commonwealth Fund international surveys across a range of plus or minus 3 percentage points (approximately the 95 percent confidence interval for most measures), recalculating the overall rankings based on the adjusted data, and repeating this procedure 1,000 times.

The sensitivity tests showed that the overall performance scores for each country varied, but that the ranks clustered within three groups ([Exhibit 3](#)). Among the simulations, the U.K., Australia, and the Netherlands were nearly always ranked among the three top countries; the U.S., France and Canada were nearly always ranked among the three bottom countries. The other five countries varied order between the 4th and 8th ranks.

**LIMITATIONS** This report has several limitations. Some are related to the particulars of our analysis and some inherent in any effort to assess overall health system performance.

First, as described above, our sensitivity analyses suggest that the overall country rankings are somewhat sensitive to small changes in the data or indicators included in the analysis.

Second, despite improvements in recent years, the availability of cross-national data on health

system performance remains highly variable. The Commonwealth Fund surveys offer unique and detailed data on the experiences of patients and primary care physicians. However, they do not capture important dimensions that might be obtained from medical records or administrative data. Furthermore, patients' and physicians' assessments might be affected by their expectations, which could differ by country and culture. In this report, we augment our survey data with other international sources, and include several important indicators of population health and disease-specific outcomes. However, in general, the report relies predominantly on patient experience measures. Moreover, there is little cross-national data available on mental health services and on long-term care services.

Third, we base our assessment of overall health system performance on five domains—Care Process, Access, Administrative Efficiency, Equity, and Health Care Outcomes—which we weight equally in calculating each country's overall performance score. In the past some have argued there are other important elements of system performance that should be considered as well, such as innovativeness or value. After consideration, and based on discussions with our advisory panel, we decided not to add new domains to the report. We believe our current five domains capture a sufficiently broad and comprehensive view of health system performance. In addition, there was a lack of meaningful data to assess these new domains.

## NOTES TO METHODS

1. Members of the advisory panel include: Marc Elliott, M.A., Ph.D., Distinguished Chair in Statistics and Senior Principal Researcher, RAND Corporation; Niek Klazinga, M.D., Ph.D., Head of the Health Care Quality Indicators (HCQI) Project, Organisation for Economic Co-Operation and Development Health Division; Ellen Nolte, Ph.D., M.P.H., Hub Coordinator, European Observatory on Health Systems and Policies, London School of Economics and Political Science, London School of Hygiene and Tropical Medicine; Rosa Suñol, M.D., Ph.D., Director of Avedis Donabedian Research Institute, Universitat Autònoma de Barcelona and Red de Investigación en Servicios de Salud en Enfermedades Crónicas (REDISSEC), Spain; and Dana Gelb Safran, Sc.D., Chief Performance Measurement & Improvement Officer and Senior Vice President, Enterprise Analytics, Blue Cross Blue Shield of Massachusetts.

2. R. Osborn, D. Squires, M. M. Doty, D. O. Sarnak, and E. C. Schneider, “[In New Survey of 11 Countries, U.S. Adults Still Struggle with Access to and Affordability of Health Care](#),” *Health Affairs Web First*, published online Nov. 16, 2016; R. Osborn, D. Moulds, E. C. Schneider, M. M. Doty, D. Squires, and D. O. Sarnak, “[Primary Care Physicians in Ten Countries Report Challenges in Caring for Patients with Complex Health Needs](#),” *Health Affairs*, Dec. 2015 34(12):2104–12; and R. Osborn, D. Moulds, D. Squires, M. M. Doty, and C. Anderson, “[International Survey of Older Adults Finds Shortcomings in Access, Coordination, and Patient-Centered Care](#),” *Health Affairs Web First*, published online Nov. 19, 2014.