By Robin Osborn, Donald Moulds, Eric C. Schneider, Michelle M. Doty, David Squires, and Dana O. Sarnak

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Primary Care Physicians In Ten Countries Report Challenges Caring For Patients With Complex Health Needs

Robin Osborn (ro@cmwf.org) is vice president of the International Health Policy and Practice Innovations program at the Commonwealth Fund, in New York City.

Donald Moulds is executive vice president for programs at the Commonwealth Fund.

Eric C. Schneider is senior vice president for policy and research at the Commonwealth Fund.

Michelle M. Doty is vice president of survey research and evaluation at the Commonwealth Fund.

David Squires is senior researcher to the president at the Commonwealth Fund.

Dana O. Sarnak is a research associate in the International Health Policy and Practice Innovations program at the Commonwealth Fund.

ABSTRACT Industrialized countries face a daunting challenge in providing high-quality care for aging patients with increasingly complex health care needs who will need ongoing chronic care management, community, and social services in addition to episodic acute care. Our international survey of primary care doctors in the United States and nine other countries reveals their concern about how well prepared their practices are to manage the care of patients with complex needs and about their variable experiences in coordinating care and communicating with specialists, hospitals, home care, and social service providers. While electronic information exchange remains a challenge in most countries, a positive finding was the significant increase in the adoption of electronic health records by primary care doctors in the United States and Canada since 2012. Finally, feedback on job-related stress, perceptions of declining quality of care, and administrative burden signal the need to monitor front-line perspectives as health reforms are conceived and implemented.

Two trends are placing unprecedented demands on health care systems in industrialized countries. Demographic trends are increasing the prevalence of degenerative conditions such as dementia and physical frailty, and rising numbers of people are at risk for chronic illness.[1] At the same time, advances in medical science are enabling patients to live longer with multiple serious chronic health conditions. In all countries, the convergence of demographic trends and medical advances are putting pressure on public and private spending.

Concern about the performance and sustainability of their health care systems has prompted governments in many industrialized countries to enact health reforms in recent years. Many reforms advocate strengthening primary care and making it more integrated, patient centered, and accountable for quality and costs. These reforms generally reflect the Chronic Care Model developed by Edward Wagner and include six interrelated components important for managing patients with complex health care needs: self-management support, clinical information systems, delivery system redesign (such as multidisciplinary teams), decision support, health care organization drivers (such as incentives and leadership), and community resources.[2]

This article reports on findings from the 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians in Australia, Canada, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States (the eighteenth in a series of annual international surveys of doctors and patients). The survey aimed to assess the experiences of primary care doctors regarding the preparedness of their practice to manage the care of patients with complex needs (both children and adults), offer patient access, communicate with other specialty and community-based providers, and use health information technology (IT). The survey also

asked about their views of their health system and satisfaction with aspects of their practice. Primary care doctors have a unique perspective on the organization and financing of primary care. Their views and experiences may be useful to policy makers and delivery system leaders. The analysis aims to identify shared challenges and potential areas for cross-national learning. For an overview of primary care provider organization and payment mechanisms across countries, see online Appendix A1.[3]

Study Data And Methods

The 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians interviewed nationally representative random samples of primary care doctors in ten countries. Samples of practicing physicians were drawn from government or private lists of primary care doctors in each country.[4] Physician specialties responsible for primary care were determined by country experts, recognizing that their roles, training, and scopes of practice vary across countries. General practice or family physicians were surveyed in all countries, as well as internists and pediatricians in the United States, Germany, and Switzerland.[5] A common questionnaire was reviewed by experts in each country, adjusted for country-specific wording, and translated as needed to ensure comparability across countries.[6]

SSRS, a survey research firm, and country contractors interviewed doctors between March and June 2015. This was a rapid-response survey with relatively short field periods (8–14 weeks). Survey data collection modes were tailored based on each country's best practices for reaching physicians. Mail surveys were conducted in Germany, the Netherlands, and Norway. In Australia and New Zealand, physicians were recruited by phone and responded to surveys online or by mail. Online and mail surveys were conducted in Canada, Sweden, and the United States, while phone and online questionnaires were conducted in the United Kingdom and Switzerland. Mail, e-mail, and phone reminders were used.

Each country participated in designing and supporting its country survey and in some instances expanded samples to support within-country analyses.[7] Final sample sizes ranged from 503 to 2,905. Data were weighted, based on the known population parameters in each country, to ensure that they were representative of the primary care physician population.[8]

The UK sample reflects data from England, Wales, Scotland, and Northern Ireland. The way health services are organized and delivered in these four nations differs, and while we did note some variation in estimates across these nations, sample sizes were too small to support reporting responses separately. Therefore, we report UK averages. When we call out reforms in the United Kingdom, we are referring to England, which represents the majority of the sample.

Dichotomous outcome variables by country, available in Appendices A2–A6, show where country differences are statistically significant using logistic regression.[3]

Among the study's limitations were the response rates, which ranged from 19 percent in Germany to 47 percent in Sweden.[9] Although nonrespondents might differ from respondents, data were weighted to account for differential nonresponse along known geographic and demographic parameters in each country. This study was based on the views and experiences reported by doctors, and the results have not been validated by independently obtained data. Finally, political events or health policy measures and discussions at the time of the interviews may have influenced respondents' views in an unknown direction.

Study Results

DOCTORS' VIEWS OF PRACTICE PREPAREDNESS TO MANAGE CARE FOR PATIENTS WITH COMPLEX NEEDS Patients with multiple chronic conditions could be expected to benefit from effective primary care. The percentage of doctors reporting that their practice is well prepared to manage such patients ranged from 66 percent in Sweden to 88 percent in Germany and the Netherlands (Exhibit 1). For patients with dementia, those in need of palliative care, and those in need of long-term home care services, the percentages reporting that their practices are well prepared were typically less than 70 percent and, in many countries, less than 50 percent. For severe mental health or substance use–related problems, with one exception (Norway), fewer than half of primary care doctors reported their practice to be well prepared; and in Sweden and the United States, fewer than one in six reported that their practice was well prepared.

PRIMARY CARE PRACTICE CAPACITY TO PROVIDE ENHANCED ACCESS AND CARE MANAGEMENT A majority of primary care doctors in all countries (except Germany) use personnel such as nurses or case managers to help monitor and manage care for patients with serious chronic conditions (Exhibit 2). Swiss respondents were the most likely to use personnel outside of their practice instead of situating them within the practice.

Large majorities of Dutch (88 percent) and UK

EXHIBIT 1

Primary Care Doctors From Ten Countries Report On Whether Their Practice Is Well Prepared To Manage Care Of Patients With Complex Needs, 2015

Country	Patients with multiple chronic conditions	Patients needing palliative care	Patients with dementia	Patients needing long-term home care services	Patients needing social services in the community	Patients with severe mental health problems	Patients with substance use–related issues
AUS ($n = 747$)	85%	48%	46%	47%	41%	34%	19%
CAN ($n = 2,284$)	70	42	42	40	28	24	15
GER ($n = 559$)	88	58	67	68	71	32	14
NET ($n = 618$)	88	92	65	80	25	44	16
NZ ($n = 503$)	81	62	41	54	48	24	20
NOR ($n = 864$)	86	54	69	78	41	56	36
SWE ($n = 2,905$)	66	25	57	51	45	14	6
SWIZ ($n = 1,065$)	80	48	49	64	55	26	25
UK ($n = 1,001$)	79	81	64	60	44	43	41
US ($n = 1,001$)	76	41	47	46	32	16	16

SOURCE 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians. **NOTE** Excludes physicians who reported that they "never" see these patients.

(84 percent) doctors said that they frequently make home visits, in contrast to only 6 percent of US doctors. Two-thirds or more of primary care practices in all countries have after-hours care arrangements, except in the United States (39 percent) and Canada (48 percent).

Eighty percent of Swiss doctors and half or more of German, New Zealand, Dutch, US, and Swedish doctors said that their patients could use e-mail to contact them about medical questions or concerns. Meanwhile, a much greater percentage of US doctors (60 percent, more than twice as high as the other countries studied) provide their patients with online access to view, download, or transmit information from their medical record than in any other country.

PRIMARY CARE DOCTORS' EXPERIENCES WITH COMMUNICATION AND CARE COORDINATION Doctors in the survey reported frequent gaps in communication between primary care and other parts of the health care system (Exhibit 3).

EXHIBIT 2

Primary Care Doctors From Ten Countries Report On Aspects Of Their Practice's Capacity To Provide Enhanced Access And Care Management, 2015

Country	Practice uses nurses or case managers to monitor and manage care for patients with chronic conditions		Practice staff frequently make home visits	Practice has arrangement for patients to see doctor or nurse after hours without going to ED	Patients can e-mail about medical question or concern	Patients can view online, download, or transmit information from their medical record
	Within practice	Outside practice				
AUS	75%	6%	25%	78%	30%	11%
CAN	43	23	19	48	15	7
GER	20	7	57	85	50	8
NET	78	14	88	94	57	13
NZ	83	7	20	92	53	24
NOR	32	37	20	80[a]	32	3
SWE	75	13	24	75	61	20
SWIZ	8	52	43	69	80	11
UK	87	8	84	89	38	28
US	43	24	6	39	57	60

SOURCE 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians. **NOTES** Sample sizes are in Exhibit 1. ED is emergency department. [a]In Norway, respondents were asked whether their practice has arrangements or if there are regional arrangements reflecting the fact that municipalities—and not primary care physicians—have responsibility for primary care after-hours services in this country.

EXHIBIT 3

Primary Care Doctors From Ten Countries Report On Their Experiences With Communication And Care Coordination, 2015

	Communication with specialists	Communication with hospital and ED		Communication with home care providers and social services		
Country	When patient is seen by specialist, primary care doctor always or often receives timely and relevant information when needed[a]	Doctor is always notified when patient is discharged from the hospital	Doctor is always notified when patient is seen in ED	Practice routinely communicates with home care provider about patient's needs and services[b]	Practice is routinely advised of relevant change in home care patient's condition or status[b]	Practice frequently coordinates care with social services or community providers
AUS	58%	18%	18%	29%	43%	45%
CAN	61	29	32	32	48	50
GER	61	27	20	51	64	63
NET	63	69	68	56	61	42
NZ	69	48	56	28	40	58
NOR	66	38	32	63	53	51
SWE	37	8	6	53	50	42
SWIZ	78	29	31	55	72	60
UK	47	37	49	34	47	65
US	62	31	32	52	63	43

SOURCE 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians. **NOTES** Sample sizes are in Exhibit 1. ED is emergency department. [a]Physicians who reported that they always or often receive a report back from the specialist with all relevant health information, and the information they receive is always or often timely and available when needed. [b]Excludes those who responded "not applicable."

The same was true of communication with social services providers, although country rates varied widely in both instances.

When their patients see a specialist, only 37 percent of Swedish doctors reported that they always or often receive a timely report back with relevant information, compared to 78 percent in Switzerland. Furthermore, despite the potential risks associated with poor handoffs from the hospital to the ambulatory setting, the percentage of primary care doctors reporting that they are always notified of a patient's discharge from the hospital ranged from 69 percent of Dutch doctors to as low as 8 percent of doctors in Sweden. Similar percentages of doctors reported always being notified when their patient is seen in the emergency department.

Fewer than two-thirds of doctors in all countries said that their practice routinely communicates with home care providers about patients' needs and services, and fewer than half in New Zealand, Australia, the United Kingdom, and Canada were routinely alerted by home care providers to relevant changes in their patients' conditions.

There are also significant gaps in care coordination with social services. Between 42 percent (Sweden and the Netherlands) and 65 percent (United Kingdom) said that their practice frequently coordinates care with the broader range of needed social services, such as housing, meals, and transportation. The extent to which coordinating social services is a burden on primary care also varies—for example, 70 percent or more of doctors in Australia and the United Kingdom reported that it is somewhat or very difficult to do so, compared to 20 percent in Switzerland (data not shown).

HEALTH INFORMATION TECHNOLOGY CAPACITY

The use of electronic health IT in primary care is a rapidly evolving area with wide variation among countries. In Australia, the Netherlands, New Zealand, Norway, Sweden, and the United Kingdom, electronic health record adoption has been nearly universal for some time. On the other hand, in Canada and the United States, where adoption rates have historically been relatively low, progress in recent years has been pronounced—increasing by 17 and 15 percentage points, respectively, in the past three years, and tripling since 2006 (Exhibit 4).[10]

Progress is more uneven when it comes to more advanced electronic functionalities. One-fourth or fewer respondents routinely receive computerized reminders for guideline-based interventions or screening tests in several countries, whereas more than three-fourths received such reminders in the United Kingdom.

The survey findings also demonstrate that having an electronic health record does not ensure electronic flow of information with doctors outside of one's practice. Fewer than half of respondents in Canada, Germany, Australia, and the United States were able to electronically ex-

EXHIBIT 4

Primary Care Doctors From Ten Countries Report On Their Use Of Health Information Technology, 2012 And 2015

	Use an electronic medical record		Routinely receive computerized reminder for guideline-based intervention or screening tests		Can electronically exchange patient clinical summaries with doctors outside practice		Very satisfied or satisfied with their electronic medical record, 2015[a]
Country	2012	2015	2012	2015	2012	2015	
AUS	92%	92%	51%	56%	30%	34%	80%
CAN	56	73**	19	26**	14	19**	68
GER	82	84	8	15**	23	22	77
NET	98	98	12	20**	58	70**	76
NZ	97	100**	46	61**	67	75**	69
NOR	98	99	6	10**	58	82**	64
SWE	88	99**	6	7	54	67**	37
SWIZ	41	54**	9	9	59	57	70
UK	97	98**	68	77**	46	60**	86
US	69	84**	33	47**	33	42**	52

SOURCE 2012 and 2015 Commonwealth Fund International Health Policy Surveys of Primary Care Physicians. **NOTES** Sample sizes are in Exhibit 1. Significance denotes within-country differences between 2012 and 2015. [a]Among physicians reporting that they use an electronic record. **$p < 0.05$

change patient clinical summaries.

Satisfaction with current electronic health record systems varied. Three-fourths or more reported being "very satisfied" or "satisfied" in the Netherlands, Germany, Australia, and the United Kingdom. In contrast, only 37 percent of doctors in Sweden and 52 percent in the United States held such positive views.

SATISFACTION AND VIEWS OF THE HEALTH CARE SYSTEM US, UK, German, and Swedish primary care doctors stand out for the low marks they give their health systems (Exhibit 5). Consistent with findings from earlier international surveys,[11] US doctors are least likely to say that their system works well and needs only minor changes. There were dramatic changes in views among UK doctors, however. In 2015 only 22 percent of UK primary care doctors thought their health system worked well and needed only minor changes, down from nearly half in 2012.[12] Norwegian primary care doctors stand out for having the most positive views of their health system.

In general, across countries, most doctors reported that their health systems were performing about the same as three years ago. In the United Kingdom, Sweden, the Netherlands, the United States, and Germany, roughly one-third reported that their health systems had gotten worse. In contrast, one-third of doctors in Norway and New Zealand reported that their health systems had improved.

For the most part, few primary care doctors were dissatisfied with practicing medicine, but German, US, UK, and Swedish primary care doctors reported higher-than-average levels of dissatisfaction. Doctors in these four countries were also more likely than others to report that their job is very or extremely stressful and were among the most likely to be dissatisfied with their time available to spend with patients. For doctors in the Netherlands, the United States, Germany, and Switzerland, the amount of time their practice spent on administrative burdens related to insurance or payment claims was also a point of significant frustration.

Discussion And Implications

Our survey results highlight critical issues for primary care across the ten countries. Substantial numbers of primary care doctors reported that their practices are less than well prepared to manage the care of patients with complex needs and that their patients face ongoing gaps in access and care coordination, including among health, home care, and social services. Furthermore, doctors reported concerns about quality, showed dissatisfaction with aspects of their practice, and offered ambivalent endorsements of their health care systems.

It is difficult to draw conclusions about the country-specific causes of the variations we observed, given the differences in these health sys-

EXHIBIT 5

Primary Care Doctors From Ten Countries Report On Their Satisfaction With And Views Of Their Health Care System, 2015

Country	System works well, only minor changes needed[a]	Quality of care patients receive throughout the health system in past 3 years			Somewhat or very dissatisfied practicing medicine	Job is very or extremely stressful	Amount of time practice spends on administrative issues related to insurance or claiming payments is a major problem	Somewhat or very dissatisfied with time spent per patient	Somewhat or very dissatisfied with their income
		Improved	About the same	Gotten worse					
AUS	48%	24%	58%	18%	12%	21%	21%	25%	36%
CAN	36	25	53	21	16	27	20	33	22
GER	27	15	55	29	36	45	52	45	28
NET	50	21	44	34	15	18	60	55	19
NZ	57	32	52	16	13	24	20	41	26
NOR	67	33	58	8	8	24	9	33	19
SWE	19	21	42	36	24	56	27	58	18
SWIZ	54	13	65	21	14	31	50	32	28
UK	22	22	42	36	33	59	21	73	33
US	16	25	41	33	34	43	54	44	34

SOURCE 2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians. **NOTE** Sample sizes are in Exhibit 1. [a]Physicians were asked which of the following three statements best expresses their overall view of the health system in their country: "On the whole the health care system works pretty well and only minor changes are necessary to make it work better"; "There are some good things in our health system, but fundamental changes are needed to make it work better"; or, "Our health care system has so much wrong with it that we need to completely rebuild it." This exhibit shows results for the first statement only.

tems' histories, cultures, and contexts. For example, several factors may have influenced doctors' varying views of the preparedness of their practices to manage patients with different types of complex needs. The organization of primary care, workforce training, use of teamwork, size of practice, payment strategies and incentives, health IT capacity, and the availability of community services may all play a role. Some observations are possible on the role of policies and recent reforms, with the acknowledgement that establishing causality is beyond the scope of this study.

ACCESS TO CARE The 2015 findings on patient access indicate how country policies can influence where, when, and how patients seek care. In countries with statutory or contractual requirements to provide after-hours care, such as Germany, the Netherlands, New Zealand, and the United Kingdom,[13] primary care practices almost universally report arrangements where their patients can see a doctor or nurse in the evenings and on weekends. The majority of patients in those countries also report easy access to after-hours care. In contrast, patients in Canada and the United States, where access to after-hours care is limited, have the highest rates of emergency department use.[14]

Most countries have yet to take full advantage of secure e-mail as a means for expanding access to primary care. The Netherlands is one of the few countries in the survey that encourages e-mail communication by providing primary care doctors supplemental payments for e-mail consultations with patients.[15] The United States has been the most proactive in offering patients online access to their medical records, likely as a result of the inclusion of this capability in the requirements to meet federal meaningful-use standards.[16]

MULTIDISCIPLINARY TEAMS While the 2015 international survey solicited the views and experiences only of primary care doctors, it should be noted that in some countries, nurses and other allied health professionals provide most of the routine care to people with chronic conditions.[17] The survey findings highlight widespread use of nurses and case managers, although country regulations vary widely on the extent to which nurses can take on expanded roles in managing care of patients with complex needs. In addition to regulatory barriers, countries with fee-for-service models have been slow to reimburse nurses at the same rate as doctors for doing the same services.[13] Fewer respondents in these countries reported using nurses or case managers, with the exception of Australia, where progressive nurse-specific benefits and practice incentive payments for care coordination appear to have been effective in encouraging the use of teams.

CARE COORDINATION This and past international surveys of both primary care doctors and patients have found that care coordination

failures are common in all ten health systems. In our 2014 Survey of Older Adults, for example, patients in Canada, the United States, Norway, and Germany reported the most problems.[14] These four countries rely on fee-for-service payment for primary care, which may provide less incentive for coordination than does salary or capitation. Switzerland, however, also relies on fee-for-service, and yet primary care doctors reported the highest rates of communication among primary and specialty care and home care, which suggests that coordinated systems can evolve within different payment paradigms.

Through delivery system and payment reforms, countries have been experimenting with various approaches to encourage coordination across settings and the care continuum, some of which are yielding some promising results that may be reflected in the survey findings. For example, in the Netherlands, bundled payments to primary care–led "care groups" have been implemented nationwide to encourage integrated chronic care for diabetes, chronic obstructive pulmonary disease, and cardiovascular disease.[13] In a recent evaluation, more than 90 percent of patients rated cooperation and coordination among their health care providers as good or excellent.[18]

With community services often operating under a separate governance structure and funding stream than health care, the challenges of care coordination with home care and social services are nonetheless often compounded. Few countries have found effective solutions, and integrating care across silos is difficult—even in countries such as Norway, where primary care, community care, and social services all operate under the auspices of the municipalities.[13]

HEALTH INFORMATION TECHNOLOGY Compelling evidence is emerging that health IT can promote coordination of care and improve quality and safety.[19,20] Our survey results show that information exchange in all countries is a work in progress, with issues around data decentralization, security, and privacy often creating stumbling blocks. The Netherlands and Norway, two countries with high-functioning electronic record systems, illustrate how countries can pursue multiple paths to support interoperability. In the Netherlands, a government-subsidized nationwide digital electronic record system was launched in 2013 but faced court challenges from primary care doctors.[21] It is now operational but requires patients to opt in and give permission for provider access, and it ensures that insurers cannot access patient information. In Norway, the state-owned National Health Network is establishing a single information exchange platform for health care providers and authorities, to facilitate exchange among general practitioners, hospitals, nursing homes, pharmacists, and others.[13]

Most countries have yet to take full advantage of secure e-mail as a means for expanding access to primary care.

HEALTH REFORM AND PHYSICIANS' VIEWS Significant changes in how primary care is organized and funded have been recently introduced in many of the countries surveyed. A range of changes have been observed: In England, general practitioner–led clinical commissioning groups have responsibility for the majority of the health care budget for their patients; in Canada, family health teams (Ontario) and family medicine groups (Quebec) offer practices the scale necessary to support multidisciplinary teams and access to care twenty-four hours a day, seven days per week; and in Australia, primary health networks bridge the divide between primary and acute care services.[13,22] Common to many of these reforms are efforts to shift from small, independent practices to extended primary care networks with the infrastructure to manage patients with complex conditions.[23]

In countries where front-line primary care doctors are the focal point of health system change, doctor burnout may be a concern. In England, declines in doctors' views of the health care system, ratings of the quality of care, and satisfaction practicing medicine have coincided with a surge in the number of doctors considering early retirement[24] and declining numbers of trainees choosing primary care as a profession.[25] Policy makers should monitor these front-line perspectives as health reforms are conceived and implemented.[26]

Furthermore, while the findings show that the vast majority of primary care doctors across countries are satisfied with their practice and income, the themes of frustration with administrative burden and insurance hassle resonate across many of the countries. This is particularly true among those with multipayer private insurance systems (Germany, the Netherlands, Switzerland, and the United States).

Themes of frustration with administrative burden and insurance hassle resonate across many of the countries.

Conclusion

The need to bolster primary care in the United States is critical. Among the ten countries in this survey, the United States has the youngest population, yet it has the highest incidence of chronic disease and spends 50–150 percent more on health care per capita than the other nine countries in the survey.[14,27] This survey highlights another unwanted distinction: US primary care doctors felt among the least prepared to treat people with multiple chronic conditions and reported being among the least prepared to manage conditions associated with aging outside of hospital or nursing home settings.

To tackle these challenges, several US reforms in recent years have aimed to better equip primary care doctors to care for patients with complex needs. The Affordable Care Act in particular has created or stimulated a number of ongoing experiments to address many of the challenges highlighted in the survey. These include investing in promising primary care models such as the primary care medical home or health homes; new payment models such as accountable care organizations and bundled payment; and efforts such as the Medicaid-Medicare dual-eligible program, which seeks to coordinate care for poor patients with disabilities who are beneficiaries of both programs.[28] In 2015 Medicare introduced a monthly chronic care management payment for primary care providers caring for patients with multiple chronic conditions.[29] Since 2009 federal incentive payments have played a role in accelerating the spread of electronic health records in the United States, catching up to or surpassing a number of the countries in the survey.[30]

But these and related efforts are nascent, and delivery systems can be slow to change. Sorting out which reforms are successful can take time. To succeed, the United States may need to do more to strengthen primary care, with policy makers keeping an open mind about new ideas (including those that have demonstrated effectiveness in other countries). Policy makers will also need to maintain a commitment to iterating on new models for improvement, refining them, and evaluating their effectiveness with the patience to recognize that a successful recipe may not be immediately apparent. ■

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3 To access the Appendix, click on the Appendix link in the box to the right of the article online.

4 Information on methods used to draw representative samples of primary care physicians in each country, including the lists (government or private) used for the sampling frames, is available from the authors upon request.

5 The US sample consisted of physicians in general practice or internal medicine (78 percent) and pediatrics (22 percent). The German sample consisted of physicians in general practice or internal medicine (78 percent), pediatrics (14 percent), and 8 percent that did not report their specialty. The Swiss sample consisted of physicians in internal medicine (88 percent) and pediatrics (12 percent). These are physician specialties responsible for primary care as determined by country experts.

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7 The Commonwealth Fund provided core support, with cofunding from the German Federal Ministry of Health and the German National Institute for Quality and Patient Safety; Haute Authorité de Santé, Caisse Nationale de l'Assurance Maladie des Travailleurs Salariés (France); Dutch Ministry of Health, Welfare, and Sport, and the Scientific Institute for Quality of Healthcare at Radboud University Nijmegen (the Netherlands); Norwegian Knowledge Centre for the Health Services; Swedish Ministry of Health and Social Affairs and the Swedish Agency for Health and Care Services Analysis; and the Swiss Federal Office of Public Health. Support to expand samples was provided by the New South Wales Bureau of Health Information (Australia); the Canadian Institute for Health Information, Health Quality Ontario, Canadian Institutes of Health Research, Quebec Health Commission, Canada Health Infoway; and the Health Foundation of the United Kingdom.

8 Weighting variables included age, sex, and a geographic variable such as region, province, or town size (except in the Netherlands, where only age and sex were used). Data for Germany and the United States were also weighted by specialty type. Weighted data align with country benchmarks along these geographic and demographic dimensions. Additional details about the weighting methodology is available from authors upon request.

9 Response rates were as follows: 25 percent in Australia, 32 percent in Canada, 19 percent in Germany, 41 percent in the Netherlands, 28 percent in New Zealand, 44 percent in Norway, 47 percent in Sweden, 39 percent in Switzerland, 39 percent in the United Kingdom, and 31 percent in the United States.

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