

INSTITUTIONS FROM THE PRACTITIONER'S PERSPECTIVE: A SURVEY OF PRIMARY CARE ON HEALTH INFORMATION TECHNOLOGY

With aging societies and costly medical innovation, spending on healthcare takes up increasing shares of GDP in the majority of developed societies. Policy-makers face the challenge of allocating these resources efficiently, i.e., to warrant high quality care while keeping down costs. The introduction of health information technology (HIT) has formed a mainstay of recent healthcare reforms. A recent study by Schoen et al. (2009) has surveyed primary care physicians (PCPs) on the diffusion of HIT in Australia, Canada, France, Germany, Italy, New Zealand, the Netherlands, Norway, Sweden, the United Kingdom and the United States.

The authors chose PCPs because of their crucial role in healthcare systems. Strong and integrated primary care has been shown to be associated with better health outcomes and lower costs (Starfield et al. 2005). PCPs form the entry point to care. With the exception of the United States, PCPs in all countries function as gate-keepers: patients are either required or offered financial incentives to consult a primary care physician before being referred to a specialist. PCPs serve as the bridge between hospital and community care, and engage patients and their families to help manage health. Against the background of growing epidemics of chronic disease, prevention is also becoming a major field of primary care.

Because HIT simplifies the processing, storage and exchange of health information it has the potential to improve all dimensions of primary care both in terms of achieving better health outcomes

and saving costs. Typical examples are the avoidance of duplicate procedures and harmful interactions of medications through the electronic tracking of treatments.

The study asked PCPs about their usage of basic electronic medical records (EMRs) and whether 13 other functions like access to laboratory results, prescribing and alerts about potential problems with drug doses or interactions were computerized in their practices. Figure 1 shows the diffusion of EMRs in the 11 surveyed countries. Use of EMRs is near universal in seven of the surveyed countries whereas Germany, France, the United States and Canada lag behind. Comparisons with data collected in Germany, the United States and Canada in a 2006 survey wave suggest, however, that the share of EMR users almost doubled in the last three years in these countries.

Figure 1

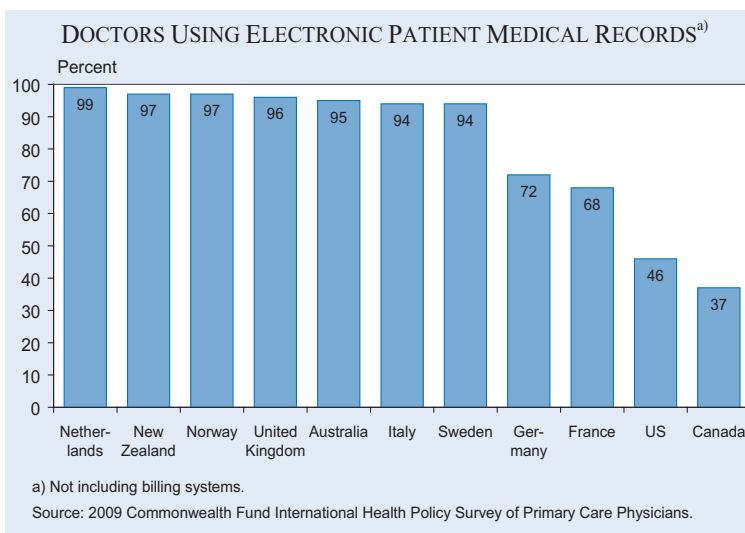
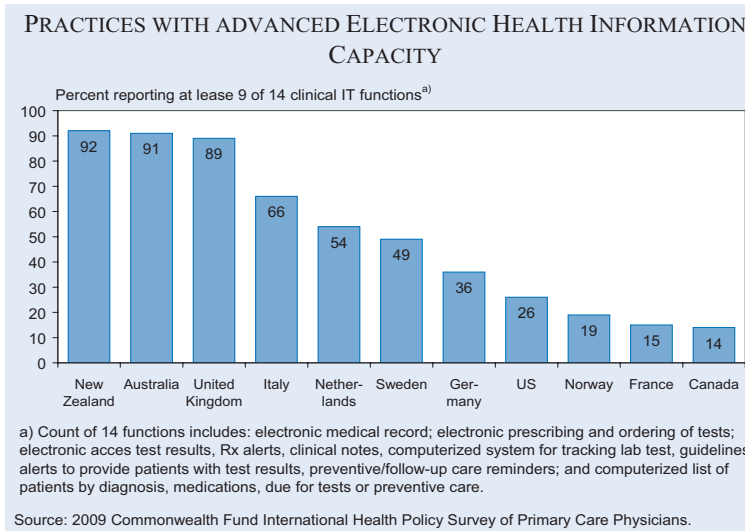


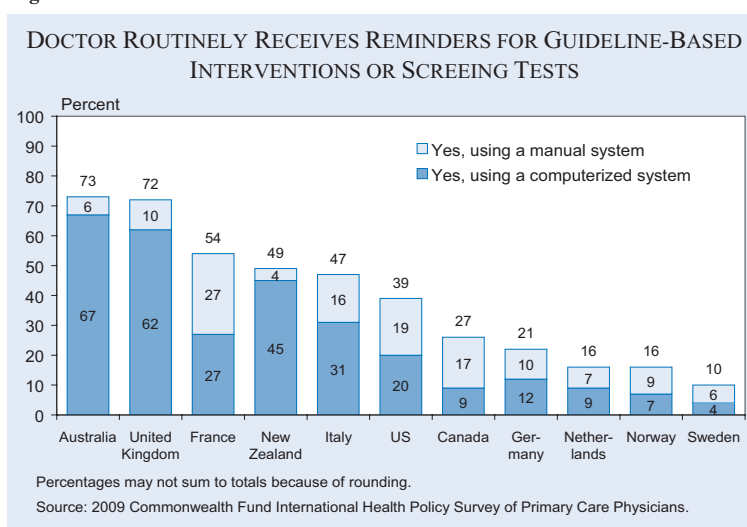
Figure 2



Based on the 14 functions, Schoen et al. (2009) created a summary variable that identifies practices computerizing 9–14 of them as having high multifunctional HIT capacity. Figure 2 shows the respective shares of high HIT capacity practices. Practices in New Zealand, Australia and the United Kingdom show the highest and Italy, the Netherlands and Sweden medium degrees of multifunctional HIT capacity. In contrast, only a minority of PCPs makes intensive use of HIT in Germany, Norway, France, and Canada. With the exception of Norway, usage of EMR thus positively correlates with overall levels of computerization. The seven countries with almost universal EMR coverage have also been successful in spreading multifunctional HIT capacity relatively equally over smaller and larger practices. In comparison, HIT capacity is still concentrated in larger practices in Canada, the United States and Sweden.

The Table presents results for a selection of the 13 computerizable functions other than EMRs. The results highlight the cross-country variation in HIT capacity building focuses. In all countries with near universal EMR coverage, the majority of PCPs can access laboratory test results electronically but only in Australia, Italy, New Zealand and Sweden is the ordering of tests computerized in more than 50 percent of

Figure 3



practices. Electronic alerts about potential problems with drug doses and interactions with other medications that form an important safety mechanism (Chaudhry et al. 2006) are almost universal only in the Netherlands, the United Kingdom, Australia and New Zealand. They are uncommon in Germany, Canada and Norway. In terms of computerized generation of patient information, Australia, New Zealand and the United Kingdom also take a leading role whereas processes, such as electronic listing of patients due for tests or preventive care or electronic listing of all medications taken by an individual patient, are least frequent in US, Canadian and French practices.

Figure 3 combines the share of all PCPs that routinely receive computer-generated reminders for

Table

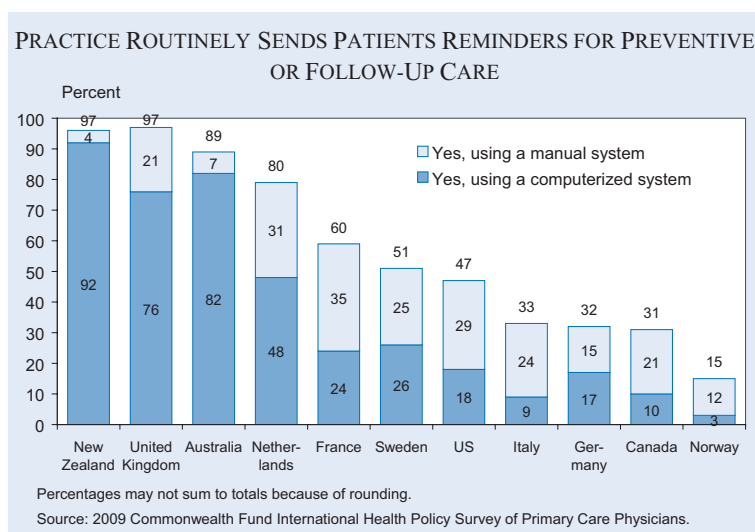
Practices using HIT on a routine basis for core tasks (in %)

	AUS	CAN	FR	GER	ITA	NET	NZ	NOR	SWE	UK	US
Electronic ordering of laboratory tests	86	18	40	62	91	6	64	45	81	35	38
Electronic access to patients' test results	93	41	36	80	50	76	92	94	91	89	59
Electronic prescribing of medication	93	27	57	60	90	98	94	41	93	89	40
Electronic alerts/prompts about a potential problem with drug dose/interaction	92	20	43	24	74	95	90	10	58	93	37
Electronic entry of clinical notes	92	30	60	59	82	96	96	81	89	97	42
Listing of patients by diagnosis	93	37	20	82	86	73	97	57	74	90	42
Listing of patients by lab result	88	23	15	56	76	62	84	49	67	85	29
Listing of patients who are due or overdue for tests/preventive care	95	22	19	65	76	69	96	32	41	89	29
Listing of all medications taken by an individual patient ^{a)}	94	25	24	65	78	61	96	45	49	86	30

^{a)} Including those that may be prescribed by other doctors.

Source: 2009 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.

Figure 4



guideline-based interventions or screening tests with the share that receives these manually. It shows that countries with high overall levels of reminding like Australia and the United Kingdom also rely heavily on electronic systems. Doctor reminders are uncommon in Sweden and the Netherlands, countries that otherwise make medium overall use of HIT.

Finally, Figure 4 shows the share of primary care practices that use manual and computerized systems to remind their patients of preventive and follow-up care. Having the third highest rate of electronic doctor reminding, New Zealand leads all other countries in the share of practices that use electronic patient reminders. Patient reminders are also universally used in the United Kingdom, but about one quarter of practices here still relies on manual systems. Italy and Norway in particular have so far abstained from introducing electronic patient reminders on a meaningful scale.

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References

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