Clinical pathways in 17 European Union countries: a purposive survey

Don Hindle and Anne-Marie Yazbeck

Abstract

We undertook a survey of clinical pathways across the 25 European Union countries. Fifty-one questionnaires were completed by largely self-selected experts from 17 countries. Respondents reported that pathways were important and were becoming increasingly widely used (although the rate of progress was highly variable). One important constraint was reported to be a cultural aversion among doctors that arises at least in part from the implication that pathways require multidisciplinary teamwork which will prejudice medical autonomy. In other words, pathways challenge clinical professional sub-cultures. Other constraints included lack of encouragement by external parties, such as purchasers, with limited financial support for pathway development and implementation and service purchasing that did not reward care providers who use pathways.

The obvious implication of the survey is that more needs to be done to achieve a common understanding of pathways. In spite of the large quantity of published papers, survey respondents reported that there are many health professionals who have only a superficial understanding at best.

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What is known about the topic?
Studies have found that use of clinical pathways is associated with a number of benefits, such as more efficient resource use, higher quality of care and better teamwork.

What does this paper add?
This paper provides information on the attitudes and reported practices of practitioners in 17 European countries. In general, the respondents supported increasing use of clinical pathways but identified important barriers. The barriers included lack of acceptance of multidisciplinary practice by medical practitioners, limited required use of pathways in contracting arrangements and little financial support for development and implementation.

What are the implications for practitioners?
The authors suggested a strong need to develop a common understanding of clinical pathways among health care teams and to encourage greater use through policy and funding mechanisms.

Clinical pathways

We were asked by the European Union (EU) Health Property Network and the Netherlands Board of Health Policy to explore current attitudes and practices with regard to clinical pathways in EU countries. The main aim was to provide one input to assessing the opportunities for future collaboration in the use of clinical pathways in strategic asset planning (SAP). We defined a clinical pathway to be a document that both describes the usual way of providing multidisciplinary clinical care for a particular type of patient and serves as a place to record care actually provided during an episode of care. It allows deviations from the usual method to be recorded, for the purpose of continuous evaluation and improvement of the methods of care. We noted that, although pathways have thus far been used mainly in acute inpatient settings and especially for scheduled surgery, they appear to be equally useful in other care settings. Moreover, they can be used to promote care coordination for patients who need

care in multiple settings over prolonged periods of time. This paper focuses on the first part of the study, reporting on the use of clinical pathways.

We conducted a literature review at the start of the study and found that there were increasing numbers of papers that described methods and outcomes. Efficiency gains have been widely reported. For example, Kwan-Gett et al. studied the effects of introducing a clinical pathway for inpatient care of children with asthma and found a 33% reduction in the costs of pathology tests and a 42% reduction in radiology costs.[1] Board and Caplan described a decline of 70% in the number of pathology tests from scheduled surgical patients, and of 25% for urgent medical cases.[2] Calligaro et al. introduced pathways for vascular surgery and reported that the average length of stay declined from 8.8 to 3.8 days.[3] Borkowski reported reductions of 50% in the lengths of stay for elective hip and knee replacements.[4]

There are similar quantities of literature reporting improved quality of care and outcomes. For example, Chang and Lin analysed the effects of a pathway for laparoscopically assisted vaginal hysterectomy.[5] They found that the average operation time decreased by 25% and the average anaesthesia time decreased by 22%. The complication rate was unchanged, but the rate of initiating intravenous antibiotic injections more than 48 hours after surgery decreased by 76%.

Kelly et al studied the effects of using a clinical pathway for hospitalised asthmatic children.[6] They found that patients treated using pathways were significantly more likely to complete asthma management training while hospitalised, to be discharged with a prescription for a controller medication, and to have a peak flow meter and a spacer device for home use. These results were obtained in spite of a reduction in cost.

Other benefits covered in the literature included improved clinical teamwork,[7-9] staff education,[10] reduced legal risks,[11,12] ensuring use of appropriate care settings,[13] and service and facilities planning.[14,15] Finally, there were several papers that addressed constraints to effective implementation. For example, Pace et al. reported a study that showed the main barriers were clinical practice variation among doctors and poor attitudes towards teamwork.[16]

There is little literature on the use of clinical pathways for service planning or for cross-setting care, nor are there adequate global statistics on the degree of use of pathways. Moreover, the literature is not evenly balanced in providing the experiences in smaller countries that do not use one of the major international languages. We wanted to obtain a balanced picture across the EU and therefore decided to undertake a purposeful survey of expert opinions to complement the literature. The results of that survey are the focus of this paper.

Survey method

The survey was conducted in two stages. The first focused on clinical pathways, and the second on strategic asset planning (which will be the subject of a separate paper). We made email contact with one agency in each country (the primary agency) that would be able to provide contacts within that country with a mix of experts from each of eight types of agencies: government regulators, health care purchasing (insurance) agencies, senior clinical managers in hospitals, senior clinical managers in non-hospital care provider agencies (eg, home care or primary medical care), health professional societies (preferably medical and nursing), accreditation or audit agencies, consumer associations, and public or private agencies concerned with health facilities development. Definitions of these agencies and other terms were attached to the questionnaire, which is available on request. We asked the primary agency to choose the experts who were most likely to be aware of clinical pathway use. The aim was not to establish a random sample but to target well-informed people.

Questionnaires were then sent to the people nominated by the primary agency and returned by email or fax after completion. The respondents were invited to ask for clarification as required, and many did so. Clarification was provided in English and French as required, and all invited respondents

1 Results by topic

	Topic	Mean	SD
1	**Health system problems (external to health care provider agencies)**		
1.1	Too few resources in the face of increasing needs and expectations for care	4.60	2.14
1.2	Health infrastructure poorly matched to current and future clinical practice	3.22	1.93
1.3	Too much interference in clinical work by external parties (insurers, bureaucrats, auditors, etc.)	2.60	1.95
1.4	Inability to make strategic changes (too much short-term crisis management)	4.53	1.83
1.5	Too little attention given to health promotion and illness prevention	3.94	1.76
1.6	Too little attention given to managing chronic illnesses	3.10	1.92
1.7	Too much hospital care, too little community care	4.24	2.04
1.8	Other problem (write in):	1.76	2.66
2	**Health system problems within health care provider agencies**		
2.1	Too few resources in the face of increasing needs and expectations for care	4.47	2.51
2.2	Poor clinical teamwork, resulting in many avoidable errors	3.88	1.97
2.3	Poor relationships between clinicians and bureaucrats	3.08	1.98
2.4	Poor relationships between the various clinical professions (doctors, nurses, etc.)	3.35	1.92
2.5	Unexplained and uncontrolled variations in clinical practice	3.92	1.75
2.6	A lack of willingness among clinicians to audit openly and admit mistakes	4.26	1.62
2.7	Low level of consumer involvement, not enough concern for patients as consumers	3.85	2.04
2.8	Other problem (write in):	1.19	2.43
3	**Your opinions about clinical work**		
3.1	Clinicians should not be responsible for controlling costs, but only for maximising their patients' outcomes	1.70	1.20
3.2	It is necessary to ration health care, and clinicians must play their part	2.45	1.32
3.3	All 'clinical decisions' are resource decisions, and all 'financial decisions' affect clinical practice in some way	2.89	1.37
3.4	Clinical practice guidelines are a poor substitute for personal experience of senior clinicians	1.16	1.06
3.5	Doctors should be allowed to use their own judgements, without interference from non-clinicians	1.95	1.26
3.6	Decisions about discharging a patient from hospital should involve a multidisciplinary team (not only the doctor)	3.27	1.07
3.7	Good patient care depends on teamwork across clinical professions	3.93	0.25
4	**Claimed benefits of clinical pathways**		
4.1	Pathways help to improve efficiency (avoidance of duplication of diagnostic tests, delayed discharge, etc.)	3.66	0.60
4.2	Pathways help to improve quality of care and patients' health outcomes	3.52	0.54
4.3	Pathways provide a framework for undertaking research and innovation in care methods	3.36	0.64
4.4	Pathways promote teamwork by encouraging understanding and respect across clinical professions	3.43	0.65
4.5	Most patients and their families like pathways, because they reduce worries about what is happening	2.59	1.05
4.6	Pathways increase efficiency of treating normal patients, allowing more time for complicated patients	3.05	0.80
	Claimed weaknesses of clinical pathways		
4.7	Clinical pathways are being imposed by bureaucrats to control costs	1.36	1.13
4.8	Clinical pathways increase the risk that all patients will be treated the same (they are 'cookbook medicine')	1.41	1.17
4.9	Clinical pathways increase the risks that doctors will be sued unfairly	1.00	1.00
4.10	Clinical pathways are useful for nurses but not for doctors	0.36	0.68
4.11	Clinical pathways are only useful for 'production line' care like scheduled eye surgery	0.89	1.32
4.12	Clinical pathways can only be used in hospitals	0.43	0.75
4.13	Clinical pathways are a fad (a short-term popular idea) that will disappear	0.64	0.77
4.14	Clinical pathways increase the amount of documentation for clinicians	1.77	1.22

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1 Results by topic, continued

	Topic	Mean	SD
5	**Uses of clinical pathways (in principle)**		
5.1	Clinical pathways should be used as a way of educating and informing new or temporary clinical staff	3.34	0.80
5.2	Clinical pathways should be used to support informed consent (ensuring patients know in advance what will happen to them)	3.39	0.78
5.3	Simplified versions of pathways should be given to patients so they know what to expect and are less worried or confused	3.16	1.06
5.4	Clinical pathways should be used that span multiple settings of care (eg, acute care for stroke followed by rehabilitation)	3.55	0.69
5.5	Clinical pathways should be used as the basis for allocating resources among clinical teams within a care provider agency	2.84	0.88
5.6	Clinical pathways should be used as the basis for negotiating contracts between purchasers and providers	2.80	0.94
5.7	Clinical pathways should be used in workforce and service planning	3.20	0.79
5.8	Clinical pathways should be used as the basis for setting payment rates	2.73	0.91
6	**Actual uses of clinical pathways**		
6.1	Pathways are used as a way of educating and informing new or temporary clinical staff	1.85	1.24
6.2	Pathways are used to support informed consent (ensuring patients know in advance what will happen to them)	1.45	1.16
6.3	Simplified versions of pathways are given to patients so they know what to expect and are less worried or confused	1.30	1.29
6.4	Pathways are used that span multiple settings of care (eg, acute care for stroke followed by rehabilitation)	1.33	1.19
6.5	Pathways are used as the basis for allocating resources among clinical teams within a care provider agency	0.95	1.16
6.6	Pathways are used as the basis for negotiating contracts between purchasers and providers	0.83	1.14
6.7	Pathways are used in workforce and service planning	1.10	1.14
6.8	Pathways are used as the basis for setting payment rates	0.78	1.13
7	**Ways that external agencies should act**		
7.1	Funding agencies should encourage and reward the use of clinical pathways	3.36	0.77
7.2	The use of clinical pathways should be a requirement of contracts between funding agencies and clinical care teams	2.98	0.97
7.3	The use of pathways should be an important basis for external audits of care (for example, by insurer or accreditation agency)	3.14	1.01
7.4	Clinical profession associations should encourage the use of clinical pathways	3.73	0.49
7.5	The use of clinical pathways should be encouraged and promoted through continuing education and licensing	3.57	0.75
7.6	Consumer associations should encourage the use of clinical pathways	3.30	0.97
7.7	Agencies should work together to provide easy access to good clinical pathways, more sharing of ideas through the Internet	3.50	0.72
8	**Ways that external agencies actually behave**		
8.1	Funding agencies encourage and reward the use of clinical pathways	1.10	1.10
8.2	The use of clinical pathways is a requirement of contracts between funding agencies and clinical care teams	0.64	0.92
8.3	The use of pathways is an important basis for external audits of care (for example, by insurer or accreditation agency)	1.31	1.34
8.4	Clinical profession associations encourage the use of clinical pathways	1.74	1.19
8.5	The use of clinical pathways is encouraged and promoted through continuing education and licensing	1.44	1.17
8.6	Consumer associations encourage the use of clinical pathways	1.15	1.03
8.7	Agencies work together to provide easy access to good clinical pathways, more sharing of ideas through the Internet	1.31	1.22

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1 Results by topic, continued

	Topic	Mean	SD
9	**Methods and levels of use of clinical pathways**		
9.1	About what % of cases are covered by clinical pathways today?	17.1%	20.0%
9.2	About what % of cases do you expect to be covered by clinical pathways in 5 years' time?	42.6%	24.6%
9.3	About what % of each clinical professional group regularly uses clinical pathways?		
	% of doctors	20.4%	23.6%
	% of nurses	27.6%	28.5%
	% of other clinical staff such as therapists and social workers	18.0%	22.9%
9.4	Do the pathways include the work of all clinical staff (doctors, nurses, therapists, etc.)?	2.12	1.31
9.5	Are the clinical pathways managed jointly by a multidisciplinary team?	1.98	1.46
9.6	Do care providers regularly evaluate their clinical pathways, and improve them?	1.68	1.26
9.7	Do care providers regularly record variances (deviations from the pathway)?	1.54	1.29
9.8	Are variances analysed and then discussed in regular multidisciplinary team meetings?	1.34	1.28
	Barriers to more use of clinical pathways		
9.9	Many doctors want to stay independent	3.14	1.10
9.10	Nurses do not support clinical pathways	1.36	1.09
9.11	Purchasers (funders, insurers) do not give enough encouragement and rewards for pathways	2.48	1.20
9.12	Many clinicians believe pathways are not worth the effort (not cost-effective)	2.52	1.03
9.13	A lack of knowledge about pathways among clinicians	2.93	1.14
9.14	Not enough clerical and administrative support for clinicians	3.10	0.89
10	**The future of clinical pathways (in 2014)**		
10.1	Clinical pathways will be the normal and accepted way of managing clinical work	3.18	0.94
10.2	A few people will continue to use pathways, but they will never become the most common way of managing clinical work	1.39	1.15
10.3	Clinical pathways will become an essential input to the planning of new or different services	3.16	0.74
10.4	Clinical pathways will become an essential input to the planning of new or different facilities (clinics, hospitals, etc.)	3.00	0.85
10.5	Patients will expect to be treated using clinical pathways, and will complain if they are not being used	2.75	1.03
10.6	New and junior clinical staff will expect to use clinical pathways, and will be surprised if they are not being used	3.11	0.68
10.7	Care providers will routinely share their pathways through national and regional databases on the Internet	2.70	1.08
10.8	The main basis for national and international benchmarking will be comparisons of clinical pathways	2.77	1.11

were apparently proficient in one or the other language. However, there was no way precisely to determine the extent to which language was a biasing factor. We received 51 completed questionnaires from 17 countries before the deadline.

Survey results

Most questions asked the respondents to state the degree to which they agreed with statements arranged in groups of topics. Opinions were to be indicated on a five-point Likert scale. Means and standard deviations of respondents' views are presented in Box 1.

Questions 1 and 2: Health system problems

The first two questions asked respondents to rate the severity of health system problems. The question was split into two parts: problems external to care provider agencies and problems within care provider agencies. Seven problems were specified for each of the external and internal categories, and the respondent could add another in a free-text field.

The most serious external problems reported were lack of resources, too much attention to crisis management rather than long-term strategies, and an excessive degree of hospital- rather than community-based care. Bureaucratic interference was considered to be the least important of the listed problems.

The most serious of the internal problems was again considered to be a lack of resources. The next highest-ranking problems related to clinical practice: an unwillingness to admit mistakes, unexplained and uncontrolled clinical practice variations and poor clinical teamwork. Again, bureaucratic interference was considered to be the least important of the listed problems.

In total, there was a relatively low degree of concordance among the respondents. For Question 1, most agreement related to crisis management, and for Question 2 it related to unwillingness to admit mistakes. There were small but sometimes significant differences by type of respondent. In particular, practising clinicians were the most likely to rate a lack of resources highly, and to express less concern over clinical teamwork. However, they were almost equally likely to express concern over clinical practice variations. There were hardly any significant differences between countries. This suggests that professional cultures are more important determinants of attitudes towards clinical pathways than national attributes.

Relatively few conclusions can be drawn from these results. This was anticipated, because the rating of problems is a matter of value judgements and problems are interconnected — it is a challenging idea to consider each of them in isolation. Indeed, we included these questions mainly as a way of encouraging respondents to take the broader context into consideration before addressing the more technical matters.

The free-text comments from respondents for questions 1 and 2 mainly provided amplification of why they rated particular problems highly. The most common comments concerned the high degree of fragmentation of the health system, poor coordination of patient care, inadequate consumer participation, poor information to manage quality of care, high levels of mistrust and suspicion between the various parties in the health system and weaknesses in resource allocation processes, including a lack of incentives for cost-effectiveness.

Question 3: The nature of clinical work

Respondents were asked to rate several claims about the nature of clinical work, on two main dimensions: the extent to which clinicians should be concerned only about patients' outcomes and not about the costs, and the extent to which clinicians should be individualistic in their approach to care.

There were mixed views about clinicians' responsibilities for rationing and control of cost, but the dominant view was that they must exercise a degree of control. There was more agreement about the need for multidisciplinary teamwork. The strongest views concerned the use of guidelines: doctors should not be free to rely only on their own judgements.

The evidence and the logic clearly show that health systems work more effectively if clinicians are aware of costs, recognise their responsibilities for rationing, and accept that every clinical decision is simultaneously a decision about resource allocation. The evidence and logic are similarly supportive of the view that clinicians' personal judgements must be influenced by and generally in line with the best available evidence, and that knowledge and experience must be shared across the various clinical professions.[17]

Question 4: Views about clinical pathways

Respondents were asked to indicate the extent to which they agreed with six commonly claimed strengths and eight commonly claimed weaknesses of clinical pathways. We selected this set on the basis of the review of the literature and the researchers' personal experiences. The literature is supportive of all the claimed strengths listed in the questionnaire. It does not support any of the claimed weaknesses, but they are the most commonly mentioned by clinicians (and especially doctors) who are being asked to give serious consideration to clinical pathways for the first time.

For the most part, the respondents agreed with the claimed strengths and rejected the claimed weaknesses. There was a high degree of concordance overall, and there were hardly any significant country or profession effects.

The strength that was least well supported concerned the extent to which patients and their families welcomed the existence of clinical pathways. The most common argument was that they would be confused. However, other respondents argued that this circumstance rarely arises. The large majority of patients and their families report that a lack of knowledge is the greater cause of concern.

The weakness that was least strongly rejected was the one concerning the quantity of documentation. This is understandable, as there is often an increase in documentation when the pathway is introduced in addition to existing documentation.

Question 5: Uses of clinical pathways (in principle)

Respondents were asked their views on the ways clinical pathways should be used in well-run health care systems in the future. In developing this question, we selected the eight kinds of uses on the basis of views expressed in the worldwide literature.

The overall level of agreement with the proposed uses was high. The lowest support was for resource allocation — for the setting of payment rates, and for internal and external contracting. However, even in these cases, the majority of respondents agreed that these were desirable applications.

It is interesting that there was a high level of agreement regarding the use of clinical pathways to manage cross-setting care. In principle, there may be more value in pathway use where care spans multiple settings, involves more than one care team, and involves provision of care for a prolonged or indefinite period. However, the reality is that pathways are much more common where the care is in a single setting and involves a care process that has little variability — such as for scheduled and uncomplicated surgery.

Practising clinicians were equally supportive of the clinical uses, but marginally less supportive of contracting and payment uses than the other respondents.

Question 6: Uses of clinical pathways (in practice)

Respondents were asked their views on the ways that clinical pathways were actually being used in their health systems. There was a much lower level of use than was judged desirable, and there was a high degree of variability between countries. This outweighed any differences between professions in terms of their estimations of level of actual use. The most common application was in the training and orientation of new staff, and the least common was in resource allocation. These results are consistent with the literature.

The non-response rate was high for this question (10%). This is not surprising, since the concept of clinical pathways is relatively new in several countries and has not yet become a common topic for the technical literature.

Question 7: External influences on the use of clinical pathways (in principle)

Respondents were asked their views on the ways that external agencies should encourage and reward the use of clinical pathways by care providers. For the most part, there was a high level of agreement that external agencies should encourage and support the use of clinical pathways. Almost every respondent considered the role of clinical professional associations in encouraging the use of pathways to be very important. There was less support for making use of clinical pathways by contracted providers a condition of their contracts.

Question 8: External influences on the use of clinical pathways (in practice)

Respondents reported that external agencies behaved quite differently from what they considered to be desirable. Overall, there was little support reported. The highest level of support was reported from the professional clinical associations, with somewhat less support from licensing, accreditation and continuing medical education agencies. This was surprising in view of the evidence of the value of clinical pathways in quality of care. It was less surprising that funding agencies and consumer associations were reported as giving little support. The use of clinical pathways was

reported as rarely required by contract between purchaser and provider.

Questions 9.1 and 9.2: Levels of use of clinical pathways

Respondents were asked their views about levels of use of clinical pathways in the health care agencies with which they were familiar in their country at present and in 5 years' time. The average estimated reported levels of use were 18% and 42% respectively. There was a high degree of variability: for the current situation, the coefficient of variation was 117% and the range was from zero to 100% of patients covered by pathways. The variation fell significantly with regard to use in 5 years' time, to 57% (but the range remained zero to 100%). The median value was 10% of patients at present and 50% in 5 years' time.

These statistics must be interpreted with care. Aspects of possible confusion include the meaning of being covered by a clinical pathway, whether any respondent can accurately estimate current levels of use and whether it is possible to make a forecast of future use with any degree of precision. However, the respondents reported low, but highly variable, use of clinical pathways, and the level of use is likely to rise significantly over the next few years.

Question 9.3: Which clinical professions use clinical pathways

Respondents were asked their views about levels of use of clinical pathways by the main types of clinical professions in the health care agencies with which they were familiar in their country. Nurses were reported to be marginally greater users. Nurses were more likely than doctors to consider that nurses made greater use of pathways.

Questions 9.4 to 9.8: Methods of use of clinical pathways

Respondents were also asked their views about methods of use of clinical pathways by the clinical professions. Again, there was a high degree of variation, but overall the level of compliance with established good practice was low. The highest level of compliance was for the most basic aspect of use — that all clinical professions should be involved. There was progressively less compliance with the more advanced aspects of use, such as discussion of variances at regular team meetings.

The survey results suggested the perception that relatively few clinical teams have been able to use pathways in an optimal way. Therefore, there might be considerable potential to improve the usefulness of pathways even where they are already established.

Questions 9.9 to 9.14: Barriers to more use of clinical pathways

Respondents were asked their views about the constraints on increased use of clinical pathways. Doctors were considered to be a major barrier, whereas nurses were not. This opinion was consistent across all countries and professions of the respondents.

The other constraints were all considered to be moderately significant. Care providers were more likely to consider purchasers' attitudes to be a barrier, and to report that a lack of administrative and clerical support was a problem. However, there were no large differences on any of the factors.

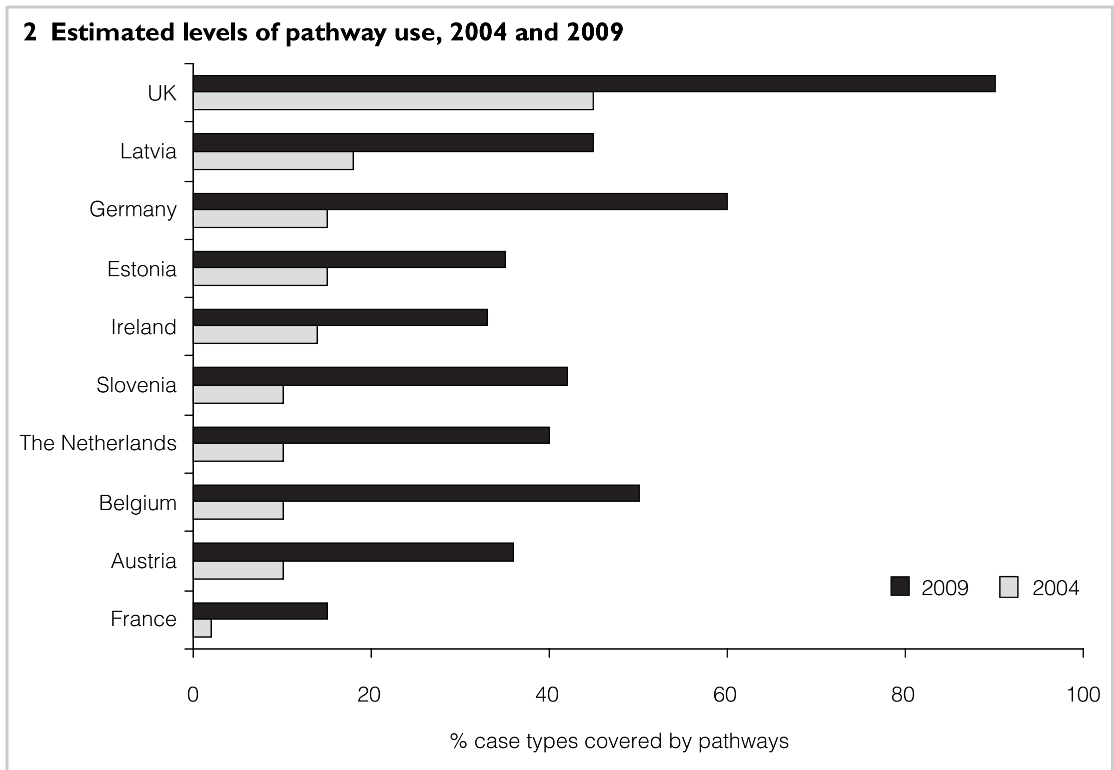
Question 10: The future of clinical pathways (by 2014)

Respondents were asked to speculate on the likely future of clinical pathways by 2014. Most respondents were optimistic and expected use to be more widespread for a variety of purposes. In general, these results are consistent with the opinions expressed earlier in the questionnaire. There was a dominant view that patients and families will expect to receive copies of clinical pathways to ensure they are adequately informed, but some respondents appeared to be unsure as to whether this would be a good idea. Most respondents believed that there should be more sharing of clinical pathway designs via the Internet and other ways, but were unsure whether this would happen to a significant extent.

Section 11: general comments

Most comments concerned the reasons why clinical pathways were perceived to be under-used. For example, it was argued that multi-payer systems like those in France and Germany were less able to

2 Estimated levels of pathway use, 2004 and 2009



influence clinical practice, that there are few good databases to facilitate the sharing of pathways and that pathways had been poorly marketed both to clinicians and consumers.

Country and professional differences

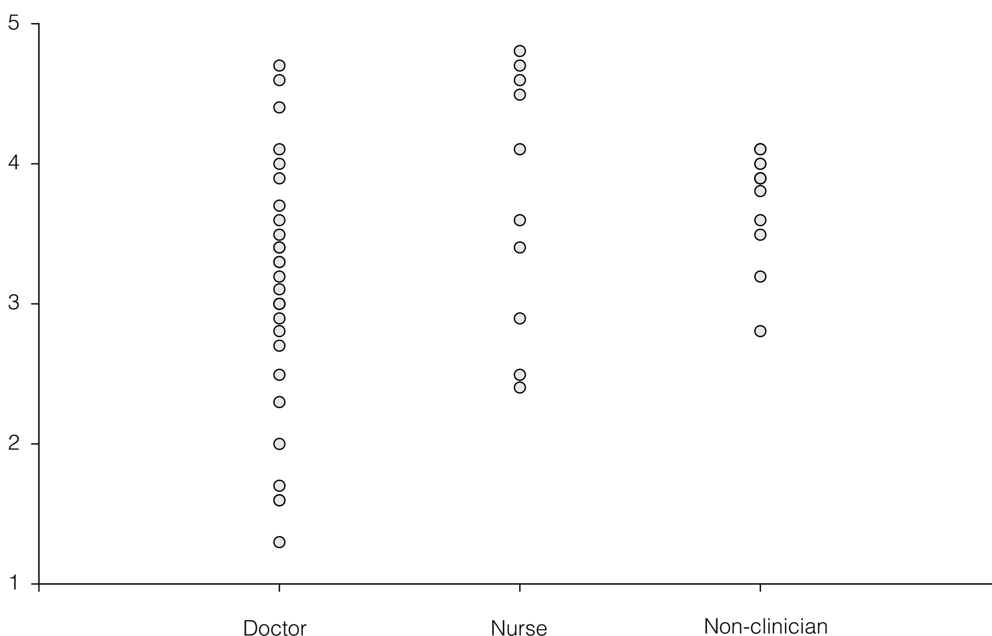
There were too few data points to draw many conclusions about differences between countries and professions of the respondents. However, a few patterns of difference emerged. At the country level there were some differences regarding the degree of penetration of clinical pathways, which shows the 10 countries for which two or more respondents provided answers (Box 2).

The statistics are of questionable value. Several respondents openly admitted that they were unsure, and there were more non-responses for this question (question 6) than for any other. It seems that no EU country maintains a reliable and up-to-date record of pathways in use. In several countries with which we are familiar, there are Internet databases that purport to contain recent and reliable statistics on use of pathways — but a cursory investigation shows they do not.

However, at least a few of the patterns in Box 2, such as the high penetration in the UK and the low penetration in France, are supported in part by other comments. We noted the opinion of relevant respondents that purchaser fragmentation is a constraint in France and Germany. The dominant government purchaser was suggested as a facilitating factor by respondents from the UK and Slovenia.

The relative strength of the medical profession was proposed as a constraint in The Netherlands. However, there is little evidence from other sources that medical professions of themselves are much different between countries. It may be that factors interact and a single dominant purchasing agency may be better able to influence an otherwise disinterested profession.

3 Attitudes towards pathways, by profession



There were few strong differences between respondents from different professions. We constructed an index of support for clinical pathways from questions 4.1 to 4.5, 3.2, 4.1, 4.2, and 5.3. The results are summarised in Box 3 ($n = 41$). Doctors, the largest group, had opinions varying from very strong to very weak support. On average, they were less supportive than the other professional groups.

Nurses were the strongest supporters overall. However, they tended to be more pessimistic about the possibilities of expansion of pathway use. In short, the typical nursing response was that pathways are extremely important but further penetration is unlikely in the short term because many doctors are unsupportive.

Discussion

For the most part, the picture that emerged from analysis of the questionnaires is consistent with evidence from other sources. In particular, the majority of respondents believed that pathways were important and their use will increase in scope and effectiveness. Reported constraints to pathway use were similar in all countries, and include a cultural aversion among some doctors and inadequate support from external agencies. It was suggested that external agencies can influence adoption but they will need to have more understanding and determination than they have shown to date; change is happening but it could and should be facilitated.

There seem to be several obvious implications of the survey results. First, more needs to be done to achieve a common understanding of clinical pathways. In spite of the large quantity of published papers about clinical pathways (we found over one thousand references on Medline) there are many health professionals who have only a superficial understanding at best. Our personal experiences in several countries are that this is likely to lead to a negative view of clinical pathways.

This means not only (say) increased education in medical schools. It also means including pathways in licensing and accreditation activities, linking them to product classifications like diagnosis related groups, healthcare resource groups, and diagnosis and treatment categories, specifying their use in purchaser–provider contracts, encouraging health care provider agencies to use pathways as the basis for internal resource allocation, promoting the use of pathways as the framework for internal clinical auditing, running clinical team-building workshops, and so on.

Second, pathways need to be more easily available. One sensible idea would be the establishment of an EU database with clear rules regarding submission, access and updating. However, experiences with related ideas (such as evidence-based health care and clinical practice guidelines) suggest that easier access is insufficient by itself. Systems problems need systems solutions.

Finally, pathways are needed that are directly relevant to future health service delivery strategies. It would be beneficial to achieve replication of the many good pathways that are setting-specific. However, the main gains in terms of reorientation of service delivery strategies will only be achieved through the design and implementation of cross-setting pathways.

Limitations of the results

The respondents were largely self-selected and there was a large (but not precisely known) non-response rate. Therefore the results cannot be safely generalised. However, most of the findings are corroborated by other sources and there was a high degree of consistency of views among the respondents. It is encouraging that health professionals who communicate in over a dozen languages have similar views about the importance of clinical pathways in all kinds of health care settings.

Competing interests

Anne-Marie Yazbeck received an honorarium for her involvement in data collection and the conduct of the survey.

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