JOURNAL OF CONTEMPORARY MEDICAL EDUCATION, 2018
VOL 6, NO. 1, PAGE 17-23
10.5455/jcme.20161216053958

eJM eJManager

EDUCATIONAL STRATEGIES

Open Access

Thoughtful questions as new pedagogy for teaching patient centred care: A pilot study in an Australian Rural Clinical School (RCS)

Michael Buist[1], Sarah Middleton[2]

[1]1Faculty of Health, University of Tasmania, Hobart, Tasmania, Australia

[2]Faculty of Law, University of Tasmania, Hobart, Tasmania, Australia

ABSTRACT

Introduction: The taking of the patient medical history is at the heart of the doctor patient relationship. It is often critical for a diagnosis and also plays an important part in ongoing clinical care of the patient. However, with the move away from assessment by "long case" to the Objective Structured Clinical Examination (OSCE), medical students spend less time with patients and when they do take a history it is done in a didactic checklist manner. This learning is contrary to the needs of the now more health literate patient.

Methods: By an iterative process, we developed a program of teaching medical history at the bedside of real patients that focussed on listening to what the patient said as opposed to the traditional history checklist. By anonymous online survey we sought feedback from the students on this way teaching.

Results: Over the 3 years of this program (from 2013) 76 of the 85 students responded to the survey (89% response rate). Students were mostly receptive to the ideas of following up on clues and information that patients gave them and then presenting this information in a more interesting way to peers. However, there was less enthusiasm, for taking the history in a more casual but patient centred way.

Conclusion: This program was feasible and welcomed by the students. The major limitations were that students were frustrated by not being taught examinable OSCE cases and that the time commitment by the clinician was onerous.

ARTICLE HISTORY

Received December 16, 2016
Accepted August 17, 2017
Published January 12, 2018

KEYWORDS

Patient centred care; listening; teaching history taking

Introduction

The taking of the patient medical history, is at the heart of the doctor patient relationship; often critical for getting a diagnosis, and is an important part in ongoing clinical care of the patient. Traditional teaching on history taking consists of a checklist of items in the broad categories of: presenting complaint(s), history of presenting complaint(s), past medical history, list of medication and allergies, family and social history, and a review of systems. This information, along with the findings on physical examination, are then synthesized to form a problem list from which a differential diagnosis or diagnoses can be made. Research dating back to the 1970's suggests that patient history alone can yield a diagnosis in 76% of cases [1] and, otherwise, can contribute up to 80% of the information required to make a diagnosis [1–5]. More recent studies point to the additional benefits of patient rapport, better patient health literacy, therapeutic compliance, and clinical outcomes [6–9].

The method of teaching history taking to medical students has remained largely unchanged for decades [6–10]. Traditionally, history taking and physical examination were taught formally by demonstration at or near the end of the preclinical years in the curriculum. After this, students are expected to develop their skills by exposure to

Contact Michael Buist Aneji ✉ Michael.Buist@utas.edu.au Rural Clinical School, Faculty of Health, University of Tasmania, Locked Bag 3513 Hospitals Campus, Brickport Road, Burnie, Tasmania 7320, Australia.

patients during their clinical years and for decades this was assessed, at least in part, by the "long case." The "long case" consists of the student having a set amount of time with a patient during which they take a history, do a physical examination, and then come up with a problem list from which they generate potential diagnoses. The student is then assessed on the quality of the case presentation and ability to answer questions about the patient. However, assessment by "long case" was found to have poor reproducibility and generalizability due to both patient and examiner effects [10].

To a large degree, the long case has been replaced by more reproducible examination tools, most notably the Objective Structured Clinical Examination (OSCE) [11]. In the OSCE candidates undertake clinical assessment tasks at a number of specific stations for 5–8 minutes. Each station has a structured "score card" that students must address to get points [11]. This type of examination has a place in the assessment of some specific clinical skills and competencies. However, it gives no indication on a student's ability and competency to comprehensively take a history do a physical examination, synthesise these findings into a meaningful problem list and finally come up with a diagnosis [12]. Despite the best of intentions by medical educationalists, students are predominantly focused (even obsessed) with only learning what they will be formally examined in [13]. This has led to the prime student motivation of passing the OSCE, which can be best learnt from internet downloads [14,15] of all the possible examinable OSCE's. So understandably students spend time learning OSCEs off the Internet, rather than gaining clinical experience of history taking and physical examination from real patients. This has led some authors to observe, anecdotally, a decrease in clinical acumen after the initial intensive education on history taking and physical examination [16]. At our university where the OSCE is the major assessment that determines graduation (no summative long case), there is little motivation for students to put in the "hours" with the patients and it is not uncommon for them to report that they may have only completed 1–2 long cases during their 5-week medical term. Most of these are "signed off" by the ward intern, occasionally by the registrar, and only rarely by the consultant.

Along with the above changes in medical education, the way patients interact with their doctors has changed. Over the last decade or so, there has been a vast increase in patient health-literacy and patients' understanding of their own illnesses largely due to the easy availability of information from the internet [17–20] and in tandem an armamentarium of sophisticated diagnostic and therapeutic modalities. Also, over time, the role of the doctor as diagnostician has diminished, with ever more sophisticated and advanced diagnostic technologies available. As such the diagnostic power of history taking has diminished but offset by an increased demand from patients to educate, explain, empathise, advocate, manage and even moderate (on conflicting opinion). This set of skills is largely not taught or examined at medical school, with the expectation, that they will be "picked up" along the way after graduation with immersion in clinical practice. Instead, assessment and by default learning by OSCE has increasingly reinforced the "checklist" approach to the patient, at the expense of real patient time. This reductionist way teaching and assessment of students further distances the gulf between what the patient says or wants to say and what the student/doctor wants to hear.

For 3 years at the Rural Clinical School (RCS) at the University of Tasmania, we have trialled a system of more holistic history taking by fourth year medical students on their Department of Medicine 5-week rotation. In this article, we describe this patient-centred approach to history taking and report on student feedback about this methodology.

Methods

Ethics and setting

The University of Tasmania Health and Research Ethics committee approved this study (H0015248). The study was funded by a small grant from University of Tasmania, Faculty of Health, awarded in 2012. The program was undertaken for three consecutive years from 2013 at the RCS. The RCS is part of the University of Tasmania's School of Medicine and takes students for the last 2 years of their undergraduate 5-year medical degree. The RCS provides all the core clinical rotations of primary care, emergency and general medicine, general and orthopaedic surgery, obstetrics and gynaecology, and paediatrics and mental health. Didactic lectures, practical tutorials and case-based learning are delivered by group learning weeks at the school. Each year group typically has 20–30 students. The academic performances of students at the RCS are equivalent to their peers at the University city based schools at Hobart and Launceston.

Patient centred history taking

The teaching is by way of a weekly 90-minute tutorial with several random patients on the medical ward and the hospital high dependency unit (a critical care step down unit). The tutorials were undertaken during the 4- to 5-week Department of Medicine rotation in the 4th year of the 5 year degree course. Each group (or rotation) had between 4 and 6 students.

The emphasis of the tutorials was to challenge the students learned reliance on the traditional history checklist and, instead, get them to really think about the patients' problems by the use of "thoughtful questions" to issues raised by the patient. In practice this is done by asking the student to start taking a history from a patient (prior consent having been obtained by the patient). Invariably the students start by introducing themselves to the patient and asking for consent to take a history. The students then embark on the traditional method of taking history. Essentially this amounts to the student amassing a large amount of information about various symptoms and obtaining a detailed understanding of past medical history. The students, in the majority of cases pursue the history checklist at the expense of not following up on tantalizing clues that the patients give in passing as to what might really be going on [21]. In some cases, the patients actually get frustrated with the student for ignoring information that they want to tell the student. A good example is the post-operative cancer surgery patient. The student is focused on getting a precise and complete timeline of the symptoms that lead to the presentation. Conversely, the patient is not really interested in that but wants to tell the student that they have bowel cancer and that the operation was complicated by a clot to the lungs and that they are now on "blood thinners." The students in many instances feel that they cannot pursue the issue of the surgery and the cancer as this is "the answer," that they are meant to deduce from the traditional model of history taking (rather than hearing this from the patient). So, from the outset of students' exposure to real patients, the traditional pedagogy reinforces the role of the doctor as someone who has, or is learning, the unique skill of diagnosis from an understanding of symptomology. The patient, on the other hand has no concept of how students learn and they are usually trying very hard to be helpful by imparting with as much information that they have about their current diagnosis and situation. In some cases, the students simply ignore the information that the patient gives them, in order to complete all the points on the traditional history checklist.

After a student, has finished they get to present their findings to the rest of the student group. Invariably this done in the manner in which they have been traditionally taught with a comprehensive description of the patient's symptoms followed by lists of past illnesses and medications, along with a comprehensive understanding of social and family history. Only when prompted will the student offer a potential diagnosis or differential.

The next step of the tutorial is to go back to the patient, and direct the interviewing student to actually ask the patient what their understanding is of their illness/disease/operation that has brought them into hospital (Table 1). Invariably the patients have quite a comprehensive understanding of what is going on and give this information to the student. Despite having this information, the student often

Table 1. Getting the history: Teaching for listening and thinking vs the traditional checklist.

Listening and thinking	Traditional checklist
Talk to the patient as a person.	Formal consent to ask questions
Have a conversation	
What is the diagnosis	What brought you into hospital
Why do you think that is the diagnosis	What symptoms do you have
What tests have you had	When did these symptoms start
What were test results	Do you have any other symptoms and for how long
How does this affect you	Do you have any other sicknesses or illnesses
What have other Doctors told you	
What symptoms do you have	
How do these symptoms affect you	
What do you think about all this	
What medications do you take	What drugs are you taking
Any reactions to drugs or things you can't take	Any drug allergies
Where do you live and with whom	Social history
How much and what do you drink and smoke	Social history
Does anyone in your family have any important conditions	Family history
What are your expectations and what do you want	
Is there anything else I need to know about you	Complete review of systems
Is there anything you want to ask me or that I can help you with	

still wants to return to the ingrained traditional checklist. Instead they are directed to ask thoughtful questions based on the preliminary information that the patient has given them. A useful way to get this started is to direct the student to ask the patient what the other doctors have been saying about their illness/disease/operation. The patients, thus prompted, usually have and offer up quite a lot of sophisticated information. At this point the information from the patient is often random, with poor temporal context and is occasionally conflicting. The better students who have now bought into the patient's history and not the traditional checklist, attempt to sort the information into some sort of temporal context and can identify points of history that are consistent and other issues that are in conflict or don't make sense. The student then presents to the group by starting with the best presumptive diagnosis and then must identify points of history that confirm this and also identify issues that may be at odds with this. They then need to discuss how they would resolve the points of inconsistency. Finally, the patient's literacy, understanding and perspectives need to be discussed.

Data collection

Over the 3 years of this project, 85 students received the tutorials. After each department of medicine term, the students were invited to respond to an anonymous questionnaire about the tutorials. The students were asked three subjective questions (Box 1) and were also asked to give free text comments. There was no specific theoretical or prior validation of the questions. Participants responded to each question using a 5-point Likert scale that ranged from "Disagree" to "Strongly agree." The data was collected and recorded on an excel spreadsheet. The results are presented as simple frequencies and percentages.

Box 1. Survey questions used.

1. Taking a medical history should be like getting personal information in a social setting
2. I now pick up on clues that patients tell me and follow those clues until I have a complete understanding of that issue
3. It makes sense to present the patient findings in a way that firstly reveals the most interesting aspects of the history

Results

Seventy-six of the 85 students responded to the anonymous online survey that gave a response rate of 89%. Figures 1–3 give the students responses to the three survey questions. Box 2 gives some of the free text comments.

Box 2. Free text response to tutorials from students

"Thank you for your tutorials. They were novel and enlightening."

"I am a student who is working on improving my skills to systematically integrate relevant questions into history taking while thinking of inclusion and exclusion of differential diagnoses at the same time. Once I am able to [a word missing here?] it as second nature, the approach taught in the tutorial may become useful."

"I thought these tutorials were very helpful and important for clinical practice. It would be nice to have more teaching of this sort."

"Interesting and fresh perspective on how to examine and communicate with patients. I appreciate being taught how to think rather than what to think."

Discussion

Main findings

There was clearly a variable response to the patient centred history taking tutorials. For the most part the students were receptive to the notion of following up on clues and information that patients gave them (Fig. 2) and then presenting this information in a more interesting way to peers (Fig. 3). However, there was less enthusiasm, for taking the history in a more casual manner (Fig. 1). Although not documented the students were at times frustrated that they were not being taught aspects of history taking that would help them pass the OSCE.

Study significance

Two recent reviews [22,23] summarise the literature on studies into educational interventions for teaching medical students history taking. Both reviews highlight the pivotal importance of history taking for clinical practice and articulate that this is a skill that can be taught and learnt. However, they identify that despite the plethora of educational initiatives, the studies are heterogeneous in design, actual interventions used and assessment. In the review article by Keifenheim et al. [22], only 23 studies were reviewed from an initial list of 1388 citations. Of these only three studies (in English language) actually included real patients [8,9,24] the

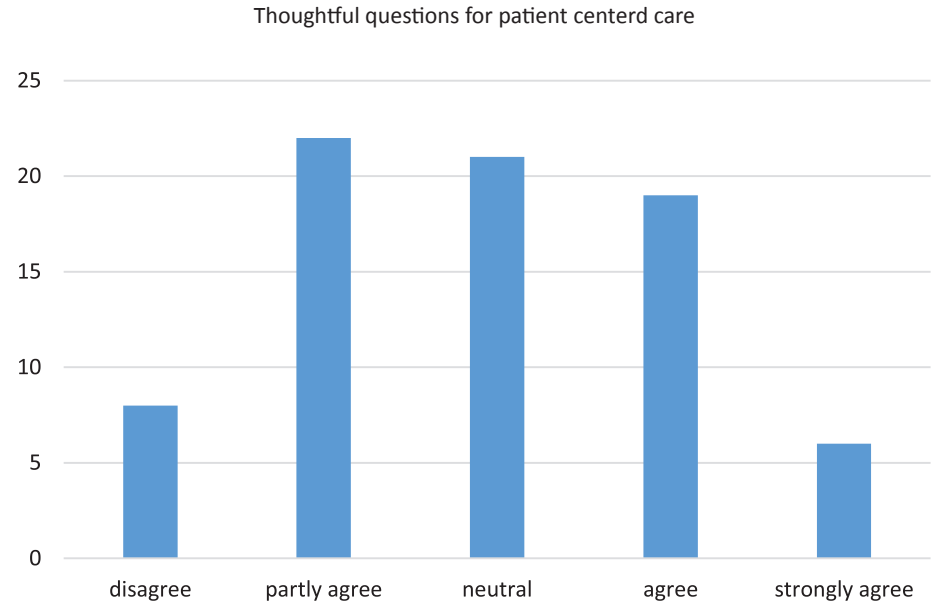

Figure 1. Taking a medical history should be like getting personal information in a social setting?

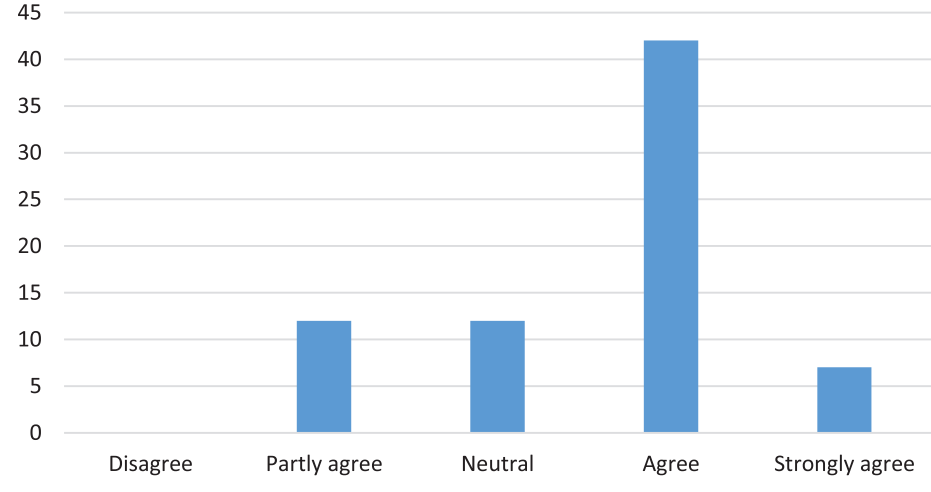

Figure 2. I now pick up on clues that patients tell me and follow those clues until I have a complete understanding of that issue?

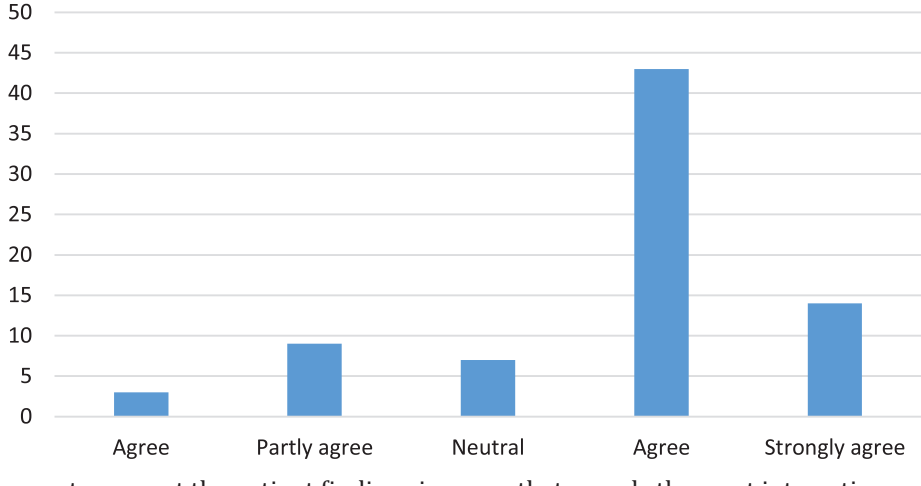

Figure 3. It makes sense to present the patient findings in a way that reveals the most interesting aspects of the history?

most recent of which was conducted a decade ago. Also, these studies also included other modalities of role play, simulated patients and video assessment and feedback. All the other studies in the review had complete reliance on non-patient modalities such as play, video recorded feedback and the use of online tools. Likewise, Alyami et al. [23] from 459 citations found only 6 studies to review, albeit using a stricter inclusion criterion of only randomized controlled studies or quasi experimental studies. However, none of the studies included real patients with all of the studied interventions either being online or simulation based. Whilst both reviews underscored the importance of history taking they concluded that there is little understanding on when and how to apply some of the initiatives in different student populations of background and maturity.

What the current study adds is that students are responsive to be taught history taking at the bedside that helps them to better understand the real patient. The point of this initiative is that despite the plethora of innovative learning tools, they all amount to being surrogates for actual bedside teaching on real patients by experienced senior clinicians [21].

Study limitations

There are many limitations to this study. First delivering this type of tutorial on a regular basis requires a significant time commitment that can only effectively be delivered in small groups. As such the difficulty of replicating this is difficult, because of the intense clinical teaching required. Conversely, what we have seen in medical education is the professional non-doctor faculty take over and hence the wide spread use of assessment tools like OSCEs all of which can be learnt online. Second, this is a small very limited study progressively undertaken over three years at a single site. Third, the assessment of effectiveness was simplistic and brief (in order to get a high response rate) and undertaken only by the students and not the patients. For example, despite the equivocal response by students to adopting a more casual conversation style of history taking, anecdotally patients preferred much this style of interaction. Finally, although anonymous, student's responses to the survey questions and free text comments may have been more favourable based on the small clinical community that exists in the rural setting.

Conclusion

At the heart of patient-centred care has to be the core ability to listen to the patient, and to hear what they are saying. The best way to demonstrate this is to reaffirm this patient information by responding with thoughtful questions that further seek to clarify the patient perspective. This is the difference between asking someone "how was your day?" as opposed to "what was the best part of your day?" The former question elicits the usual response of "fine or well thank you." The latter question demands a more comprehensive response, that intimates a greater degree of interest in actually "what was your day like" and I am genuinely interested in understanding that. In this age of text, tweet, Facebook, Instagram, we actually need to teach students how to have a conversation, not just how to ask a series of questions [25].

The Institute of Medicine has defined patient-centred care as "care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions." [26] To achieve this, we need a paradigm shift in medical student pedagogy away from traditional methods of checklist history taking, and emphasis on point of care diagnostic and therapeutic tools.

References

[1] Peterson MC, Holbrook JH, Von Hales D, Smith NL, Staker LV. Contributions of the history, physical examination, and laboratory investigation in making medical diagnoses. West J Med 1992; 156(2):163–5.

[2] Hampton JR, Harrison MJ, Mitchell JR, Prichard JS, Seymour C. Relative contributions of history-taking, physical examination, and laboratory investigation to diagnosis and management of medical outpatients. Br Med J 1975; 2(5969):486–9.

[3] Kassirer JP. Teaching clinical medicine by iterative hypothesis testing. Let's preach what we practice. N Engl J Med 1983; 309(15):921–3.

[4] Roshan M, Rao AP. A study on relative contributions of the history, physical examination and investigations in making medical diagnosis. J Assoc Physicians India 2000; 48(8):771–5.

[5] Sandler G. The importance of the history in the medical clinic and the cost of unnecessary tests. Am Heart J 1980; 100(6 Pt 1):928–31.

[6] Fortin AH, Haeseler FD, Angoff N, Cariaga-Lo L, Ellman MS, Vasquez L, et al. Teaching pre-clinical medical students an integrated approach to medical interviewing: half-day workshops using actors. J Gen Intern Med 2002; 17(9):704–8.

[7] Hatem DS, Barrett SV, Hewson M, Steele D, Purwono U, Smith R. Teaching the medical interview: methods and key learning issues in a faculty development course. J Gen Intern Med 2007; 22(12):1718–24.
[8] Novack DH, Dube C, Goldstein MG. Teaching medical interviewing. A basic course on interviewing and the physician-patient relationship. Arch Intern Med 1992; 152(9):1814–20.
[9] Windish DM, Price EG, Clever SL, Magaziner JL, Thomas PA. Teaching medical students the important connection between communication and clinical reasoning. J Gen Intern Med. 2005; 20(12):1108–13.
[10] Norcini JJ. The death of the long case? BMJ 2002; 324:408.
[11] Harden RM, Stevenson M, Downie WW, Wison GM. Assessment of clinical competence using objective structured examinations. BMJ 1975; 1:447–51.
[12] Barman A. Critiques on the objective structured clinical examination. Ann Acad Med Singapore 2005; 34(8):478–82.
[13] Miller GE. The assessment of clinical skills/competence/performance. Acad Med 1990; 65(s9):S63–7.
[14] http://www.osceskills.com/ (Accessed 5 August 2016).
[15] http://www.pastest.com/OSCEs (Accessed 5 August 2016).
[16] Teoh NC, Bowden FJ. The case for resurrecting the long case. BMJ 2008; 336:1250.
[17] McDaid D, Park, AL. Online health: untangling the web—evidence from the BUPA health pulse 2010 International Healthcare Survey [Internet]. London, BUPA; 2011. Available via http://www.bupa.com.au/staticfiles/Bupa/HealthAndWellness/MediaFiles/PDF/LSE_Report_Online_Health.pdf (Accessed 22 August 2016).
[18] Shuyler K, Knight K. What are patients seeking when they turn to the internet? Qualitative content analysis of questions asked by visitors to an orthopaedics web site. J Med Internet Res 2003; 5(4):e24.
[19] Bessell T, Silagy C, Anderson J, Hiller J, Sansom L. Prevalence of South Australia's online health seekers. Aust N Z J Public Health 2002; 26(2):170.
[20] Dart J, Gallois C. Community desires for an online health information strategy. Aust Health Rev 2010; 34(4):467–76.
[21] Thompson BM, Teal CR, Stephen Marks S, Manning SN, Greenfield E, Shada RE, et al. Following the clues: teaching medical students to explore patients' contexts. Patient Educ Couns 2010; 80(3):345–50.
[22] Keifenheim KE, Teufel M, Ip J, Speiser N, Leehr EJ, Zipfel S, et al. Teaching history taking to medical students a systematic review. BMC Med Educ 2015; 15(159); doi:10.1186/s12909-015-0443-x
[23] H Alyami, B Su'a, F Sundram, M Alyami, MP Lyndon, TC Yu, et al. Teaching medical students history taking content: a systematic review. Am J Educ Res 2016; 4(3):227–33; doi:10.12691/education-4-3-2
[24] Evans BJ, Coman GJ, Goss B. Consulting skills training and medical students' interviewing efficiency. Med Educ 1996; 30(2):121–8.
[25] Sanson-Fisher R, Maguire P. Should skills in communicating with patients be taught in medical schools? Lancet 1980; 2(8193):523–6.
[26] Institute of Medicine. Crossing the quality chasm: a new health system for the 21st Century. National Academy Press, Washington, DC, 2001.