

Health inequalities and regional specific scarcity in primary care physicians: ethical issues and criteria

Greg Stapleton · Peter Schröder-Bäck ·
Helmut Brand · David Townsend

Received: 3 December 2012/Revised: 24 May 2013/Accepted: 11 July 2013/Published online: 24 July 2013
© Swiss School of Public Health 2013

Abstract

Objectives A substantial body of evidence supports the beneficial health impact of an increase in primary care physicians for underserved populations. However, given that in many countries primary care physician shortages persist, what options are available to distribute physicians and how can these be seen from an ethical perspective?

Methods A literature review was performed on the topic of primary care physician distribution. An ethical discussion of conceivable options for decision makers that applied prominent theories of ethics was held.

Results Examples of distributing primary care physicians were categorised into five levels depending upon levels of incentive or coercion. When analysing these options through theories of ethics, contrasting, and even controversial, moral issues were identified. However, the different morally salient criteria identified are of prima facie value for decision makers.

Conclusions The discussion provides clear criteria for decision makers to consider when addressing primary care physician shortages. Yet, decision makers will still need to assess specific situations by these criteria to ensure that any decisions they make are morally justifiable.

Keywords Health inequalities · Primary care · Physicians · Ethics

Introduction

Is primary care good for health and health equality? Many policy papers, and a considerable volume of research backing them, suggest this is indeed the case (Habicht et al. 2009; Starfield et al. 2005; SVR 2009; WHO 1978, 2008). However, primary care (PC) is often conceived and/or organised differently around the globe, making it difficult to discuss comparatively. Consequently, when considering health inequalities it is evident that in the context of PC, what is most important is ‘access’. Depending upon its conceptualization and operationalization, ‘access’ can have many meanings. ‘Spatial’ and ‘aspatial’ elements of access are characteristics that are often unique to particular regions and nonetheless influence how potential access to PC is realised. For example, the average distance to PC facilities, the diversity of languages spoken in particular communities, or perhaps even aspects of ethnicity, educational level or age may all have some influence on access to health care within particular regions (Bell et al. 2012; Guagliardo 2004; Habicht et al. 2009; Puddu et al. 2009; Rosicova et al. 2011). It is likely that effects on health equality occur between geographical regions (spatial) or population demographics (aspatial), yet these effects could differ again with the type of PC delivered in different health systems. With this in mind, it can be assumed that PC is beneficial for health equality when distributed according to health need and furthermore, that this effect is achieved through increased access to PC via primary care physicians (PCPs). A substantial body of evidence supports this assumption, demonstrating both the positive effects

This article is part of the special issue “Explaining Health Inequalities: The Role of Space and Time”.

G. Stapleton · P. Schröder-Bäck (✉) · H. Brand
Department of International Health, School for Public Health
and Primary Care (CAPHRI), Maastricht University,
Duboisdomein 30, 6229 GT Maastricht, The Netherlands
e-mail: peter.schroder@maastrichtuniversity.nl

D. Townsend
Department of Health, Ethics and Society, School for Public
Health and Primary Care (CAPHRI), Maastricht University,
PO Box 616, 6200 MD Maastricht, The Netherlands

that more PCPs can have on the health of populations they serve and in reversing the negative health impact of high-income inequality (Macinko et al. 2007; Starfield et al. 2005; WHO 2008). However, questions remain about the options that are available when too few physicians seem willing to specialise in PC (supply) and to practice in specific regions (distribution). Considering the moral obligation to address health inequalities (Koskinen and Puska 2009) and the potential usefulness of PCPs in addressing this, how can the distribution of PCPs be understood from an ethical standpoint? This paper attempts to address these questions from an intra-national perspective.

Method

Framework

The conceptual model underlying this case can be formulated using regional level units that are described using the attributes 'attractive' and 'unattractive'. This can be understood to mean a region, area or location (spatial measurement) where a physician, given complete freedom, would either choose (attractive) or not choose (unattractive) to practice PC (or to live in general). The physicians' reasons are not considered however, it is possible to hypothesise that the demographic or socio-economic characteristic of the population, the character or lifestyle opportunities associated with the area (e.g. education for their children, leisure opportunities, etc.), play some role in the decision of where to practice PC. 'Unattractive regions' (UR) have (among other determinants of health) fewer PCPs practicing within them compared with 'attractive regions' (AR). This means populations of UR have poorer access to PC than populations of AR, which may result in lower levels of health. Although simplified, it is evident that health inequalities are likely to widen between geographical regions in accordance with the respective levels of access to PCPs provided by the health system. Therefore it seems, *prima facie*, desirable that PCPs are assigned to certain (unattractive) regions to tackle health inequalities.

Theories

The options available to tackle this issue by distribution can be ethically discussed from the point of view of the following core theories of ethics: Utilitarianism, libertarianism, and justice. Utilitarianism is often used as an essential theory within public health. It can help to conceptualise aggregate health gains, and therefore, can contribute to maximising overall utility (Mackenbach 2005), which is the classic goal for utilitarianism. Libertarianism's principles have been the focus of the debate on

physicians' rights by Sade (1971, 2008). Libertarianism is also the most directly contrasting theory to utilitarianism. As such, a consideration of both theories provides an antagonistic 'coupling' that ensures competing arguments are included. Lastly, justice theories are important considerations because questions of health equity, public health and environmental justice, are concepts that are frequently connected to theories of justice (Powers and Faden 2006; Schlosberg 2007). Therefore, when considering PCP distribution, theories of justice facilitate a debate that is more pertinent to these concepts. Furthermore, as will be demonstrated later, justice theories form a 'middle ground' between the two strictly contrasting theories of utilitarianism and libertarianism, thus when considered together, they span a spectrum of ethical norms (Schröder-Bäck et al. 2009). It is from this spectrum of norms that the issue of distributing PCPs is ethically tested.

Literature review

To identify the full range of potential solutions to tackle PCP distribution, a review of international literature on primary care physicians was performed. A search within the database web of knowledge using the search term 'primary care physician' highlights the extensive coverage of literature relevant to this topic, retrieving in excess of 60,250 hits (5th October 2012). However, when analysed by title, only 6,195 articles were retrieved which contained the search term 'primary care physician'. Within this sample only 574 articles were relevant to the additional topics 'distribution' (283) (or) 'supply' (220) (or) 'shortage' (71). A preliminary analysis was performed on abstracts within this body of literature to identify articles that discussed issues of PCP shortages, distribution programmes or policies and ethical considerations related to these topics. Overwhelmingly, the body of literature related to issues associated with the United States and its health system. However, as English language was used as an inclusion criterion, it is likely that English-speaking countries may be over represented in this review. Only two articles could be identified which directly addressed ethical considerations of physician supply and distribution, with both articles focused on the US physician workforce.

Results

Technical options for solving this issue

The issue of PCP supply and distribution is a problem for many countries. The primary issue to be addressed is perhaps conceptualised best by Starfield and Fryer (2007) in their study of US physician workforce origins and

migrating international medical graduates (IMGs). In the US, the health system seems to encourage the immigration of foreign medical students from countries with significant shortages. The practice—one that is arguably at odds with the WHO Global Code of Practice on the International Recruitment of Health Personnel (WHO 2010)—provides advantages to the importing country in two ways. First, the supply of physicians is increased in a cost effective way from savings usually associated with the education and training of health care professionals. Secondly, the willingness of IMGs to accept less attractive positions facilitates the resolution of distributional issues, such as regional specific shortages in health care professionals. Needless to say, exporting countries with shortages are disadvantaged simply by the extra cost in maintaining supply.

This overall issue is not unique to the US, a point highlighted when Glinos (2012) warns of the dangers of ignoring health care professional mobility in favour of patient mobility and in particular during periods of austerity. Yet, whilst this can be seen as a concern within health economics for health planners, the problem also raises substantial ethical questions. Hagopian (2007), in an editorial, emphasises exactly this issue. In the US, IMGs provide a solution to internal physician shortages; however, what solutions are available to solve internal shortages in countries less attractive to IMGs or in countries exporting them?

Within this scope, a particular emphasis is made of the dichotomy between methods utilising incentives which might further privilege PCPs or methods which limit PCPs not only in their freedom of medical practice but that could also directly impact their private lives and possibly the lives of their families.

How might a '(re)distribution' between UR and AR be achieved? Several methods have been conceptualised based upon examples discussed in sampled literature (Brooks et al. 2002; Busato and Künzi 2008; German Medical Association 2011; Godager et al. 2009; Hagopian 2007; Politzer et al. 1999; Starfield and Fryer 2007; Rabinowitz et al. 2012; Rieselbach et al. 2010; Walker et al. 2010). The methods can be constructed into the following groups to which the authors have added conceivable aspects:

1. Highly incentivized: career opportunities for PCPs in UR are improved (i.e. physician salaries are improved, investments are made in local PC training and educational institutions).
2. Incentivized: inhibiting factors to becoming or remaining a qualified PCP or to establishing practices are removed (i.e. eliminating bureaucracy or establishing support services for creating PC practices).

3. Conditionally incentivized: medical students are encouraged into PC in specific regions (i.e. conditional grants and/or scholarships which are contingent on the successful completion of a placement/residency within a specific region).
4. Coercive: PCPs are pressured into 'serving' in UR (i.e. licensing bodies refuse licences to PCPs in over-served regions resulting in the relocation of PCPs practicing within them).
5. Highly coercive: selected medical students are only accepted into medical school if they sign a contract agreeing that they will later specialise in PC and/or serve in UR, at least for limited period of time.

The methods listed above can be thought of as forming a spectrum ranging from (1) action characterised by the use of 'incentives', requiring minimal or no use of 'coercion', to (5) action characterised by the strong use of 'coercion', requiring minimal or no use of 'incentives' and less choice. It is acknowledged that other methodologies exist which may influence access to PC. However, the primary focus of this paper is in addressing methods of PCP distribution, and therefore, other methods have not been discussed. Subsequently, the ethical arguments that follow contribute to the academic and practical discourses in solving regional specific scarcity in PCPs through employing solutions that might impact on physicians' freedoms. Through a debate on theories of libertarianism, utilitarianism, and justice, an attempt is made to answer what moral norms, if any, could be considered critical in deciding upon appropriate measures for distributing PCPs.

Ethical perspectives: utilitarianism, libertarianism and justice

From a utilitarian perspective a particular action is to be preferred over alternatives if its outcome achieves greater utility, consequently the use of coercive or forceful measures to distribute PCPs into UR is justified only if the net benefit from subsequent events is greater than all alternatives (including inaction). Neither the PCPs' freedoms nor health equality has intrinsic value within this theory. Instead, the question becomes an empirical and welfare-economic one, with a heavy focus on maximising the overall 'happy life years', even if this means that quite controversially, more coercive methods are employed to distribute PCPs or that UR are left with PCP shortages, and therefore, worse health. All eventualities or consequences should be considered in the widest context under utilitarian theory and a thorough comparison made of all outcomes (Rauprich 2008; Rothgang and Staber 2009). This, for example, includes an account of how forcefully distributing PCPs into UR may hinder the supply of PCPs by making

PC a less attractive specialty to medical students. In turn, the calculation should extend to include the possibility of a negative impact on population health resulting from this. It is also important to consider any opportunity costs. In reality, making a sound judgement from such an ‘all encompassing’ calculation is a ‘utopian ideal’ in that the comprehensiveness of the calculation should be infinitely inclusive, and therefore, could hardly be performed. Consequently, utilitarian theorists must limit calculations based upon what can be reasonably forecast. However, within utilitarianism, ‘health’ does not necessarily equate to happiness. This distinction is an important focus of the utilitarian theory that can complicate public health issues as utilitarians cannot only focus on the ‘burden of disease calculations’. Further, the very criteria to be used in the judgement of ‘greater happiness’ or ‘utility’ are contested, again making the theory’s application problematic (Rauprich 2008).

In contrast, libertarians strongly oppose the use of any force on either party. Their focus is on entitlement. If people—by virtue of their education and labour—are entitled to professional skills or property, it is their choice alone what to do with them. In the most pronounced libertarian arguments, a state can only demand force (e.g. in the form of taxes) to maintain the security of property. Thus professionals, and in this instance PCPs, have a very strong position against any form of interference (Sade 1971). For extreme libertarians, the health issues faced by an underserved population are simply their own bad luck, or a result of their lack of foresight or prudence in making life choices. Any solution to assist populations in underserved regions can only be established from a ‘freedom of choice’ perspective, as might be exemplified by the use of charity. For libertarians, the issue at stake would be handled best via (free) market forces.

From the perspective of justice theories, a consideration is made of the opportunities and capabilities of all persons involved. Equal opportunities (Daniels 2008) and sufficient capacity to realise those opportunities (Nussbaum 2006) demand that everyone should have the real possibility to pursue a good life (which includes ‘health’ for justice theorists). Even if individuals chose not to make the best use of their opportunities or capabilities they still must have a sufficient level of both available to them in reality if the system is to operate fairly. For example, if someone is sick, the justice perspective might ask, ‘is the sickness due to a missed opportunity for care that occurred because the individual made an informed decision not to see a physician, or did the individual not have real access to a physician?’ Within this hypothetical situation, real access can mean either spatial or aspatial access. For example, a lack of health literacy may have limited the individual’s understanding of the consequences of his or her (in)action.

Likewise, the distance to the nearest (available) physician may be inhibiting the individual from seeking care. Even though the result of the individual’s decision not to see a physician would be the same, namely that person being sick, but there would only be an injustice where real access is inhibited.

Within theories of justice, restrictions upon professional liberty can be justifiable, and even demanded, if this leads to equal opportunities and sufficient capabilities for all. It is the obligation of public institutions and societies to guarantee this. This of course also counts for the physicians and (prospective) medical students themselves. Yet, where exactly this level of sufficiency lies, and how far this might differ between societies, is another (largely unsolved) issue. Nevertheless, to achieve equal opportunities and capabilities on a sufficient level for all, it might mean that the capabilities of others are restricted when above the level of sufficiency. Furthermore, justice theorists would probably not demand that the individual’s capabilities need to include a right to study medicine, specialise in what they want, and to work in a region or place of choice. Rather, individuals who have attained access to medical schools, arguably, have already reached a sufficient level of capability with some considerable opportunity for a good life.

In addition, justice theories—while not mainly looking at outcome or exclusively on individual liberty (often called negative freedoms)—offer alternative perspectives. Unlike the utilitarian and libertarian perspective, justice theories focus on fair processes when goods are scarce (Daniels 2008). For example within theories of justice, the public have some claim of ownership on physicians’ skills in that physicians acquire them at (some) public expense (in school and University education costs). Under this premise, physicians could be required to use skills (acquired goods) in public service (Veatch 1981). In addition, as argued by Gostin and Powers (2006), physicians are already privileged members of society. To advantage them further at the expense of the least privileged would compound injustices, and create a ‘double’ unfairness.

Discussion

Each perspective highlights salient moral points on the issue of distributing PCPs, and appears to forward convincing moral arguments. The libertarian answer is relatively straightforward. However, it appears alien against the values and principles of e.g. European health-care systems (The Council of the European Union 2006) as solidarity duties and collective responsibilities are ignored. The utilitarian perspective makes a case for action on PCP shortages. However, the utility-based arguments are almost

impossible to estimate or realise, and their insensitivity to individual rights and health equality again distance them from a healthcare culture based on solidarity. Therefore, they do not effectively discriminate between options of PCP distribution. Within theories of justice, there appears to be a morally convincing claim for equality in access to PCPs. However, it does not provide criteria for decision makers on distributing PCPs, particularly during times of resource scarcity. So how can the five options for distributing PCPs be evaluated from the perspectives of the three theories of ethics?

A choice of action that is characterised by incentivizing positions in URs for PCPs is preferable under libertarianism. Therefore, libertarians would prefer options 1 and 2 as long as the financing for these options was not derived from a tax or compulsory insurance scheme. They would also find option 3 acceptable based upon the assumption that this would not infringe on the negative freedoms of medical students. Again, libertarians would not accept this option unless it was financed from private initiatives. What medical students choose to study and where they (eventually) practice medicine, should be deregulated and be determined by (free) market forces. Thus, option 4 would be unacceptable to libertarians and option 5 would only be acceptable if students were able to buy out of this scheme (e.g. through higher tuition). From a public health point of view it has to be stressed that there would be no guarantee to reach a sufficient coverage of PCPs when applying the four remaining methods under libertarian conditions. It is a criticism of the libertarian perspective that it does not sufficiently take population health outcomes into account.

In contrast to libertarianism, utilitarians prioritise outcomes over individual liberty. Whilst they may require a thorough analysis of all costs and outcomes, they could accept any of the five options, morally favouring the option that had most utility in bringing greatest overall happiness. Therefore, the utilitarian perspective requires that decision makers take full account of the reasonably foreseeable consequences of each option. Yet, health—and thus the ‘burden of disease’—is not the main outcome parameter of utilitarianism. Even though health has been accepted to contribute to happiness, the utilitarian calculus must be based on the broader concept of maximised happiness (Nussbaum 2006).

Justice theorists might be particularly sceptical of options 1 and 3. Option 1, especially the aspect of higher or incentivising salaries, could mean that more resources are used for privileging a position in society that, arguably, already provides many opportunities in life. This might also come at the cost of disadvantaging other parts of health or social budgets that could adversely affect less privileged groups. Method 3 might also be considered unfair if students from less well-off or low-income families

have fewer choices and opportunities than students that are not financially underprivileged or vulnerable. Furthermore, justice theorists that favour a sufficiency level of capabilities might argue that having the opportunity to study medicine and becoming a PCP itself is already such a great opportunity that any extra opportunity (e.g. to decide on specialisation and location of practice) cannot morally be necessary. Option 4 might be considered as minimally fair if the decision-making and allocation criteria were fair, i.e. they are transparent and apply to everyone. Method 5 could also be considered fair if the selection procedure applied to everyone equally and no one individual could buy out of the ‘selection pool’ to their advantage. However, the justice perspective also demands a consideration of the capabilities and opportunities of family members (i.e. spouses and children). Opportunities and capabilities of everyone in all regions should be equal and sufficient (respectively), for the children living there and for the children potentially moving there. Arguably, from the justice perspective it is more important that individuals can access school education according to their abilities and needs. Children from all social classes should have fair opportunity to be able to choose to study medicine (or any other programme) than to have any claim on becoming what one desires.

One might still argue that the theories could be differently interpreted and employed in dealing with the five alternative methods. Yet, it already becomes clear that each theory points to other morally salient features. However, it seems plausible to assume that the discussion has provided the following points for consideration and criteria to which to adhere for deciding ethical action remedying region specific PCP shortages: first, any action taken should alleviate PCP shortages without further disadvantaging the socially deprived as this would even further hinder their capabilities and opportunities. Second, any additional gain of opportunities of the ‘better off’ beyond a level of sufficiency is morally unnecessary. Third, the infringement of professionals’ liberties would at least require the ‘burden of proof’ to lie with showing the justification for the infringement rather than presuming the validity of the infringement. When considering efficient and morally acceptable solutions that bring about greater health equality, more opportunities, capabilities and happiness for all, opportunity costs must also be considered. These opportunity costs may have a negative impact on other areas of opportunities, capabilities and happiness of individuals that can be of equal moral worth to health. Therefore, a thorough assessment of the relative inequalities (opportunities and capabilities) between all social groups concerned (PCPs and populations of UR/AR) must be performed to make a decision that is morally justifiable, and universally convincing, within the context of the specific case being addressed.

Conclusions

This paper has made explicit a fundamental ethical conflict that emerges from primary health care planning: is it justifiable to set special incentives for, or to coerce, medical students to become primary care physicians in unattractive regions to support a distribution of primary care that can result in better health (equalities)? It is argued that solutions will be ethically most convincing if they consider the following criteria: the utilitarian perspective that actions and inactions are morally relevant and that health is neither sufficient nor necessary for happiness of people—even if it plays an important role; that liberty of professionals (and patients) is essential and any infringement of this has a strong burden of proof; and that a sufficient level of opportunities and capabilities of all affected by a decision have to be taken into account, while considering fair procedures and having a special emphasis on not further disadvantaging the underprivileged.

Yet, the ethical discussion can only offer criteria for decision makers. Decision makers still have a duty to investigate the relative inequalities (opportunities and capabilities) between all concerned social groups to justify action taken to redress PCP shortages in URs. Yet, in this decision-making process ethical criteria should be used first, to avoid inaction, and second, to make an ethically robust justification possible.

Acknowledgments The authors would like to extend their gratitude to the participants of “Explaining Health Inequalities: The Role of Space and Time” conference for their valuable comments and insight (Centre for Interdisciplinary Research, Bielefeld: Germany, 25–27 June 2012).

References

- Bell S, Wilson K, Bissonnette L, Shah T (2013) Access to primary health care: does neighborhood of residence matter? *Ann Assoc Am Geograph* 103:85–105
- Brooks RG, Walsh M, Mardon R, Lewis M, Clawson A (2002) The roles of nature and nurture in the recruitment and retention of primary care physicians in rural areas: a review of the literature. *Acad Med* 77:790–798. doi:10.1097/00001888-200208000-00008
- Busato A, Künzi B (2008) Primary care physicians supply and other key determinants of health care utilization: the case of Switzerland. *BMC Health Serv Res* 8:1–8. doi:10.1186/1472-6963-8-8
- Daniels N (2008) *Just health: meeting health needs fairly*. Cambridge University Press, New York
- German Medical Association (Bundesaerztekammer) (2011). Eckpunkte zur Sicherstellung der hausärztlichen Versorgung. Beschlussprotokoll des 114. Deutschen Ärztetags vom 31.05–03.06.2011 in Kiel. <http://www.bundesaerztekammer.de/page.asp?his=0.2.23.9278.9427.9460.9461>
- Glinos I (2012) Worrying about the wrong thing: patient mobility versus mobility of health care professionals. *J Health Serv Res Po*. doi:10.1258/jhsrp.2012.012018
- Godager G, Iversen T, Ma CTA (2009) Service motives and profit incentives among physicians. *Int J Health Care Fi* 9:39–57. doi:10.1007/s10754-008-9046-y
- Gostin LO, Powers M (2006) What does social justice require for the public’s health? *Public health ethics and policy imperatives*. *Health Aff* 25:1053–1059. doi:10.1377/hlthaff.25.4.1053
- Guagliardo MF (2004) Spatial accessibility of primary care: concepts, methods and challenges. *Int J Health Geogr* 3:3. doi:10.1186/1476-072X-3-3
- Habicht J, Kiivet RA, Habicht T, Kunst AE (2009) Social inequalities in the use of health care services after 8 years of health care reforms—a comparative study of the Baltic countries. *Int J Public Health* 54:250–259. doi:10.1007/s00038-009-8012-x
- Hagopian A (2007) Recruiting primary care physicians from abroad: is poaching from low-income countries morally defensible? *Ann Fam Med* 5:483–485. doi:10.1370/afm.787
- Koskinen S, Puska P (2009) From social determinants to reducing health inequalities. *Int J Public Health* 54:53–54. doi:10.1007/s00038-009-7069-x
- Macinko J, Starfield B, Shi L (2007) Quantifying the health benefits of primary care physician supply in the United States. *Int J Health Serv* 37:111–126. doi:10.2190/3431-G6T7-37M8-P224
- Mackenbach J (2005) Odol, Autobahnen and a non-smoking Führer: reflections on the innocence of public health. *Int J Epidemiol* 34:537–539. doi:10.1093/ije/dyi039
- Nussbaum M (2006) *Frontiers of justice: disability, nationality, species membership*. The Belknap Press of Harvard University, Cambridge
- Politzer RM, Harwick KS, Cultice JM, Bazell C (1999) Eliminating primary care health professional shortage areas: the impact of title VII generalist physician education. *J Rural Health* 15:11–20. doi:10.1111/j.1748-0361.1999.tb00594.x
- Powers M, Faden R (2006) *Social justice: the moral foundations of public health and health policy*. Oxford University Press, New York
- Puddu M, Demarest S, Tafforeau J (2009) Does a national screening programme reduce socioeconomic inequalities in mammography use? *Int J Public Health* 54:61–68. doi:10.1007/s00038-009-8105-6
- Rabinowitz HK, Petterson S, Boulger JG, Hunsaker ML, Diamond JJ, Markham FW et al (2012) Medical school rural programs: a comparison with international medical graduates in addressing state level rural family physician and primary care supply. *Acad Med* 87:488–492. doi:10.1097/ACM.0b013e3182488b19
- Rauprich O (2008) Utilitarismus und Kommunitarismus als Grundlagen einer Public-Health-Ethik? *Bundesgesundheitsbl Gesundheitsforsch Gesundheitsschutz* 51:137–150. doi:10.1007/s00103-008-0442-8
- Rieselbach RE, Crouse BJ, Frohna JG (2010) Teaching primary care in community health centers: addressing the workforce crisis for the underserved. *Ann Intern Med* 152:118–122
- Rosicova K, Geckova AM, van Dijk JP, Kollarova J, Rosic M, Groothoff JW (2011) Regional socioeconomic indicators and ethnicity as predictors of regional infant mortality rate in Slovakia. *Int J Public Health* 56:523–531. doi:10.1007/s00038-010-0199-3
- Rothgang H, Staber J (2009) Ethik versus Ökonomie in Public Health? Zur Integration ökonomischer Rationalitäten in einen Public-Health-Ethik-Diskurs. *Bundesgesundheitsbl Gesundheitsforsch Gesundheitsschutz* 52:494–501. doi:10.1007/s00103-009-0836-2
- Sade RM (1971) Medical care as a right: a refutation. *New Engl J Med* 285:1288–1292
- Sade RM (2008) Foundational ethics of the health care system: The moral and practical superiority of free market reforms. *J Med Philos* 33:461–497. doi:10.1093/jmp/jhm023

- Schlosberg D (2007) Defining environmental justice. Oxford University Press, New York
- Schröder-Bäck P, Brand H, Escamilla I et al (2009) Ethical evaluation of compulsory measles immunisation as a benchmark for good health management in the European Union. *Cent Eur J Public Health* 17:183–186
- Starfield B, Fryer G (2007) The primary care physician workforce: ethical and policy implications. *Ann Fam Med* 5:486–491. doi:10.1370/afm.720
- Starfield B, Shi L, Macinko J (2005) Contribution of primary care to health systems and health. *Milbank Q* 83:457–502. doi:10.1111/j.1468-0009.2005.00409.x
- SVR (Sachverständigenrat zur Begutachtung der Entwicklung im Gesundheitswesen) (2009). Coordination and integration—Health care in an ageing society. Special Report. Abridged (English) version. Berlin
- The Council of the European Union (2006) Council conclusions on common values and principles in European Union health systems. *OJ C* 146:1–3
- Veatch RM (1981) A theory of medical ethics. Basic Books, New York
- Walker KO, Ryan G, Ramey R, Nunez FL, Beltran R, Splawn RG, Brown AF (2010) Recruiting and retaining primary care physicians in urban underserved communities: The importance of having a mission. *Am J Public Health* 100:2168–2175. doi:10.2105/AJPH.2009.181669
- WHO (1978). Declaration of Alma-Ata. In: Primary health care: report of the international conference on primary health care. World Health Organisation, Geneva, pp 6. <http://www.planhealth.com.au/pdf/AlmaAta.pdf>. Accessed 11 Nov 2012
- WHO (2008). The world health report 2008: primary health care—Now more than ever. http://www.searo.who.int/LinkFiles/Reports_whr08_en.pdf. Accessed 11 Nov 2012
- WHO (2010). The WHO global code of practice on the international recruitment of health personnel. World Health Organisation, Geneva. http://www.who.int/hrh/migration/code/WHO_global_code_of_practice_EN.pdf. Accessed 11 Nov 2012