



WN *Development*

Volume 6, Number 3, March 2015

Journal of the World Public Health Nutrition Association
Published monthly at www.wphna.org

Universal health care **Health for all, now**



Amartya Sen

Department of Economics, Littauer Center 205, 1805 Cambridge Street
Harvard University, Cambridge MA 02138, US
Emails: asen@fas.harvard.edu; cri@fas.harvard.edu

With examples from Partners in Health's work in Rwanda

[Access September 1978 WHO Alma Ata Declaration on primary health care here](#)

[November 2007 WHO Margaret Chan on universal health care in China here](#)

[Access April 2014 David Werner with Halfdan Mahler on universal health care here](#)

[Access June 2014 Harvard International Review on Rwanda here](#)

[Access 2014 WHO report on universal health care here](#)

Editor's note

Adequate varied nutrition improves and protects health. So do many other inter-related factors, all of which relate to health care systems. Above all what is needed worldwide is universal basic primary health care. This is a dream that could come true. Selective care, restricted to those people who are already diseased, or who are identified as especially vulnerable, is still generally supposed to be more rational and feasible. Here Amartya Sen, economist and philosopher, author of *Development as Freedom* (1), shows why selective care is a mistake. It treats disease or potential disease, and not health in the full sense (2). It does not engage with the underlying and basic social, cultural, economic and political determinants of states of population health. Typically although not necessarily, it does not

empower vulnerable, impoverished and exploited communities to know how to maintain their health and that of their families, This includes the ability to fight for their fundamental and elemental rights to adequate housing, clean water, effective sanitation, decent education, meaningful employment – and secure adequate nourishing food supplies. Amartya Sen argues forcefully that effective publicly funded or strongly subsidised universal public health systems are a necessary firm foundation for energetic, resourceful and confident societies and countries. He also points out, with many examples including some developed here from the people-centred work of Partners in Health in Rwanda (3), that they largely rely on locally trained people, and are likely if anything to be more feasible in low-income than in high-income countries.

Twenty-five hundred years ago, the young Gautama Buddha left his princely home in the foothills of the Himalayas, in a state of agitation and agony. What was he so distressed about? We learn that he was moved in particular by seeing the penalties of ill health – by the sight of mortality (a dead body being taken to cremation), morbidity (a person severely afflicted by illness), and disability (a person reduced and ravaged by unaided old age).

Health care for all

Health has been a primary concern of human beings throughout history. It should, therefore, come as no surprise that healthcare for all – universal health care – has been a highly appealing social objective in most countries in the world, even in those that have not got very far in actually providing it.

The usual reason given for not attempting to provide universal health care in a country is poverty. The United States, which can certainly afford to provide healthcare at quite a high level for all its citizens, is exceptional in terms of the popularity of the view that any kind of public establishment of universal health care must somehow involve unacceptable intrusions into private life. There is considerable political complexity in the resistance in the US, often led by medical business and fed by ideologues who want ‘the government out of our lives’, and also in the systematic cultivation of deep suspicion of any kind of national health service, as is standard in Europe (‘socialised medicine’ is now a term of horror in the US).

One of the oddities in the contemporary world is our astonishing failure to make adequate use of policy lessons that can be drawn from the diversity of experiences that the heterogeneous world already provides. There is much evidence of the big contributions that universal health care can make in advancing the lives of people, and also (and this is very important) in enhancing economic and social opportunities – including facilitating the possibility of sustained economic growth. This has been firmly demonstrated in the experience of south-east Asian countries, such as Japan, South Korea, Taiwan, Singapore and, more recently, China.

Box 1

Health care and food and nutrition security in Rwanda



Rwanda. Daphroza Nyiranzoga and her daughters Solange and Angelique. Primary health care with nutrition advice enabled by Partners in Health has made her family food-secure

See also June 2014 Harvard International Review on health systems in Rwanda [here](#)

Daphroza has been receiving clinical and social support from Partners in Health in Rwanda. She credits community health workers for helping link her to a food security programme. Below is part of an interview in which she reflects on her experience with Partners In Health and local community health workers. For more see <http://www.pih.org/country/rwanda>.

I found that I had HIV when I was already pregnant with one of my children. I was so sad when I found out that I was infected, and because I thought that my daughter would be born with it, too. But Partners in Health in Rwanda enrolled me into a programme that performed miracles. My baby was born without any trace of HIV. To me, this was a miracle.

Before Partners in Health, it was almost impossible to get antiretroviral therapy. Partners in Health provided the medication and assigned me a community health worker who checks my health regularly and has taught me a lot about basic health and what I can do to keep my family and me healthy. This also healed my hunger. I was given two cows, which provide milk and manure that I can sell.

More recently I was enrolled into the Food Security Programme, which taught me about the importance of having a kitchen garden and how vital it is to have a healthy, nutritious diet. They gave me various types of vegetable seeds and now we feed on lots of vegetables with my family. My children will never suffer from malnutrition again. Now that I know the causes of malnutrition, and how to prevent it, I will make sure the people in my community learn from me as well. I won't let them suffer from malnutrition as I plan on passing on these lessons and sharing my vegetables with people in my village.

The community health worker follows up on me and my children. She advises us about different health issues, and we are no longer ignorant about how to live healthily. I take my medication as prescribed, eat healthily, and live a stress-free life. I am now living positively and no longer feel sad and hopeless about the future. Life has never been better.

Universal basic care is feasible

Further, a number of poor countries have shown, through their pioneering public policies, that basic healthcare for all can be provided at a remarkably good level at very low cost if the society, including the political and intellectual leadership, can get its act together.

There are many examples of such success across the world. None of these individual examples are flawless and each country can learn from the experiences of others. Nevertheless, the lessons that can be derived from these pioneering departures provide a solid basis for the presumption that, in general, the provision of universal healthcare is an achievable goal even in the poorer countries.

An Uncertain Glory: India and its Contradictions (4), my book written jointly with Jean Drèze, discusses how India's predominantly messy healthcare system can be vastly improved by learning lessons from high-performing nations abroad, and also from the contrasting performances of different states within India that have pursued different health policies.

Over the last three decades, various studies have investigated the experiences of countries where effective healthcare is provided at low cost to the bulk of the population. The places that first received detailed attention include China, Sri Lanka, Costa Rica, Cuba and the Indian state of Kerala.

Since then examples of successful universal health care – or something close to that – have expanded, and have been critically scrutinised by health experts and empirical economists. Good results of universal care without bankrupting the economy – in fact quite the opposite – can be seen in the experience of many other countries.

Equity in Thailand

This includes the remarkable achievements of Thailand, which has had for the last decade and a half a powerful political commitment to providing inexpensive, reliable healthcare for all. Thailand's experience in universal healthcare is exemplary, both in advancing health achievements across the board and in reducing inequalities between classes and regions.

Prior to the introduction of universal health care in 2001, there was reasonably good insurance coverage for about a quarter of the population. This privileged group included well-placed government servants, who qualified for a civil service

medical benefit scheme, and employees in the privately owned organised sector, which had a mandatory social security scheme from 1990 onwards, and received some government subsidy. In the 1990s some further schemes of government subsidy did emerge, but they proved woefully inadequate. Most of the population had to continue to rely largely on out-of-pocket payments for medical care.

However, in 2001 the government introduced a '30 baht universal coverage programme' that, for the first time, covered all the population, with a guarantee that a patient would not have to pay more than 30 baht (about \$US 1) per visit for medical care (there is exemption for all charges for the poorer sections – about a quarter – of the population).

The result of universal health coverage in Thailand has been a significant fall in mortality (particularly infant and child mortality, with infant mortality as low as 11 per 1,000) and a remarkable rise in life expectancy, which is now more than 74 years at birth – major achievements for a poor country. There has also been an astonishing removal of historic disparities in infant mortality between the poorer and richer regions of Thailand; so much so that Thailand's low infant mortality rate is now shared by the poorer and richer parts of the country.

Transformation in Rwanda

There are also powerful lessons to learn from what has been achieved in Rwanda, where health gains from universal coverage have been astonishingly rapid. Devastated by genocide 21 years ago in 1994, the country has rebuilt itself and established an inclusive health system for all with equity-oriented national policies focusing on social cohesion and people-centred development. Premature mortality has fallen sharply and life expectancy has doubled since the mid-1990s.

Following pilot experiments in three districts with community-based health insurance and performance-based financing systems, the health coverage was scaled up to cover the whole nation in 2004 and 2005. Rwandan minister of health Agnes Binagwaho, the US medical anthropologist Paul Farmer (co-founder of Partners in Health) and their co-authors say in *The Lancet* last year (5):

Two decades ago, the genocide against the Tutsis in Rwanda led to the deaths of 1 million people, and the displacement of millions more. Injury and trauma were followed by the effects of a devastated health system and economy. In the years that followed, a new course set by a new government set into motion equity-oriented national policies focusing on social cohesion and people-centred development. Premature mortality rates have fallen precipitately in recent years, and life expectancy has doubled since the mid-1990s... Investing in health has stimulated shared economic growth as citizens live longer and with greater capacity to pursue the lives they value.

Box 2

Health care and economic empowerment in Rwanda



Neza Guillaine, a computer expert and teacher supported by a Rwandan associate of Partners in Health, leads a session on programming at Camp TechKobwa, Gashora, Rwanda

Extracted from <http://www.pih.org/country/rwanda>. Neza Guillaine, 26 years old, had a seemingly simple task for the 16 young women who sat in front of her in a small classroom in Gashora, Rwanda. This was to provide step-by-step instructions for drawing a smiley face on the chalkboard. But there was a catch. 'They had to follow the steps in such a way that any imprecision, such as a student telling me to draw a circle without first telling me to pick up the chalk, causes problems', she says.

She is a Java developer for Partners in Health's sister organisation. It's been a challenging career path to pursue. From Silicon Valley to Shanghai to South Africa, the gender gap in science, technology, and engineering is enormous. And in settings such as Rwanda, where access to computers is limited and cultural barriers plenty, it's exceedingly difficult for women to get a foothold in the field.

'There are many challenges for women in science and technology. Some girls just think they can't make it or that the technology world is only meant for men. Some girls don't get enough support from their families at a young age', she says. 'I knew what I wanted to do and started work early on at university so that when I finished I had knowledge that could help me get a small internship.'

She has always been keen on sharing tips with women interested in pursuing a career in technology, so she was excited with the opportunity to lead three seminars for the weeklong Camp TechKobwa. This hosted 48 female students from nearby high schools. Students learned how to set up an email account, basics of blogging, and fundamentals of programming. Advice on personal health and financial planning were weaved in.

That's where the smiley face came in. By making sure the students listed every step she had to take—from picking up the chalk to drawing the actual smile—they came to understand how algorithms make up a programme and that programmes execute larger-scale tasks.

The experiences of many other countries also offer good lessons, from Brazil and Mexico (which have recently implemented universal health care with reasonable success), to Bangladesh and the Indian states of Himachal Pradesh and Tamil Nadu (with progress towards the universal coverage already achieved by Kerala).

Bangladesh's progress, which has been rapid, makes clear the effectiveness of giving a significant role to women in the delivery of healthcare and education, combined with the part played by women employees in spreading knowledge about effective family planning. Bangladesh's fertility rate has fallen sharply from being well above 5 children per couple to 2.2 – very close to the replacement level of 2.1). To separate out another empirically observed influence, Tamil Nadu shows the rewards of having efficiently run public services for all, even when the services on offer may be relatively meagre. The population of Tamil Nadu has greatly benefited, for example, from its splendidly run mid-day meal service in schools and from its extensive system of nutrition and healthcare of pre-school children.

Universal care in poor countries

The message that striking rewards can be reaped from serious attempts at instituting – or even moving towards – universal healthcare is hard to miss. The critical ingredients of success that have emerged from these studies include a firm political commitment to the provision of universal healthcare, running workable elementary healthcare and preventive services covering as much of the population as possible, paying serious attention to good administration in healthcare and ancillary public services, and arranging effective school education for all. Perhaps most importantly, it means involving women in the delivery of health and education in a much larger way than is usual in the economically developing world.

The question can, however, be asked: how does universal healthcare become affordable in poor countries? Indeed, how has it been afforded in those countries or states that have run against the widespread and entrenched belief that a poor country must first grow rich before it is able to meet the costs of healthcare for all? The alleged common-sense argument that if a country is poor it cannot provide universal health care is, however, based on crude and faulty economic reasoning.

The first – and perhaps the most important – factor overlooked by the naysayers is the fact that at a basic level healthcare is a very labour-intensive activity, and in a poor country wages are low. A poor country may have less money to spend on healthcare, but it also needs to spend less to provide the same labour-intensive services (far less than what a richer – and higher-wage – economy would have to pay). Not to take into account the implications of large wage differences is a gross

oversight that distorts the discussion of the affordability of labour-intensive activities such as healthcare and education in low-wage economies.

Second, how much healthcare can be provided to all may well depend on the country's economic means, but whatever is affordable within a country's means can still be more effectively and more equitably provided through universal coverage. Given the hugely unequal distribution of incomes in many economies, there can be serious inefficiency as well as unfairness in leaving the distribution of healthcare entirely to people's respective abilities to buy medical services.

Universal health care can bring about not only greater equity, but also much larger overall health achievement for the nation, since the remedying of many of the most easily curable diseases and the prevention of readily avoidable ailments get left out under the out-of-pocket system, because of the inability of the poor to afford even very elementary healthcare and medical attention.

It is also worth noting here, as European examples richly illustrate, that providing universal health care is compatible with allowing the purchase of extra services for the especially affluent (or those with extra health insurance), and its demands must be distinguished from the ethics of aiming at complete equality. This is not to deny that remedying inequality as much as possible is an important value – a subject on which I have written over many decades. Reduction of economic and social inequality also has instrumental relevance for good health.

Definitive evidence of this is provided in the work of Michael Marmot, and Richard Wilkinson and Kate Pickett (6) and others, who show that gross inequalities harm the health of the underdogs of society, both by undermining their ways of life and by making them prone to harmful behaviour patterns, such as smoking and excessive drinking. Nevertheless, the ethics of universal health coverage have to be distinguished from the value of eliminating inequalities in general, which would demand much more radical economic and social changes than universal health care requires. Healthcare for all can be implemented with comparative ease, and it would be a shame to delay its achievement until such time as it can be combined with the more complex and difficult objective of eliminating all inequality.

Third, many medical and health services are shared, rather than being exclusively used by each individual separately. For example, an epidemiological intervention reaches many people who live in the same neighbourhood, rather than only one person at a time. Healthcare, thus, has strong components of what in economics is called a 'collective good', which typically is very inefficiently allocated by the pure market system, as has been extensively discussed by economists such as Paul Samuelson (7). Covering more people together can sometimes cost less than covering a smaller number individually.

Ebola should not have happened

Fourth, many diseases are infectious. Universal coverage prevents their spread and cuts costs through better epidemiological care. This point, as applied to individual regions, has been recognised for a very long time. The conquest of epidemics has, in fact, been achieved by not leaving anyone untreated in regions where the spread of infection is being tackled. The transmission of disease from region to region – and of course from country to country – has broadened the force of this argument in recent years.

Right now, the pandemic of Ebola has been causing alarm even in parts of the world far away from its place of origin in West Africa. For example, the US has taken many expensive steps to prevent the spread of Ebola within its own borders. Had there been effective universal health care in the countries of origin of the disease, this problem could have been mitigated or even eliminated. In addition, therefore, to the local benefits of having universal health care in a country, there are global ones as well. The calculation of the ultimate economic costs and benefits of healthcare can be a far more complex process than the universality-deniers would have us believe.

Unequal knowledge

In the absence of a reasonably well-organised system of public healthcare for all, many people are afflicted by overpriced and inefficient private healthcare. As has been analysed by many economists, most notably Kenneth Arrow (8), there cannot be a well-informed competitive market equilibrium in the field of medical attention, because of what economists call ‘asymmetric information’. Patients do not typically know what treatment they need for their ailments, or what medicine would work, or even what exactly the doctor is giving to them as a remedy.

Unlike in the market for many commodities, such as shirts or umbrellas, the buyer of medical treatment knows far less than what the seller – the doctor – does, and this vitiates the efficiency of market competition. This applies to the market for health insurance as well, since insurance companies cannot fully know what patients’ health conditions are. This makes markets for private health insurance inescapably inefficient, even in terms of the narrow logic of market allocation. And there is, in addition, the much bigger problem that private insurance companies, if unrestrained by regulations, have a strong financial interest in excluding patients who are taken to be ‘high-risk’. So one way or another, the government has to play an active part in making universal health care work.

The problem of asymmetric information applies to the delivery of medical services itself. It makes the possibility of exploitation of the relatively ignorant a likely result

even when there is plentiful market competition. And when medical personnel are scarce, so that there is not much competition either, it can make the predicament of the buyer of medical treatment even worse. Furthermore, when the provider of healthcare is not himself trained, as is often the case in many countries with deficient health systems, the situation becomes worse still.

As a result, in the absence of a well-organised public health system covering all, many patients, denied any alternative, remain vulnerable to exploitation by unscrupulous individuals who robustly combine crookery and quackery.

While such lamentable conditions are seen in a number of countries, there are other countries (or states within countries) that, as has already been discussed, demonstrate the rewards of having a functioning universal public healthcare system – with better health achievements and also larger development of human capabilities. In some countries – for example India – we see both systems operating side by side in different states within the country.

A state such as Kerala provides fairly reliable basic healthcare for all through public services – Kerala pioneered universal health care in India several decades ago, through extensive public health services. As the population of Kerala has grown richer, partly as a result of universal healthcare and near-universal literacy, many people now choose to pay more and have additional private healthcare. But since these private services have to compete with what the state provides, and have to do even better to justify their charges in a region with widespread medical knowledge and medical opportunity, the quality of private medical services tends also to be better there than where there is no competition from public services and a low level of public education.

In contrast, states such as Madhya Pradesh or Uttar Pradesh give plentiful examples of exploitative and inefficient healthcare for the bulk of the population. Not surprisingly, people who live in Kerala live much longer and have a much lower incidence of preventable illnesses than do people from states such as Madhya Pradesh or Uttar Pradesh.

The value of prevention

In the absence of a reasonably well-organised system of public healthcare for all, a system of universal healthcare also has the advantage that it can focus on vitally needed but often ignored primary medical attention, and on relatively inexpensive outpatient care when a disease receives early attention. In the absence of systematic care for all, diseases are often allowed to develop, which makes it much more expensive to treat them, often involving inpatient treatment, such as surgery.

Thailand's experience clearly shows how the need for more expensive procedures may go down sharply with fuller coverage of preventive care and early intervention.

Good healthcare demands systematic and comprehensive attention, and in the absence of affordable healthcare for all, illnesses become much harder and much more expensive to treat. If the advancement of equity is one of the rewards of well-organised universal healthcare, enhancement of efficiency in medical attention is surely another.

The case for universal health care is often underestimated because of inadequate appreciation of what well-organised and affordable healthcare for all can do to enrich and enhance human lives. It is one thing to accept that the world may not have the resources and the dexterity at this moment to provide the finest of medical care to all, but that is not a reason for eliminating our search for ways of proceeding towards just that, nor a ground for refusing to provide whatever can be easily provided right now for all. In this context it is also necessary to bear in mind an important reminder contained in Paul Farmer's book *Pathologies of Power*: 'Claims that we live in an era of limited resources fail to mention that these resources happen to be less limited now than ever before in human history' (9).

In addition, we have to take note of the dual role of healthcare in directly making our lives better – reducing our impoverishment in ways that matter to all human beings – as well as helping to remove poverty, assessed even in purely economic terms. Reduction of economic poverty occurs partly as a result of the greater productivity of a healthy and educated population, leading to higher wages and larger rewards from more effective work, but also because universal health care makes it less likely that vulnerable, uninsured people would be made destitute by medical expenses far beyond their means. Here again, Thailand's experience shows how penury caused by medical costs can fall rapidly once universal health care is established.

The mutual support that healthcare and economic development can provide has been brought out very extensively by the results of universal health care-oriented policies in south-east Asia, from Japan to Singapore. The complementary nature of health advancement and economic progress is also illustrated in the comparative experiences of different states within India.

I remember being admonished 40 years ago, when I spoke in support of Kerala's efforts to have state-supported healthcare for all. I was firmly told that this strategy could not possibly work, since Kerala was, then, one of the poorest states in India. The thesis of unaffordability was, however, wrongly argued for reasons already discussed. Despite its poverty, Kerala did manage to run an effective universal health care programme that contributed greatly to its having, by some margin, the longest life expectancy in India and the lowest rates of infant and child mortality, among its other health accomplishments.

But in addition to these so-called ‘social achievements’, it was possible to argue even in those early days – despite scorn from those who were opposed to universal health care – that with the help of a more educated and healthier workforce, Kerala would also be able to grow faster in purely economic terms. After all, there are no influences as strong in raising the productivity of labour as health, education and skill formation – a foundational connection to which Adam Smith gave much attention.

This has actually happened. In fact, the previously poor state of Kerala, with its universal healthcare and universal schooling, now has the highest per capita income among all the states in India. Tamil Nadu and Himachal Pradesh, both of which have made substantial moves towards the provision of education and basic healthcare for all, have both progressed admirably and now belong solidly among the richer Indian states.

Thus there is plenty of evidence that universal healthcare powerfully enhances the health of people, and that its rewards go well beyond health. There is a strong relationship between health and economic performance. We have every reason to base public policy on a proper understanding of the nature and reach of what is clearly a positive interdependence. There is no mystery in all this, given the centrality of health for better lives and for enhancing human capabilities.

Box 3

Health For All re-affirmed by WHO

World Health Organization director-general Margaret Chan, who now has two years remaining of her second term of office, has been constantly determined to secure universal primary health care, in the spirit of the 1978 Alma Ata Declaration (10). This work continues to date (11). One of her first acts on office was to affirm this at the 2006 WHO World Health Assembly, at which some key themes of the Declaration were affirmed:

- Health, which is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity, is a fundamental human right. The attainment of the highest possible level of health is a most important world-wide social goal whose realisation requires the action of many other social and economic sectors in addition to the health sector.
- The existing gross inequality in the health status of the people, particularly between developed and developing countries as well as within countries, is politically, socially, and economically unacceptable and is, therefore, of common concern to all countries.
- The people have a right and duty to participate individually and collectively in the planning and implementation of their health care.
- Primary health care is based on practical, scientifically sound, and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development, in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of overall social and economic development of the community. It is the first level of contact of individuals, the family, and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first elements of a continuing health care process.

References

- 1 Sen A. *Development as Freedom*. New York: Random House, 1999
- 2 World Health Organization. *Declaration of Alma Ata*. International Conference on Primary Health Care. Geneva: WHO, 1978. [Access pdf here](#)
- 3 Partners in Health in Rwanda. <http://www.pih.org/country/rwanda>
- 4 Drèze J, Sen A. *An Uncertain Glory. India and its Contradictions*. London: Penguin, 2013
- 5 Binagwaho A, Farmer P, Nsanzimana S et al. Rwanda 20 years on: investing in life. *The Lancet* 2014, **384**, 9940, 371-375.
- 6 Wilkinson R, Pickett K. *The Spirit Level: Why More Equal Societies Almost Always Do Better* London: Bloomsbury, 2011.
- 7 Samuelson P. *The Pure Theory of Public Expenditure*. *Review of Economics and Statistics* 1954, **36** (4): 387–389.
- 8 Arrow KJ. Uncertainty and the welfare economics of medical care. *American Economic Review* 1963, **53** (5): 941–973.
- 9 Farmer P. *Pathologies of Power: Health, Human Rights and the New War on the Poor*. Berkeley: University of California Press, 2005.
- 10 Chan M. Address at the seminar on primary health care in rural China. Beijing, China, 1 November 2007. [Access pdf here](#)
- 11 World Health Organization. Making fair choices on the path to universal health coverage. Report of the WHO consultative group on equity and universal health coverage. Geneva: WHO, 2014. [Access pdf here](#)

Status

Cite as: Sen A. Universal health care. Health for all, now. [Development]. *World Nutrition* March 2015, **6**, 3, 157-169. All WN contributions are obtainable at www.wphna.org.

World Nutrition commentaries are reviewed internally or by invitation. All contributions to *World Nutrition* are the responsibility of their authors. They should not be taken to be the view or policy of the World Public Health Nutrition Association unless this is explicitly stated.

How to respond

Please address letters for publication to wn.letters@gmail.com. Letters should usually respond to or comment on contributions to *World Nutrition*. More general letters will also be considered. Usual length for main text of letters is between 350 and 1,000 words. Any references should usually be limited to up to 12. Letters are edited for length and style, may also be developed, and once edited are sent to the author for approval.