WELCOME TO THE NEW IHF REFERENCE BOOK

ARTICLE BY DAME GILL MORGAN

This is the first edition of the new IHF yearbook – The International Hospital Federation Reference Book. This innovative publication will reflect the new approach being adopted by the IHF in its quest to improve and expand its capacity to share ideas and information about hospital management strategies and care regimens. The Reference Book will form an integral part of the IHF communications strategy together with the quarterly journal and new regional reports. It will feature annual assessments of the worldwide evolution in hospital care and facilities development.

The purpose of the book remains the sharing of information and the worldwide dissemination of best practice and innovation. Senior health service leaders, managers and professionals remain the target audience of the publication.

Healthcare systems differ widely in their funding and management systems, in the levels of investment and in their state of development. Despite this disparity all health services are being challenged. The emergence of new diseases such as Severe Acute Respiratory Syndrome (SARS), the persistence of others such as HIV/AIDS, and the mutation of others such as Multi-Drug Resistant (MDR)-TB have demonstrated that health is a global issue which inextricably links the wealthiest and the poorest nations. One weak link in management can bring disaster to all. We must learn together and from each other in increasingly innovative and dynamic ways. Herein lies the challenge for 21st century health and health services. Managing this challenge will require an increasing level of global solidarity.

Whilst a comprehensive strategy needs the commitment of national leaders, global institutions and global industries, we, as members of the global healthcare fraternity and community, have a role to play either through the organizations we represent or through personal endeavour.

The International Hospital Federation, therefore, through this medium of communication will aim to catalyse and support international linkages across differing healthcare systems so that those responsible for planning and managing health and healthcare services may learn from each other. Most important of all, the aim will also be to stimulate the development of healthcare or hospital associations that can work in partnership with governmental agencies at a national level.

I hope and believe that this Reference Book will be a genuinely useful publication for those working in hospital healthcare and make a real difference to how people do their jobs.

I trust and hope you will enjoy the Reference Book and welcome contributions to future editions.

Dame Gill Morgan
President
International Hospital Federation
This is the first edition of the IHF yearbook in a new format, the 'The International Hospital Federation Reference Book', the result of a collaboration with our new publishers, Pro-Brook Publishing Limited.

A wide variety of topics are covered in this edition. The state and future of hospital laboratories, continuing medical education and continuing professional development, the impact of diabetes on healthcare and hospitalization, healthcare security, hospitable hospitals, nursing management, innovation in wound care, patient safety, e-Health, smoking cessation among youths, all of which are of high relevance to hospitals and health services the world over.

I wish you interesting reading and welcome an exchange of dialogue and feedback on this initiative and medium by which the IHF will look to communicate more effectively and extensively on developments in the international healthcare arena.

Professor Per-Gunnar Svensson
Director General
International Hospital Federation
THE EFFECTS THE CONSTRUCTION OF EUROPE ON DIVERSITY IN THE HOSPITAL FIELD

ARTICLE BY GÉRARD VINCENT AND PASCAL GAREL

Abstract


Diversity is first of all at the very origin of European social systems. A classic analysis habitually chooses the ideological inspiration of social protection systems as a criterion of comparison, thus contrasting the systems inspired by Bismarck with those based on Beveridge.

Systems known as social insurance, inspired by Bismarck, link the benefit of health protection to the fact of belonging to a particular professional category. In this type of obligatory insurance, the trusteeship over the care offered is carried out by separate financing institutions. On the other hand, national systems on the Beveridge pattern ensure the financing of health costs by taxation. Access is universal and the care offered is the monopoly of a national health service. Obviously, no system is either purely Bismarkian or Beveridgian. It is more accurate to talk of mixed systems, since both systems experienced changes, which have distanced them from their founding principles.

This analysis, based on ideological inspiration, is useful in that it presents the founding principles of systems and also then enables the elements of convergence to be identified in their diversity. However, it is inadequate if you wish to understand fully the specific nature of the hospital system. Beside the classic outline distinction, which distinguishes those social systems inspired by Bismarck from those inspired by Beveridge, it is necessary to take into account, in analyzing health systems, the articulation between various territorial levels of responsibility and the level of decentralization. In Europe, the degree of intervention of the regions with regard to healthcare and hospitals varies enormously.

This diversity reflects the differences in the constitutional and administrative organization of the European States. It is also the result of cultural habits and administrative practices, which sometimes ease institutional schedules. In general, the number of States in Europe, which authorize regions to intervene significantly in the field of health, has been constantly growing for the past thirty years.

The consistency of regional sanitary powers is itself very variable. It may be minimal (the implementation of national health legislation and the management of part of the health system) or maximal (decision making powers for regulation, health planning, financial powers and including the supply of hospital care).

The intervention of regions in the European Union member states with regard to hospital is sometimes contested because of the difficulties caused by the reconciliation of decentralized management and national solidarity. However, although federal States experience inequality recorded through various health indicators or in terms of health structures, especially the number of beds, this is not peculiar to them. Decentralized or centralized States also include these inequalities.

With particular reference to hospitals, the major differences in systems may be measured using a few key elements. Firstly, the means of access to hospitals (direct or not) remains very different from one member state to another. National hospital structures are also highly varied, especially in terms of the division between public and private and within the private sector between for profit and non-for profit. As this concerns the weight of public hospital costs in the national total of health costs, such differences in the organization of the systems cause significant budgetary differences. Continuing the analysis, it is also clear that the models of medical organization, internal management and decision-making powers in hospitals are very different from one member state to another.

Convergence is growing for various reasons: cost containment, innovation, consumerism, ageing, etc. This is visible on access, quality and financing of hospitals. The construction of the European Union has in itself been the basis of a number of actions, leading to a certain degree of convergence. This specific aspect of Europe is worth mentioning.

The European Union is above all economic, based on the principles of the free circulation of goods and workers. It has also pervaded the financial world with the single currency. However it is constantly deepening its skills and tackling new fields of activity. The organization of care and the role of hospitals is increasingly being included, if
not in its field of competence, at least in its sphere of influence.

This does not mean that concern with health and social matters has not existed in the past few decades. On the contrary, the original actions were contemporaneous with the major founding acts of the Community; this was the case for the social cover provided for transboundary workers. However, up to the adoption of the Maastricht Treaty, health was not an intrinsic part of European integration and the treatment of social policies remained very unequal within the Community.

This sphere is essentially guided by the rules of national sovereignty onto which is grafted the community principle of subsidiarity: “the Community only intervenes in those fields which are not part of its exclusive competence such as public health, if and to the extent that, because of their dimension or their effect, the objectives of the envisaged action would be better achieved at Community level”. Except for particular instances, the level of suitable administration for a function remains the most decentralized level. The member States have thus decided that the state or regional level was the most appropriate for decisions regarding health. Consequently, Community actions with regard to social or health matters are only legitimate if they add to or strengthen those carried out at national level. Based on this and up to now, the majority of Community legislation enacted in the field of health has not fundamentally transformed the way health systems operate in the countries of Europe, as the Treaties have only given the Union very tenuous powers over health systems. Similarly, no member state has wanted to give up its prerogatives in the social sphere. The disparities in the infrastructures of care, the variety of management models and the various modes of consuming care do not justify the position taken by states and the cautious attitude to intervention by the European legislature.

Article 129 of the Maastricht Treaty (1992) structured health and social structures in the European Union, providing for the Community to provide a “contribution to the achievement of a high level of health protection”. Community intervention, however, remained limited. It favoured the prevention of disease, the struggle against such major menaces such as drug addiction by encouraging research into their causes and transmission as well as information and education on health matters. Although modest, Article 129 nevertheless enabled European programmes on public health to be created or to make gradual progress, in particular the struggle against smoking, cancer, AIDS and drug taking, as well as the monitoring of transmissible diseases and the promotion of health.

Article 152 of the Treaty of Amsterdam (1997) widened the powers of the Union with regard to public health by conferring on it genuine decision making powers in certain fields. This is particularly true with regard to the quality and security of organs and substances of human origin, blood and its derivatives. Without being a Community policy, public health has become a fully-fledged transversal objective of the Community, an additional element in other common policies, such as agriculture, industry or consumers. Over the years, therefore, there has been increasing Europeanization of health in spite of the fact that Article 152 formally excludes any harmonization of national legislation in this field. The pressure of public opinion with regard to food safety, for example, has led to the envisaging of European Agencies to monitor this.

Although formally excluded from the Treaty of Amsterdam (even the term hospital is not mentioned), hospitals in Europe are nevertheless living in an environment that has already been considerably marked by community legislation. The directives governing the free circulation of health professionals have opened our hospitals to Community citizens for certain categories of jobs such as doctors, nurses or pharmacists. The free circulation of health professionals is now a fact. Similarly, the application of the free circulation of goods and services has convulsed the procedures for officially certifying medical equipment, unifying the principles of material vigilance, the conditions governing the collection and fractioning of blood products and the protocols concerning grafts and the removal of organs as well as the authorization procedures for the marketing of drugs. A number of European rules governing the treatment of waste are already in force in the establishments. Purchasing procedures are already tending to become uniform, etc. Little by little, Europe is infiltrating into hospitals.

What influence has the single market had on health services? Has the free circulation of persons, goods and capital changed the way Member States manage their health systems? With regard to the three major aspects, the changes in the job market for health professionals, public contracts for goods and services and the free circulation of patients, show both the limited nature of the adaptation of health systems to the European market and vice versa. The impact on health services is relatively limited and marginal but has a specific transboundary effect.

Further reading

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Authors

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HOSPITAL CARE IN WHO EASTERN MEDITERRANEAN REGION: AN AGENDA FOR CHANGE

ARTICLE BY DR AHMED ALI ABDULLATIF

Abstract

THE EASTERN MEDITERRANEAN REGION (EMRO) COVERS A LARGE AREA AND IS HOME TO 500 MILLION PEOPLE. THE GREAT DIVERSITY WITHIN HOSPITAL SERVICES AND HEALTHCARE BUDGETS IN THE REGION, AND EVEN WITHIN THE INDIVIDUAL COUNTRIES, MAKES THE DEVELOPMENT AND IMPLEMENTATION OF AN APPROPRIATE AGENDA FOR CHANGE INTO A VAST TASK. IT IS A NECESSARY TASK, HOWEVER, BECAUSE THE FUNCTIONS OF HOSPITALS NEED TO ADAPT TO MEET THE MANY CHANGING AND CHALLENGING SCENARIOS OF THE 21ST CENTURY.

WHO/EMRO consists of 22 Members covering the geographical block (except Algeria) extending from Morocco in the west to Pakistan in the east, and has a population of 500 million. The diversity of the countries of the Region in terms of political, economic, demographic, epidemiological and environmental situation explains the variety and degree of magnitude of change and challenge, and their impact on health systems in the Region.

With more than 90% of the population of the Eastern Mediterranean Region living in low-income and middle-income countries, economic constraints are reflected in the rising levels of poverty and social deprivation in many countries.

Most countries within EMRO have “mixed systems of healthcare” which have various providers – public, private and governmental. In EMRO these providers operate usually with one sector dominating – either the public sector as in most countries or the private sector such as in Lebanon. In such mixed health systems, hospitals have emerged as a dominant institution for healthcare delivery. The main achievement in provision of care has been the improved coverage by primary healthcare. For example, accessibility in countries of the Region has improved substantially, to reach 84% in 2000. The wide primary healthcare infrastructure increased the need for referral care.

Challenging environment

The rapid changes taking place in the social, demographic, technological, epidemiological and economic spheres, both in the world in general and in the Eastern Mediterranean Region in particular, call for a review of the present status of policies for hospital health system infrastructure development; the resources available; the roles and functions of hospitals; technology in use and the mechanisms for maintaining that technology. This is needed in order to ensure the provision of equitable and quality hospital care to people.

Hospitals in the Eastern Mediterranean Region have evolved since early times and their status and role were identified in the teachings of Arab and Muslim Scholars of Medicine. Nowadays, national hospital systems are coming under increasing scrutiny with a view to cost containment and quality improvement, often as a direct or indirect result of initiatives for health system reform.

There is great diversity within hospital services in the Region, often even within the same country. Prominent public and private medical centres exist in the Region that are comparable to the most advanced in any other region. However, in many other hospitals there are services that do not meet a minimum level of quality. Hospital performance, generally speaking, is characterized by low bed-occupancy rates varying from more than 80% in most Gulf Cooperation Council (GCC) countries to around 45% on average in other low- to middle-income countries of the Region. Country reports for 2004 show the range for the number of physicians per 10,000 population – varying from 0.4 in Somalia to 28.1 in Lebanon, whereas the average for the Region is 9.1 physicians per 10,000. The range for the number of beds per 10,000 population ranges from 3.9 in Afghanistan to 39.0 in Libya.

In general, the distribution of hospital beds, skilled personnel and costly health technology in many countries is skewed in favour of urban areas, illustrating a striking difference and inefficiency in the use of resources. The private sector so far has confined its investment to urban areas, adding to the inequity of access to hospital care.

Ministries of health spend more than half their budget on hospital-based curative services, yet many hospitals operate at very low occupancy rates, employ excess staff and use their resources inefficiently.

Gaps in service delivery and efficient use of resources are multifactorial. The main causes are lack of coordination between the two main providers of
hospital care, namely the government on the one hand and private sector on the other; under-funded healthcare systems, and escalating costs of healthcare. The overall trend in healthcare financing in the Region shows a clear shift of the burden from government to households, even in oil-producing countries and those that provide social welfare. Direct out-of-pocket spending by households accounts for a major portion of private spending in most countries. In some countries, working conditions of health workers are unsatisfactory, with low salaries, poor living conditions especially in remote areas and inadequate career structures. Multiple employment is a common feature among the health workforce in some countries and this will continue if privatization is not regulated and monitored. Leadership development and management capabilities are lacking. Governments face a potentially confusing array of policy tensions and choices of types of healthcare delivery, especially in respect to decentralization of authority and hospital autonomy; the unsettled issue of provision of care versus financing of care is still a major concern of many national health authorities and planners. Weak management has also caused poor organization and delivery of health services at all levels including ineffective referral systems. The weakness of health information systems at central and peripheral levels has resulted in difficulties in collecting and using information to measure performance of health facilities.

Agenda for change and the way forward for credible hospital care

Hospitals now have to face the changing environment created by globalization, advances in health technology, ageing and urbanization patterns, as well as the burden of disease. Pressures are intensifying to make hospitals more accountable to national health policies. WHO/EMRO has promoted accreditation as a way to re-engineer hospital care and to ensure that hospitals contribute to national health systems as set by health planners. Hospital treatment patterns are shifting due to changing technology and demands. Hospitals are being ‘re-engineered’ to cope with challenges of high cost and increase demand.

Reorientation of healthcare institutions and provision of care

In conjunction with the development of the network and infrastructure, efforts were made in some countries (Egypt, Jordan and the member countries of the GCC) to develop family practice as a strategy for effective coverage through gatekeeping and screening of users of services. The Declaration of Al Manama (Bahrain), where PHC and family practice specialists convened in 2003, emphasized the role of the family physician in healthcare delivery.

Some of the Region’s low-income countries (Afghanistan, Sudan and Yemen) and middle-income countries (Egypt, Lebanon and Iran) have developed “core packages”, which define health interventions that should be available at the district hospital level. In the early 1980s quality assurance and improvement (QAI) in healthcare occupied an important position in the agenda of most countries in the Region. Almost all EMRO countries have developed training programmes and QA/I plans. Several countries (Jordan, Pakistan, Saudi Arabia, Sudan and Syrian Arab Republic) conducted a quality assessment, either nationally or in pilot areas.

Developing accreditation systems for hospitals: A number of government, semi-private and private health institutions in the Region are currently seeking recognized accreditation systems in order to cope with heightened demands for quality in healthcare service delivery. Many countries, including Egypt, Iran, Jordan, Kuwait, Lebanon, Morocco, Oman and Saudi Arabia, have established national committees to study requirements for accreditation and are piloting national accreditation programmes.

Involvement of and incentives to healthcare providers: Contracting physicians to provide a core package of care is being tried in Egypt, Iran and Pakistan to improve the quality of care and to provide incentives to workers in district hospitals.

Improving efficiency and effectiveness of hospital care services

New methods of payment for services are being designed in order to introduce efficiencies in the provision of hospital care services. Examples are initiatives to provide services to patients in less costly settings (Bahrain, Iran, Oman), such as through ambulatory care and community-based approaches, e.g. home-based care and long-term care. Different Health Insurance Schemes are also introduced as risk-sharing in Lebanon, Tunisia, Morocco, Iran and Egypt. In addition to the various efficiency measures which need to be introduced, there is a great need to make physicians and teams accountable, not only for their patients’ health, but also for the wider resource implications of any treatments involved, including referrals from primary care into secondary and tertiary care. There is a need to widely adopt management protocols in order to curb the cost of services and to improve the quality and accessibility of care. Efficiency gains could also be achieved through appropriate selection of biomedical technology. However, this technology is still limited and in its early phase.

Organization, management and reorientation of healthcare service provision: Hospital care requires a new organizational culture which should prevail at all levels and sites. Actions taken so far have included: changing the existing organizational structure within the Ministry of Health (Bahrain, Egypt,
Iran, Qatar, Sudan) to support a general management or business management style; introducing multidisciplinary management teams working within each service and department; collaboration and joint planning between private and public sectors to ensure mutual benefits (Jordan, Saudi Arabia, Lebanon, Oman, Tunis, UAE).

Strengthening management and strategic planning for health workforce development: New leadership modalities are necessary to establish the role of ministries of health to exercise effective oversight. Efforts are being made in many countries of the Region to train managers at various levels and to introduce innovative approaches for training focused on leadership, problem-solving techniques, continuous quality improvement, evidence based practices and community involvement.

Enhancing decentralization through district health systems development: The district health system in all EMRO countries has received special attention through the convergence of resources at the operational level to foster hospital autonomy and referral system support. These efforts are not fully operational at this stage.

Investing in collaboration with nongovernmental organizations (NGOs) and the private sector: In Afghanistan, Lebanon and Sudan, NGOs are major providers of health services. Contractual agreements are in progress with NGOs to secure hospital care at the district level. Contractual agreements with private sector hospitals are a common practice in many other EMRO countries, particularly Saudi Arabia, Lebanon and Jordan.

Conclusions
In striving to cope with prevailing changes and challenges, the agenda in front of hospitals is substantial. Hospitals have to prove efficient, through better use of their resources by opting for alternative ways of providing care such as using ambulatory care; enhancing adherence and compliance of providers and users to the standards of care and evidence-based practices; effectively reducing avoidable hospitalization and average length of stay (ALOs), and increasing bed-occupancy rates (BOR); using the Gatekeeper principle to ensure screening and better referral care, classification systems of patients according to severity, comorbidity and socioeconomic vulnerability status. Hospitals also should improve quality by reducing substantially medical errors and adverse events rates of hospital patients, enforcing licensing and re-licensing, and making operational the accreditation systems. The societal role of hospitals can be effected through a shift from sick care to comprehensive healthcare approaches which include health promotion. The appropriate skill mix of staff and reward system for them cannot be over-emphasized.

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HEALTHCARE IN SOUTH-EAST ASIA REGION – SITUATION AND CHALLENGES

ARTICLE BY DR SAMLEE PLIANBANGCHANG, MD, DR PH

The 11 Member States of WHO’s South-East Asia Region present a vibrant and diverse socioeconomic and cultural picture. With more than 1.5 billion people, the Region, comprising Bangladesh, Bhutan, Democratic People’s Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste, accounts for 25% of the world’s population (Figure 1). The population increased by 61% from 1975 to 2000 and is estimated to exceed two billion by 2025.

An interesting demographic change in the Region is the decline in the proportion of the population who are less than 15 years of age. From 41% in 1975, the percentage declined to 33% in 2000, and is likely to drop to less than 23% by 2025. At the same time, the proportion of those aged 65 years and above increased from 3.7% in 1975 to 4.8% in 2000, and is expected to reach 8.4% by 2025.

The widespread poverty in some countries of the Region poses a serious threat to health. This is evident from the high percentage of low-birth-weight infants and malnourished children. More than 400 million people are estimated to go hungry every day and the deprivation of human capabilities and access to opportunities affect more than 510 million people. Poverty is also a major contributor to disabilities and to shorter life expectancies in the Region.

This WHO survey of the South-East Asia Region provides information on the current health situation and the trends that are influencing its development. This article also considers the nature of the Region’s healthcare facilities and the institutions that serve their countries, including the rapid growth of private healthcare. The survey also considers the challenges ahead.

Health situation and trends

The Region carries the largest portion of the global burden of many communicable diseases (Figure 2). A new dimension is the rising trend of noncommunicable diseases, such as cardiovascular and cerebrovascular diseases, cancer and diabetes mellitus as well as accidents and injuries. High maternal mortality ratios (40% of the world’s maternal deaths occur in this Region) are also a cause for concern, as are the low literacy levels for women and girls.

Every year, more than 600,000 adults in the Region die of TB (Figure 3) and 250,000 children die of measles. More than six million people are living with HIV/AIDS and 250 million are at risk of contracting a severe form of malaria. In addition, the Region has faced epidemics of emerging infectious diseases, adding to the burden of the health systems. Severe acute respiratory syndrome (SARS) and avian influenza are recent examples of such diseases which have caused enormous health and socioeconomic...
hardship and posed a major threat to health security across countries, and beyond national borders. Dengue/DHF, the Nipah virus and the new strain of cholera (V. cholera 0139 Bengal) are spreading to new areas, while age-old diseases like leprosy, kala-azar and lymphatic filariasis continue to cause considerable suffering and psychosocial disruption.

With increasing life expectancies and marked changes in lifestyles, the past two decades have seen a sharp increase in cardiovascular diseases, diabetes mellitus, hypertension and cancers. For example, 10–15% of the adult population is already affected by hypertension in countries such as India, Indonesia and Thailand. Violence, traffic and work-related accidents, and mental disorders, as well as problems related to substance abuse, are also increasing. Diseases and deaths attributable to tobacco use are a cause of serious concern.

The estimated prevalence of diabetes mellitus in adults in countries of the Region ranges from 2% to 4%. Contrary to trends in developed countries, where the majority of diabetics are 65 years or older, most diabetics in the South-East Asia Region are between 45 and 64 years of age – an economically productive age group.

By 2020, according to some estimates, noncommunicable diseases are expected to account for seven out of every ten deaths, compared with less than half today – from 47% of the total mortality burden to almost 70%. The situation is compounded by the unprecedented earthquakes and tsunamis of December 2004 which severely affected six of the Region’s 11 Member States (India, Indonesia, Maldives, Myanmar, Sri Lanka and Thailand). It caused an estimated 280,000 deaths, with thousands still missing. Nearly half a million people were injured and at least five million rendered homeless and/or deprived of adequate access to safe drinking water, sanitation, food or health services. Health infrastructures were severely damaged. The aftermath of this tragedy is posing serious public health management and logistical challenges.

The health situation in Region, however, is not entirely bleak. Over the past few decades, countries have made substantial efforts to reduce their population growth rates. The average annual population growth rate in the Region declined from 2.16% between 1975 and 1980 to an estimated 1.44% between 2000 and 2005. Life expectancies have risen and infant mortality rates have decreased. The Region is close to eliminating leprosy and eradicating poliomyelitis (Figure 4). It was certified free of guinea-worm disease in February 2000. Efforts for the prevention and control of TB, HIV/AIDS, malaria and other communicable diseases are being scaled up. With more resources, many more challenges can be met.

Healthcare facilities
Over the past few years, Member States in the Region have strengthened their primary health services considerably. The recognition that functional access is more important than physical access to the basic health needs of the people has encouraged the development of district health systems to provide maximum coverage. Millions of health personnel and volunteers have been trained and deployed in the Region’s rural areas. Noteworthy progress has been made in countries with social welfare-oriented policies.

The District Health System has proven to be a successful approach for health delivery in an integrated, cost-effective way in countries of the Region. The Mongar District in Bhutan, winner of the Sasakawa Health Prize in 1997, is an example. Further, community health development programmes such as the Integrated Health Package Programme (Po Pelayanan Terpadu or Posyandu) in Indonesia, the Village Health Volunteer Schemes and the integrated Basic Minimum Needs (BMN) programme in Thailand, and the Community Health Care Programme in Myanmar contributed significantly to health development.

Hospitals play an important role in healthcare in the Region and are considered the backbone of the health services (Figure 5). With the public health facilities already stretched to the limit, many have little option but to turn to the private sector for their needs even if it is beyond their means. In fact, out-of-pocket expenditure on healthcare has landed many poor families in dire catastrophic expenses. Some studies however also have shown that people generally prefer private healthcare facilities and there is little or no
difference between the costs of care in either public or private facilities, especially for paying services. The number of hospitals, especially in the private sector, has increased significantly during the last few decades. The growth has been facilitated by the shift in financing policy in healthcare. Currently, the most common for-profit private service providers in all countries are private practitioners. Therefore, private healthcare in the Region is also growing rapidly. In some cases, the growth in the health sector is more than what the national economy can handle. Private hospitals in India and Thailand are attracting patients from neighbouring countries and are also extending their services to other countries in the form of offshore activities. Globalization definitely presents further opportunities for growth.

Challenges
As eluded to earlier, the Region has made remarkable progress in health service development and control of diseases, particularly in recent years. This is true more so in the area of communicable diseases. Marked reductions have occurred in vaccine-preventable diseases, and morbidity associated with poor sanitation and hygiene is slowly declining. Overall, there has been an impressive reduction in infant and child mortality rates and improvement in the health status of the people in general.

However, infectious and parasitic diseases such as tuberculosis and malaria, perinatal conditions and respiratory infections still are the leading causes of morbidity in the Region (Figure 6). With the additional burden of noncommunicable diseases and road traffic injuries, countries in the Region face a triple burden: the burden of communicable and noncommunicable diseases, and the weak capacity of health systems.

In the context of communicable diseases, the challenges are to build on past successes, sustain the achievements made already, and prepare to face the emerging challenges. In order to lighten the burden of communicable diseases we not only need to further scale up the response to communicable diseases but also to improve our health systems in general. There is a need to address issues such as inadequate resources and emerging issues like globalization and socioeconomic changes.

It is impossible to extend public health services to the entire population through hospitals since they take up a disproportionately high share of resources. More investments need to be made on first-referral facilities and preventive and promotive care. Policy making and policy related budgeting is therefore required for systems that are most responsive to the prevailing needs and conditions.

The rapidly escalating costs of healthcare in both the private and public sectors seem to be influenced by use of high technology in areas of specialization and super specialization, and by hospitalization and extensive investigations. The main challenge is to curb costs. There is a need to provide care and cure. Apart from investing in public health, family medicine – with its orientation towards ambulatory or out-of-hospital care, preventive medicine and health maintenance, the selective way of diagnostic procedures and the rational use of drugs and therapeutics – may be a way of controlling costs while preserving and

There is a need to address issues such as inadequate resources and emerging issues like globalization and socioeconomic changes
expanding the quality of patient care.

Another challenge is how to address access and equity in healthcare. Appropriate healthcare reforms and systems development are urgently needed. In this context, public hospitals pose major challenges. Their configuration often reflects the practice of healthcare in a bygone era in many of the countries. Their incompatibility with present needs ranges from major problems, such as scarcity of operating theatres, to shortcomings such as the lack of power sockets for the ever-expanding amount of electronic equipment. The majority are also poorly designed to cater to the needs of the elderly. It is not only the physical structure that is difficult to change. The functions are also resistant to change. Given these constraints, it is not surprising that hospital reform is viewed with trepidation by some health policy makers.

Serious challenges persist in the development and management of human resources in many countries. In addition to a continuing shortage of nurses and midwives there are also imbalances in the mix of health personnel. Disparities in the geographical distribution of health personnel between urban and rural areas are stark. An emerging factor that further aggravates the situation is the increasing competition between the public and the private sectors.

In the area of essential healthcare interventions, though there has been rapid expansion in the past few decades, further improvement in the provision of safe water supply and sanitation, essential medical care including essential drugs, and essential obstetric care for pregnancy and delivery pose serious challenges. Reaching the un-reached is another area that merits serious attention.

**Conclusion**

The burden of communicable and noncommunicable diseases, and demographic changes, particularly the increase in the percentage of elderly people in the Region’s population are exerting serious pressure on health services in the countries. Health facilities everywhere are crowded and the need for long-term and chronic care is becoming increasingly evident.

Internationally agreed development goals contained in the United Nations Millennium Declaration, Agenda 21 and the plan of implementation of the Johannesburg Summit call for strengthened health services for all as a crucial measure to improving health, especially in the poorest countries of our Region. However, there is a disturbing trend to invest in expensive tertiary care which is beyond the reach of those who need the services most – the common man and the poor.

Therefore, in South-East Asia, concerted and sustained efforts are required to strike a balance between the primary healthcare approach and tertiary hospital-based care. It is in this context that it is important for hospitals, whether they are public or private, to have a mix of functions incorporating primary care, outpatient services and screening programmes and not be restricted to offering only inpatient care. Hospitals should be responsible and accountable.

In the face of a burgeoning private sector and increasing number of private hospitals in the Region, governments must establish clear guidelines and norms for the private sector. Consumers, especially the underprivileged, should be protected. It is also important that there is an appropriate public-private mix available.

Healthcare systems, therefore, need to be properly reoriented towards the provision of holistic, integrated and continuous healthcare. More attention needs to be paid to health promotion and protection rather than cures. There is an urgent need for Member States to provide health services beyond hospitals.

It is not merely more facilities that are needed, but facilities that are adequately equipped with human and material resources. – with health personnel who are caring and efficient; with equipment that works; and with drugs and vaccines that are effective. Only then can we hope to reach the cherished goal of health for all.

**Box 1 | Mongar Health Services Development Project**

The Mongar Health Services Development Project showed how one district in the mountainous kingdom could succeed in extending primary healthcare throughout the district. The project was implemented through several partners, both within and outside the health sector. Every member of the isolated district was targeted, with special focus on mothers and children in the community.

With guidance from district health and block development committees, outreach clinics were set up, health awareness and hygiene promoted, latrines constructed, referral systems developed and healthcare extended with the help of local volunteers.

The results were impressive. Immunization coverage reached 94%. Two thirds of households were able to access safe water and 90% were able to use sanitary latrines. More than two thirds of all pregnant women received antenatal care and 95% obtained two doses of tetanus toxoid. The project was replicated to extend primary healthcare to the entire country to achieve health for all.
Author
Dr Samlee Plianbangchang took over as the Regional Director of the South-East Asia Region of the World Health Organization (WHO) on 1 March 2004. Before being elected as Regional Director by the Member States in the Region, Dr Samlee Plianbangchang was a Senior Advisor on International Health in the Ministry of Public Health, Royal Thai Government. In 2001, the College of Public Health, Chulalongkorn University, appointed Dr Samlee as the Dean of the College and as the Chairman, Executive Committee on Ethics in Research of Health Sciences Group. He continued in these capacities until end-February 2004. During this period, he was also Adviser to the Minister of Public Health, Royal Thai Government. In addition, he was a Board Member of the Thai Health Promotion Foundation during 2000-2001, and a Member of the National Committee on Tobacco Control, Ministry of Public Health, Thailand, during 2000-2004.

Recognizing the rich and varied experience of Dr Samlee in the field of programme development and management, the Director-General of WHO appointed him as a Senior Analyst and Special Advisor in the area of Budget and Management Reforms at the World Health Organization Headquarters in Geneva, Switzerland, in 2001.

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Venue
All meetings and exhibition related to the 35th International Hospital Congress 2007 will be held in the COEX. It is conveniently located in the southeastern part of Seoul within one of the city’s major business districts. Transportation facilities nearby include Samseong subway station and the Korea City Air Terminal (KCAT), which operates nonstop shuttles to and from Incheon International Airport and Gimpo International Airport.

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THE NEED FOR COMMON VALUES, PRINCIPLES AND OBJECTIVES FOR HEALTH POLICY IN A CHANGING EUROPE

ARTICLE BY DR ILONA KICKBUSCH

Abstract

This paper examines the values debate in the realm of health and its applications to policy-making in Europe. It discusses the issue of health as a value in itself, as well as other values like equity, dignity, solidarity and diversity that are relevant to the European context. The paper continues by analysing the values common to the public health and health policy arenas as well as some of the applications for governance, including health targeting and evidence. It discusses participation and accountability as values, followed by questions for future debate and dialogue on this vast topic. Its key intention is to help initiate a systematic debate on European values in health.

A new focus and debate on ethics and values is occurring in the health field. After a decade of economic debate, professionals are beginning to think more critically about the values that drive health action. This debate is as relevant to the changing European context as it is to the resolution of global challenges. Do “European values on health” exist, and if so, how do they affect health policy-making – nationally, regionally and globally? Are they reflected in the European Constitution or in other documents? Are they clearly stated or do they constitute a subtext? Does consensus still need to be established, particularly after the recent expansion of the Union and its growing global role? Values take their most concrete expression in rights.

For Jurgen Habermas, the new European citizenship could be rooted in the notion of “constitutional patriotism” in which diverse cultural identity and practices coexist but do not define citizenship. According to Habermas, the nation-state gains its identity from “the praxis of citizens who actively exercise their civil rights.” It follows then that European citizenship should be rooted in its constitutional principles rather than its cultural orientations. Such principles guarantee citizens’ rights and freedoms in the multicultural European society. Constitutional patriotism would replace the ethnic nationalism that is still a key factor in many European nation states and promote a Europe that is “united in its diversity” (which is the motto of the Union as expressed in Article IV-1 of the Constitution).

Historically health has developed into a right of citizenship in European nation states as represented in the universality of access and solidarity in financing (despite very different approaches to organizing and financing health systems). The health discourse in Europe took its starting point with the enlightenment and has always been at the intersection of values assigned to two spheres: the public and the private, the personal and the political, the public good and individual rights. This historical dimension with its roots in a view of health as a means of empowerment for individual citizens and a responsibility of the state for the health of the public is critical to any discussion of European values in health and health policy. The right to health and medical care was and is an integral part of the claims to rights and citizenship of many of the social and political movements of the last 150 years. Women’s health rights remain to this day the most explicit example of this link.

“In modernity – so Foucault – the sharpest discourse on difference always takes its starting point from the body.” Major health differences exist within and between countries in the new expanded European Union and addressing them will be a challenge that goes beyond individual member states. Just as health played a major role in establishing citizenship, identity and allegiance at the level of the nation state, it could play a major role in the establishment of citizenship, identity and allegiance to the modern European Union (EU). Health is an area that very concretely affects people’s well-being and feelings of security. Indeed a strong commitment of the European Union to health could be seen as a concrete expression of the potential that lies in the EU’s commitment to well-being and social justice. But at present, health remains an area that member states are highly ambiguous about – with healthcare jealously guarded by the member states of the Union and public health kept weak within the Union’s responsibilities.

Also, there is not yet a strong citizen’s movement that advocates for a new approach to sharing access to health rights throughout the Union. This paper examines the values debate in the realm...
Values in health are ubiquitous. They frame European debates and shape evidence that informs health policy and goals.

of health and its applications to policymaking in Europe. It discusses the issue of health as a value in itself, as well as other values like equity, dignity, solidarity and diversity that are relevant to the European context. The paper continues by analysing the values common to the public health and health policy arenas as well as some of the applications for governance, including health targeting and evidence. It discusses participation and accountability as values, followed by questions for future debate and dialogue on this vast topic. Its key intention is to help initiate a systematic debate on European values in health. This is crucial not just for Europe itself but also for its role in relation to global developments.

The values debate in health: key dimensions

Values in health are ubiquitous. They frame European debates and shape evidence that informs health policy and goals. A discussion on the underlying values in health within a new context and framework is timely, as the success of public health in Europe has changed the very nature of modern societies. They have become health societies. Health has expanded into ever-wider realms of life and policy, and has become increasingly do-able (Figure 1). Health societies are defined by five major characteristics:

- a high life expectancy and ageing populations;
- an expansive health and medical care system;
- a rapidly growing private health market;
- health as a dominant theme in social and political discourse;
- health as a major personal goal in life.

Each of these five characteristics (and perhaps even more their synergies) presents a challenge to public health and changes its nature and the extent of its remit. As in the 19th and 20th centuries, the resolution that is adopted will define the progress of 21st century society. How will we treat the old? How will we pay for health? Who has a right to care? To what extent will we enhance our biological capabilities? How do we approach risk solidarity, generational solidarity or global solidarity? Or as Ulrich Beck would frame it “How do we want to live?” The answers to this debate will only be found in a European-wide debate involving a wide range of stakeholders and conducted over at least a decade with the aim of developing a new public health ethic within a European democratic public space.

Health as a value in itself

Health as an intrinsic value: an end not only a means. Health itself is often identified as a value. The World Health Organization’s (WHO) Task Force on Health in Development had as a key aim to achieve global recognition of the value of health in itself. Amartya Sen, the 1998 Nobel Laureate in economics, also advocated this position by emphasizing health, not only a means, but also as an end of political and societal activity, thereby reinforcing the intrinsic value of health. Various types of capabilities (such as the capability to avoid preventable morbidity and premature mortality, or to be literate and numerate) are considered both as ends in themselves, but they are also key to the achievement of other intrinsically valued ends, such as political freedoms and capability to participate in trade and production. Health and its social determinants, therefore, have both constitutive and instrumental value – they contribute to the capability of a person to live more freely, but they also complement one another.

In many countries, the commitment to a certain system of improving health is seen as a value in itself. The Canadian report Medicare: A Value Worth Keeping asserts, “Canada’s healthcare system is one of this country’s foremost social accomplishments, a core value that helps define our national identity.” Sorrell claims, “NHS functions in the United Kingdom not only as a source of medical treatment but as a prime medium of national solidarity and national identity.”

At this level, health and the health system as values are “part of the cultural fabric that allows people to engage each other with language, develop their institutions, maintain the social order necessary for survival and prosperity, play social roles, and assume personal identities.”

Health as a public good

The discussion of health as a global public good has also given new impetus to the discussion of health as a public good at other levels of governance. Public goods are non-excludable and are available in the public domain for all to enjoy. The public good concept implies that health cannot be reduced to a commodity and
needs political will and a “public push”. It must be supported by a governance infrastructure with public financing mechanisms. In this sense, health is also a public value. Public values are “concerned with State intervention to promote morally desirable ends.” Public values extend beyond both individual preferences and the private realm and, in terms of health, increasingly expand from regarding only medical care provision into including the realm of social determinants of health. A renaissance of Geoffrey Rose’s public health dictum is taking place at national and international levels. “The primary determinants of disease are mainly economic and social; therefore its remedies must also be economic and social.”

This concept forms the foundation of a new and broader public health field and expands it into a wide area of economic and social rights. The new debate on basing health policies on a health determinants approach also reflects this. (For example, see Box 4 “Swedish Public Health Policy: focusing on the determinants of health”) But the concept of health as a public good and a public value is clearly under threat both from economic developments, such as the growth of the private healthcare market, but also from social trends such as increasing individualization. Consequently, European societies must debate the values they assign to health: as a right of citizenship and empowerment, as a private product on the market or as an ultimate value.

Health as a human right
As inequities in health become increasingly obvious, the notion of health as a human right is gaining new support. The right to health was codified as a human right in the Declaration of Human Rights in 1948 and is stated in the constitution of the WHO. This raises the issue of the interface between European values and what has been termed universal values. Nigel Dower points out, “If citizens are increasingly motivated by global concerns then cosmopolitan goals enter domestic policy in that way and people can be effective global citizens by being effective globally oriented citizens of their own states.” In particular, this would imply a common notion of social justice and a system of international law where human rights, and in particular the right to health, constitute a legal claim. The right to health approach moves health policy-making into the arena of international legal entitlements. It is relevant to the EU in terms of access rights of third country nationals within Europe as well as the global social contract that is implicit in the acceptance of health as a human right.

Values in Health
Schools of Thought
As already stated, values are inherent in health policies, programmes and advocacy. Yet, these values in health are seldom explicit. Clarity on the values and schools of thought underlying the formulation of health goals and targets creates an understanding of the reasons for undertaking the initiative and also helps to determine appropriate strategies and scope of the programme. Alkire and Chen argue that a rights-based approach (“fulfilling our obligations so others are dignified”) or an equity approach (“achieving a fairer distribution of health capabilities”) differs from one that is utilitarian (“maximizing aggregate subjective happiness”) or humanitarian (“acting virtuously towards those in need”). Frequently, health advocates from various schools of thought do not clearly elucidate their platform in an attempt to keep the discussions more superficial, thereby appealing to a wider audience and generating more agreement.

Equity and Social Justice
From the very beginning of modernity, health has been at the centre of debates on inequity, initially within the context of the nation state and today as a key dimension of globalization. Health governance debates are predominantly about social justice. The value of equity commonly arises in relation to access, utilization or financing of health services and also in regards to health outcomes and health status. Two main forms of health equity can be identified: vertical equity (preferential treatment for those with greater health needs) and horizontal equity (equal treatment for equivalent needs). Published literature focuses more heavily on horizontal equity.

In the 1990s, new political and moral trends surfaced in the world that emphasized health and equity. John Rawls’ work on the universal principles of social justice as set forward in The Law of Peoples takes the issue of justice and fairness beyond states to peoples. Amartya Sen developed the “capabilities approach”, partly based on Aristotle’s theories, which asserts that health has a special and moral importance in society. As mentioned earlier, Sen values health intrinsically and maintains that different kinds of capabilities (such as the ability to participate actively in life) are regarded as both ends in themselves and means for the achievement of other ends (such as achieving good health). It is the expansion of these human capabilities that are the real freedoms of life and the ultimate end of public policy. David Held in turn stresses the need to keep the focus on “public goods” in relation to health, welfare and the environment including new global mechanisms to finance them.

Dignity
Another value commonly evoked in the general health debate is dignity. Immanuel Kant defined dignity as “an absolute inner worth [of a man] whereby he exacts the respect of all other rational beings in the world, can measure himself against each member of his species, and can esteem himself on a footing of equality with them.” In 1997, the Council of Europe adopted the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine. Article one states that Parties to the Convention “shall protect the dignity and identity of all human beings and guarantee everyone without discrimination, respect for integrity and other rights and fundamental freedom...” And Article two states, “The interests and welfare of human beings shall prevail over the sole interest of society or science.” The value of dignity is becoming increasingly important in relation to the ageing of European populations in terms of long-term care as well as death and dying. But it also plays a role at the global level. According to Richard Horton, “A goal for those concerned with global health might reasonably be to create a setting that foster the conscious awareness and expression of dignity.” Given the reports on AIDS patients in the developing world, mental health patients in many parts of Europe, older people throughout health
European societies have deeply held beliefs that the state has a responsibility for the health of its population. The existence of these beliefs implies an acceptance of policies that seek to enhance population health.

In a recent statement by Commissioner, population health efforts seek to enhance population health. 25 implies an acceptance of policies that seek to enhance population health. The existence of these beliefs implies a responsibility for the health of its population. Martin McKee claims, "European societies have deeply held beliefs that the state has a responsibility for the health of its population. Within a short time span of about 50 years, universal medical care has become a trademark of European welfare states. Martin McKee claims, "European societies have deeply held beliefs that the state has a responsibility for the health of its population. The existence of these beliefs implies an acceptance of policies that seek to enhance population health. Recent statements by Commissioner David Byrne support this notion. In a European of the future, "Everybody has easy and prompt access to affordable, high quality healthcare – whoever and wherever they are … people will have no trouble finding clear and reliable information on how to be in good health and about diseases and treatment options." Yet little is said about the mechanisms of solidarity needed to achieve these goals. How will the three solidarities that need to be developed and clarified interface? These three solidarities include: + the still existent but partly eroding national solidarity in health, + the European health solidarity through cooperation, redistribution of resources and granting of access to citizens throughout the Union, and + global health solidarity. Part of the debate about European values holds that the diversity of Europe itself constitutes a value to be upheld. This diversity, which is based in the political, cultural and religious inheritance of each country, is not adequately understood. Given the diversity of values across Europe, a key issue for further exploration is how beliefs in one country might influence the adoption of health policy developed elsewhere. 27 Within the EU the system of “open coordination” and the increasing number of policy networks on health28 that have emerged throughout the EU are contributing to the regular exchange of values. The European Regional Office of WHO has consistently attempted to gain a common language and approach to key values driving European health policy. So to some extent, the values reflected in the WHO European Health For All policy shed light on European values in health – but on the whole they have been developed with nation state stakeholders only – not with the broad involvement of European citizens. They include good governance, participation, solidarity, equity and human rights. 29

The Health For All toolbox provides policy makers with the effective means with which to apply these values (see Box 1). The tools for implementing Health For All values are divided into three categories: + sustaining and improving the ethical framework, + basing policy on observation, knowledge and expertise, and + improving decision-making. 30

Values, health and the European constitution

The European Constitution on values

The Preamble of the European Constitution emphasizes the need to draw “inspiration from the cultural, religious and humanist inheritance of Europe, the values of which, still present in its heritage, have embedded within the life of society the central role of the human person and his or her inviolable and inalienable rights, and respect for law.”

Article 2 sets forth the Union’s values. It states, “The Union is founded on the values of respect for dignity, liberty, democracy, equality, rule of law and respect for human rights. These values are common to the Member States in a society of pluralism, tolerance, justice, solidarity and nondiscrimination.”

Article 3 outlines the Union’s objectives: “The Union’s aim is to promote peace, its values and the well-being of its peoples …It shall combat social exclusion and discrimination, shall promote social justice and protection, equality between men and women, solidarity between generations and protection of children’s rights….It shall promote economic, social and territorial cohesion and solidarity among Member States.”

The European Constitution on health

The commitment to the well-being of citizens is seen as a core value of the European Union. Article 3 states, “The Union’s aim is to promote peace, its

Box 1 | Tools for implementation of WHO EURO’s Health For All values

Sustaining and improving the ethical framework:
• international treaties, covenants and other legal instruments ratified by countries
• priority-setting, for instance the Millennium Development Goals strategy with its core priority of fighting poverty
• consideration of the needs and expectations of citizens

Basing the policy on observation, knowledge and expertise:
• observation and monitoring of health and health determinants through permanent data collection and analyses
• assessment of health risks, health crisis watch and alert systems
• evaluation of the quality of health settings and units through sound systems of accreditation

Improving decision-making:
• analysis of the regional, national or local context
• health impact assessment (evaluation of the health consequences of societal choices)
• sound use of scientific knowledge (evidence-based policy)
values and the well-being of its peoples.” Health is not explicitly mentioned in this article but by applying the WHO’s definition of health, well-being includes health. WHO states, “Health is a state of complete physical, mental and social well-being, and not just the absence of disease.” The EU’s formal position on health is outlined in the following way in the European Constitution:

+ Article 16 includes the protection and improvement of human health as one area of supporting, coordinating or complementary action. It states:
  - “A high level of human health protection shall be ensured in the definition and implementation of all the Union’s policies and activities.”
  - “Action by the Union, which shall complement national policies, shall be directed towards improving public health, preventing human illness and diseases, and obviating sources of danger to physical and mental health. Such action shall cover the fight against the major health scourges, by promoting research into their causes, their transmission and their prevention, as well as health information and education.”
  - “The Union shall encourage cooperation between the Member States in the areas referred to in this Article and, if necessary, lend support to their action.”
  - “The Union and the Member States shall foster cooperation with third countries and the competent international organizations in the sphere of public health.”
  - “European laws or framework laws shall contribute to the achievement of the objectives referred to in this Article by establishing the following measures in order to meet common safety concerns.”
  - “European laws or framework laws may also establish incentive measures designed to protect and improve human health and to combat the major cross-border health scourges.”

+ Article II-31 discusses fair and just working conditions: “Every worker has the right to working conditions which respect his or her health, safety and dignity.”

+ Article II-35, which comments on healthcare, states, “Everyone has the right to access to preventive healthcare and the right to benefit from medical treatment under the conditions established by national laws and practices. A high level of human health protection shall be ensured in the definition and implementation of all Union policies and activities.”

+ Article III-132 is on consumer protection. “In order to promote the interests of consumers and to ensure a high level of consumer protection, the Union shall contribute to protecting the health, safety and economic interests of consumers, as well as to promoting their right to information, education and to organize themselves in order to safeguard their interests.”

### European citizenship and health

Two views dominate the discussion of European citizenship and health: one focuses on cultural identity and one on citizens’ rights. Both views have implications for a debate on European values and health, particularly since with European expansion significant differences in health status now exist within the EU.

### Citizenship as culture

European citizenship, as a new kind of citizenship, cannot derive its sole meaning from national citizenship. National identity, rights and responsibilities are important in their own right; yet European citizenship is more than the sum of its parts. Since citizenship and identity are closely linked, the development of a meaningful understanding of European citizenship is dependent on the creation of a European identity, which in turn implies the commitment to a common set of values. The notion of a European identity, however, seems problematic due to the linguistic, economic, ethnic and cultural heterogeneity of the EU. This diversity in Europe intensifies even further with the influx of third country nationals who now are a significant element of Europe. If the European identity is characterized by increasing heterogeneity, how should European citizenship be understood? Some argue that cultural citizenship is most appropriate in the European context. Distinct from the Habermasian notion of citizenship, this view stresses the centrality of culture for an adequate understanding of citizenship. It is closely aligned with multiculturalism and embraces cultural differences rather than promoting assimilation. Cultural citizenship makes cultural identity, not national identity or constitutional principles, the core of citizenship.

### Citizenship as rights

Concepts of citizenship relevant to understanding European values in health include: theoretical/soft citizenship, practical/strong citizenship, active citizenship and social citizenship. According to Ralf Dahrendorf, European citizenship lies between theoretical/soft citizenship (such as feeling part of a
According to Gosta Esping-Andersen social rights are granted based on citizenship, not performance in the market.\textsuperscript{35} Social services are available as a right, and therefore health is not a commodity.

| Box 3 | Disvalues |

**Stated Values**
- Health, ability to function
- Equity, fairness
- Access
- Compassion
- Participation
- Pride
- Diversity
- Efficiency
- Prevention

**Potential Antonyms**
- Illness, dysfunction?
- Inequity, unfairness?
- Barriers?
- Apathy?
- Exclusion?
- Shame?
- Uniformity?
- Inefficiency?
- Cure?

Applications to health policy
As can be seen from the above discussion, values in health policy are ambiguous and complicated. This is due in part to the fact that research on values in the health realm is very underdeveloped but also because values are inherently complex. And while it is not possible to encapsulate all values into one grand theory, some reflections can be made.

Values in health policy and public health
Different sets of values appear in discussions on healthcare versus discussions on public health. When referring to values in public health, the domain of the public (thus implying the role of the state) and the domain of health (as a more inclusive concept than healthcare) are present at the outset; action on determinants of health is relevant in this case. Concerning healthcare, the core issues that seem to emerge are access to healthcare and universality. Both discussions, whether about public health or healthcare, are driven by the notion of equity. The importance assigned to one over the other is not necessarily a reflection of values but of interest.

Values in health policy
Giacomini et al.\textsuperscript{36} conducted a very helpful analysis of values in Canadian health policy. Their research found that most stakeholders agree that values drive policy goals, decision-making and conduct, but disagree on which values matter most. Health professionals do not share a precise understanding of what values even are. Canadian health professionals call a variety of things “values”, including the health system (healthcare, prevention-oriented system), health states (health, well-being, quality of life), equity (fairness, social justice, equality), access (in conjunction with equity, that is universal accessibility), economic viability (cost-effectiveness, efficiency), and relationships (caring, inclusiveness, rights), among others.\textsuperscript{37}

Many seemingly objective things contain values. Evidence, for instance, is not free of values. The questions posed by a researcher, the transformation of answers into reported facts and the creation of an audience for research reports are all influenced by values.\textsuperscript{38} Terminology like “ought” or “should”, or words with positive/negative connotations (like health/mortality) are embedded with values. Additionally, what goods society views as “public” versus “private” is often a reflection of its values. “The privateness or publicness of a good is rarely an innate property. In most instances, it is a policy choice – our policy choice – to make a good more or less public or private.”\textsuperscript{39} The trend towards privatization of health and healthcare, for example, is one expression of larger neo-liberal values in modern societies. In the United States alone, the sales of the wellness industry have already reached approximately US$ 200 billion and it is set to achieve sales of US$ 1 trillion within 10 years, thus matching the healthcare industry.\textsuperscript{40}

Meanwhile the public health sector faces the crisis of a severe shortage of public funding at local, national and global levels. Discussions of values rarely include explicit talk of the negative side of values, or their antonyms, also called “disvalues”. Negative values are seldom called values despite the fact that they are equally normative and judgmental as their positive counterparts. (For a list of values and their potential antonyms, see Box 3.)\textsuperscript{41} In a case of competition between values, dissenting individuals do not typically advocate a disvalue but instead minimize a value’s importance or just omit mentioning it altogether. “Negative values language carries a stiff price: it not only judges but also has an accusatory tone that positive talk avoids.”\textsuperscript{42}

Values in public health
Public values, as described above, relate to state activity. A report by Staley of the King’s Fund\textsuperscript{43} in the United Kingdom suggests seven public health values:

- Equity reflects the understanding that everybody should get their fair share and that people should only have what is their “due”.
- Compassion and altruism reflects the importance we place on selflessness and putting others before oneself.
- Security reflects the importance we...
Box 4 | Swedish public health policy: focusing on determinants of health

The new Swedish Public Health Policy, adopted in 2003, aims to create equity in health. In the 1980s, there were large health inequalities in Sweden, and so a parliamentary commission was formed to create a strategy to create equal conditions for good health through a focus on the structural determinants of health. The main objectives include, but are not limited to, economic and social security, secure and favourable conditions during childhood and adolescence, participation and influence in society, healthier working life and increased physical activity.

Many ministries and governmental agencies had to become involved in the implementation of Swedish Health Policy due to its focus on determinants of health. Policy-makers in Sweden have concluded that economic policy (redistribution between income groups, age groups and regions), social welfare policy (accessibility of basic social services), labour policy (employment rate), secure growing up conditions (quality of schools and daycare), environmental policy, food and agricultural policy (food subsidies), and alcohol policy (reducing supply) are all integral to creating equity in health in Sweden.

Yet, in all of these sectors, there is political resistance to the foundations of the new Public Health Policy, in large part due to differences in values. Neo-liberal forces, for instance, counter redistributive economic policies and the accessibility of social services (through increased privatization). The Swedish National Institute of Health in Sweden asserts, “There is strong popular opinion for defending and developing the social welfare. On the other hand there are strong opposing forces, especially on the international level.”

Therefore, Ministers in Sweden are required to challenge the dominant neo-liberal paradigm in the world today. The underlying issue in this case is expressed by McMichael and Beaglehole, “Tension persists between the philosophy of neo-liberalism, emphasizing self-interest of market-based economies, and the philosophy of social justice that sees collective responsibility and benefit as the prime social goal. The practice of public health, with its underlying community and population perspective, sits more comfortably with the latter philosophy.”

place on controlling the future, minimizing risk and reducing anxiety.

+ Efficiency reflects a desire to get the most out of the resources available, always paying attention to the costs of actions and decisions.

+ Choice and autonomy reflects the freedom to act and make decisions on the basis of one’s own desires, in the absence of State-imposed restraints.

+ Health reflects a wide conception of what is ‘good’ for people in terms of how they treat their own bodies.

+ Democracy underpins the authority of the Government to act, on the understanding that policy implementation requires the consent of the people.

In analysing the above values, one can conclude that efficiency is not a value in itself but is a means to an end. Also, in this list the concept of health as a value re-emerges. The importance given to equity is reinforced, as it is listed first. And security and choice/autonomy, which are often conflicting, are both listed.

Democracy is a value that can be created through public participation in debates around public values. Involving the public brings legitimacy, limits conflict and encourages consideration of collective concerns. It may also help policy-makers identify and prioritize the relevant competing values so that they are better able to act on behalf of their constituents. “It is possible to imagine that public consultation could serve as such a statement of preferences. QALY [Quality Adjusted Life Year] estimates, for example, require some understanding of the relative value that individuals place on various combinations of disease/disability states. One can think of public consultation as a way of providing this sort of information.”

Values and health governance

Goverance and health targeting

Values, unlike goals, do not necessitate particular policies. Yet values do serve a range of other objectives. Three key aspects of values include the developmental (i.e., creating, cultivating, changing values), philosophical (i.e., apprehending possible values, critically interpreting values), and discursive (i.e., conversing, deliberating, and persuading). This explains why, when discussing target setting in health, individuals involved so frequently mention the importance of the process of target setting, which serves to clarify and reiterate common concepts, approaches, values and learning. “Developing targets – at whatever level of governance from international to organizational – provides a ‘common context of interpretation’ and broadens the legitimacy base for critical choices.”

In this way, values are both a means and an end, which goes back to the aforementioned capabilities approach by Sen. Values in health policy can be viewed on a continuum. Ultimate values, or those that are moral and abstract and do not direct activities clearly (such as equality or health for all) are on end, and instrumental values (such as universal access to healthcare) are on the other. The values that lie in between “operationalize” the ultimate and instrumental values. (See Figure 2.)

Being involved in setting health targets as a broad inclusion process creates a political space to actually consider the values along the continuum between the ultimate values on one end and the instrumental values on the other. Policy makers involved with instrumental values make choices and take specific action. They deal less with what matters and more with what must be done, such as in healthcare financing. In comparing the policy processes in Germany and Sweden, one can see that policy makers in Europe deal with both ultimate and instrumental values. There are little to no debates in Germany about the ultimate, or fundamental values, except in extremely hot debates over party politics. Yet, as described above, the Swedish Public Health Policy is first and foremost focused on an ultimate value – that is, achieving equity in health.

Values and evidence

Translating the evidence or facts into policy requires also value trade-offs (not to mention that the evidence itself is not free of values). Policy decisions involve giving more weight to one value over
Prioritizing public values can give rise to political controversies in public health because values are often deeply held and individuals have conflicting beliefs on what values are most important.

No hierarchy of values exists, and so individuals will trade-off values in a way that reflects their priorities. Values basically reflect how one thinks the world should be organized, and this becomes particularly important when final evidence is not available. The everlasting debate between equity and efficiency is one such example. Prioritizing public values can give rise to political controversies in public health because values are often deeply held and individuals have conflicting beliefs on what values are most important. Often, policy-makers hide behind technical evidence because tough decisions that might seem to counteract supposedly held (or really held) values might need to be explained politically.

In order to achieve support, “health programmes also must build consensus among a diverse constituency of resource-holders as to the central value of the initiative.”

One example is the fact that the majority of policy makers continue to frame health in terms of expenditure and consumption of healthcare services. Very few institutions, organizations and funding programmes clearly differentiate between programmes that focus on health and its determinants and those that focus on healthcare. One potential reason for this gap, among many others, is that little Cochrane-type evidence exists on what are successful interventions to address the determinants. The historical and common sense evidence, of course, abounds but is not utilized. As Kimmo Leppo so eloquently stated, “One of the great paradoxes in the history of health policy is that, despite all the evidence and understanding that has accrued about determinants of health and the means available to tackle them, the national and international policy arenas are filled with something quite different.” It is in exactly this area that a new type of European debate spearheaded jointly by the EU and the WHO Regional Office should move forward. The WHO has now created a new Commission on social determinants and health chaired by one of the leading academics in Europe. Herein lies the possibility of developing a new health policy model based on European values and bringing it into the global debate as a guide for health development.

**Fairness as an instrumental policy value**

Health inequities exist due to unequal access to resources, including education, healthcare, job security and clean air and water. Inequalities that are unfair, or arise from social injustices, and are also avoidable are considered inequities. Fairness is used in this context to describe the unacceptable disparities in health (See Figure 3).

Benchmarks published in the WHO Bulletin contain criteria for evaluating specific aspects of fairness of health reform proposals. Relevant in a developing country context, the benchmarks include analysis of:

- intersectoral public health;
- financial barriers to equitable access;
- non-financial barriers to access;
- comprehensiveness of benefits and tiering;
- equitable financing;
- efficacy, efficiency and quality of care;
- administrative efficiency;

![Diagram of Values Reasoning in Policy Analysis](image-url)
too does the role of the citizen in health. The citizen becomes an individual who takes care of her own health, as a consumer in the health market place, as a patient in the healthcare system, as a voter on healthcare issues, and as a social actor together with others in nongovernmental organizations (NGOs) and social movements. As this critical role of the citizen/consumer/patient gains in importance, participation and accountability become key values in health governance.

Future European dialogue on health and values
In the 21st century, the increasing overlap between government, civil society and the market pervades all debates on new social contract between the state and the citizen are issue that commonly surface. And indeed this is the case here. The values debate in health reflects this trend, a natural evolution in modern society. In response to this, Europe needs to widen the health debate with many stakeholders about the role of health and the values of health in the European Union. Health can become a positive force of European citizenship. The expansion of health into areas other than the health sector implies that there needs to be a new and broader dialogue at the European level. It is not enough to have agreement on values with regard to health within the health sector alone. This paper brings to light areas for further exploration and discussion in the values debate (see Box 5). A key ambiguity in this assessment seems to be the difference in what professionals consider a value versus an interest. Perhaps this could be an area of future review. A comparative value study of European health documents as undertaken by the Canadians would probably reveal, just as the Canadian study did, that European health policy makers call a great variety of things “values”. Also, a process to develop European health goals and targets would create the political space to discuss the common European core and also the key values relevant to European public health policy. Europe cannot escape the debate that builds on moral philosophy as in efforts to build a healthy Europe and healthier world. Yet it is essential to find ways to instrumentalize the values that

Role of the citizen
As health expands in modern societies, so democratic accountability and empowerment;
+ patient and provider autonomy.

These benchmarks to not attempt to provide a universal scale of fairness across health systems but instead emphasize the need to be context-specific. They are intended to be supplementary to other efforts of monitoring equity in health systems.

Participation and accountability as Values
Do-ability and accountability
Public health is about collective efforts. This is important because, as Europe becomes increasingly interdependent, there is an expansion of the territory of health into an increasing array of personal and political spaces and a concurrent expansion of the do-ability of health. This do-ability raises the issue of responsibility and accountability. Because health is do-able, whose responsibility is it to promote and provide it? Who is accountable for the individuals lacking access to health and health services?

Knowledge and power in contemporary societies are so widely distributed that cooperation becomes “a new categorical imperative.” It follows that accountability needs extend horizontally, not just vertically. This is expressed, for instance, through the Verona Benchmarks, which relate best practice to partnership building.

Role of the citizen
As health expands in modern societies, so

Box 5 | Questions for further debate in Europe

- How are values manifested in European health policy?
- Does it help to make these values explicit?
- Whose values matter?
- How can policy makers take public values into account? Is this possible given the diversity in the EU?
- How are values manifested in technical goals?
- Are there “priority values” by which European policy makers should follow in policy making and target setting?
- If evidence is not value free, what does that mean for evidence-based policy making?
- How are values manifested in the implementation process of target setting?
- How can conflicts of value prioritization in target setting be resolved?
- How does the distinction of “old” versus “new” Europe impact the values discussion?
- What kind of frameworks can be constructed to help guide policy making and target setting?
- What are relevant mechanisms through which to implement health values in Europe?
come to the fore and make them reference points. This means taking values out of the realm of moral speculation and putting them into the realm of rights at all levels of governance.

The key complexity is that in an interdependent world no national approach will be sufficient. Equity, solidarity, universality and dignity will need to be matched at European and at the global level. Indeed what is needed is a new global social contract. Elements of this are under way as the rich states examine their approach to debt relief, trade and development policies. But it will be crucial that European citizens themselves engage in this debate (see Box 5: Questions for further debate in Europe).

**Whose values matter?**

How can policy makers take public values into account? Is this possible given the diversity in the EU? How are values manifested in technical goals? Are there “priority values” by which European policy makers should follow in policy making and target setting?

If evidence is not value free, what does that mean for evidence-based policy making? How are values manifested in the implementation process of target setting?

Europe has the potential to be an international leader in shaping policies that promote health through the global acceptance of responsibility. Health, first and foremost, needs to be at the centre of EU policymaking, especially in relation to citizens’ needs and rights. The social Europe of the future requires a focus on European identity in which health is inextricably linked to the concept of modern European citizenship. Such a concept of citizenship also accepts a commitment to global solidarity. Europe needs to apply the lessons learned in the historical development of public health in Europe to its global responsibilities. □

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Hospitable” and “hospital” have common etymological roots, but not until recently have they been used side-by-side in architectural writing to describe healthcare facilities. This juxtaposition, which would have been perceived as quasi inappropriate a few decades ago, now refers to what is certainly one of the most important trends in hospital architecture. Architects and engineers have been devoting their creative talents to integrating the concept of hospitality in hospitals and other healthcare facilities. In some cases, one could argue that they are striving to move their creative works a few steps up Maslow’s hierarchy of needs, echoing our narcissistic and individualistic western world and responding in some cases more to the marketing imperatives of a consumer-driven society in which healthcare is considered a commodity rather than to humanistic concerns.

Patients and staff are demanding more than the healing machine they have been accustomed to. Patients want to be treated “holistically”, in their totality and not simply as “cases”. Medical and allied health staff certainly demand an efficient and efficacious workplace – but also a pleasant, comfortable and convivial one. This does not mean, however, that designers have neglected their more traditional preoccupations with efficiency, flexibility, ecology and aesthetics.

Roger S Ulrich’s seminal research in the 1980s provided a sound, scientific basis for what was up to that point intuitive and empirical, i.e. if a pleasant and comfortable environment can reduce stress and provide a sense of well-being, could it not also enhance our self-healing process? Ulrich eventually identified three factors that contribute to what he calls “supportive design”:

- control and privacy;
- social support;
- access to nature and other positive distractions.

Designers can certainly create environments that meet these requirements, but to provide a truly patient-centred approach to healthcare, a whole caring and compassionate culture has to permeate the institution.

For the purposes of this article, these general trends will be briefly reviewed under four headings:

- urban integration and public image;
- structure and form;
- flexibility and adaptability;
- sustainability.

Urban integration and public image

Closed off for centuries behind high fences or relegated to the city’s fringes, today’s hospital wants to be an integral part of the urban fabric in the same way as schools, city halls, libraries and courthouses. It is a place for not only caring and curing, but also for informing and educating. To fulfill this role, the hospital is open to the city and in some cases is an extension of it. Public spaces and interior streets within the hospital, sometimes with commercial facilities, act as an extension of the neighbourhood and its streets. Some have seen this trend as the “malling” of the hospital.

Gardens and courtyards around the hospital prolong the urban landscape and serve as mitigating spaces between the city and the hospital’s protected environment while providing additional amenities to the citizenry.

Hospitality also means a generous and cordial welcome: openness and transparency become important features. Access routes are clearly marked and segregated to avoid conflicts between emergency services and patients’ and visitors’ traffic. Sometimes, landmarks visible from a distance, such as towers, are used to mark the location of the hospital in the city.

The hospital is a small city, with its own internal network of avenues, streets and back alleys. Services are organized along and between these arteries as in neighbourhoods. To be understood and easily negotiated, that network, like the city, has to be legible. The hospital needs a centre, a point of reference so that when you get there, there is a “there” there, to paraphrase Gertrude Stein’s famous saying about Hollywood. Architects are using various devices to create this “there” and to initiate its circulatory hierarchy. Atria and large interior streets are among the most common ones. Older hospitals are usually unintelligible,
The hospital is a small city, with its own internal network of avenues, streets and back alleys. Services are organized along and between these arteries as in neighbourhoods illegible because haphazard accretions over time have created a maze that no way-finding system can correct.

Traffic within the hospital is also segregated to promote efficiency and protect patients’ privacy. The old notion of “clean” and “soiled” has disappeared: today, horizontal and vertical circulations are segregated on the basis of routes for outpatients and visitors and routes for hospitalized patients and supply distribution. In the latter case, delivery systems are sometimes automated and use dedicated corridors and elevators.

This preoccupation with legibility is not foreign to the concept of the hospitable hospital. On the contrary, hierarchy and segregation create clear circulation patterns that contribute to the patient’s and family’s comfort by reducing stress and protecting privacy, not to mention the light and delight that atria and interior streets bring.

Structure and form

Over the past decade, three major factors have been shaping the contemporary hospital: the introduction of public spaces within the hospital, the importance accorded to natural light, and new medical practices. The combined effect of these three factors has introduced a horizontal and fragmented approach to hospital design, a radical departure from the most common hospital morphology of the 1970s and ‘80s, the tower-on-a-podium concept or the “matchbox on the muffin”, as it is sometimes called.

The hospital is being “unbundled”. Services are grouped together in separate blocks according to their functional and clinical affinities: the diagnostic and treatment block, the ambulatory care block, the support services block. Inpatient units are no longer on top of the podium that previously housed all these services: they slide to the side and are tied horizontally with the other blocks. Interior streets and vast atria link these blocks together. Blocks are narrow and interspersed with courtyards and gardens bringing in a maximum of daylight and diversion to patients, staff and visitors and facilitating their orientation. This approach to design responds to the mostly European concept of access to daylight as a right, not a privilege. With this unbundling or fragmentation, blocks are free to adopt the shape, structural frame, engineering systems and code requirements that are the most appropriate to their functions, a freedom that the tower-on-a-podium concept cannot provide.

Changing medical practices and a greater emphasis on patient-centred care, however, have introduced a new mutation in this fragmentation process. To better serve their patients and provide a one stop-shopping approach to care, various modalities, such as ambulatory care, diagnosis and treatment and inpatient care, are grouped together around a certain clientele, such as mental-health patients or mother and child, pathologies such as cancer, or specific organs or physiological systems. To give a physical expression to this new clinical approach, services are now partially decentralized and dispersed. For example, in the Hôpital de Nevers in France, the cardiac care programme brings together on one floor inpatient beds, medical daycare, some intensive care beds, catheterization laboratories and a small surgical suite. The epitome of this satellization is the new University Hospital in Trondheim, Norway, where each clinical programme occupies its own building with its own separate entrance, maintaining only tenuous physical links with some centralized support services.

Horizontality is not always possible, particularly for hospitals located on dense town centre sites. But even then, town centre hospitals like the University Medical Centre in Groningen (The Netherlands) and the Princess Margaret Hospital in Toronto (Canada) still provide all the amenities associated with a hospitable environment.

Flexibility and adaptability

Flexibility has always been an elusive and frustrating goal in hospital design. Hospitals are heavily serviced and built to last, and yet they must constantly adapt to changing needs arising mainly from technological development and new medical practices. Flexibility is related to the ability to change internally and to grow externally, and to replace parts that have become obsolete. Adaptability refers to versatility, to the possibility of using the same space for multiple functions.

Over the years, many solutions have been used to resolve the issue of flexibility. The new horizontality adds another weapon, so to speak, to the architectural arsenal. When the hospital is fragmented into separate blocks, the blocks can grow at their own pace and can eventually be fully or partially replaced. Growth and change is planned from the very beginning. Services most likely to grow are identified at the programming stage and future growth is planned either by allowing space on the side for expansion or internally by providing “soft space”, space that is easily displaced, located next to services most likely to expand. Vertical expansion is also possible in the tower-on-a-podium concept, but is seldom used as it is associated with numerous problems.

In the 1970s, the interstitial space hospital was conceived as a way to provide that ever elusive complete flexibility, an “equipotentiality” that would allow any function to be located anywhere within the long-span structural frame by tapping into a service backbone located within the interstitial floor. This approach found its purest expression in the McMaster Health Centre in Hamilton, designed by Zeidler Roberts Partnership Architects of Toronto (Canada).

Based on the misrepresentation that their initial construction costs were exorbitant, a misrepresentation that still circulates today, although it should have been put to rest a long time ago by a Canadian study, full interstitial space hospitals are seldom seen today: interstitial floors are used selectively, primarily over some heavily serviced diagnostic and treatment services. The principles on which they were based are still espoused today, however, by some respected companies that specialize in healthcare design. Briefly, the strategy is to separate the permanent from the temporary and to create a kind of universal framework that is irrigated by a
fixed backbone of mechanical, electrical and communication systems and a prime vertical and horizontal circulation network. Adaptable is another basic tenet of contemporary design. This versatility is usually achieved through modularity and universality: patient rooms that can adapt to different levels of care; multipurpose exam consultation rooms and offices; modular clinics; operating rooms that can be adapted for various procedures; identical medical surgical units; and so on.

Sustainability
Hospitals have a voracious appetite for energy, an appetite that architects and engineers have successfully attempted to mitigate for years, but their concern for energy consumption has embraced some much broader horizons with the introduction of the concepts of “sustainable development” and “green building”. LEED (Leadership in Energy and Environmental Design) certification has become a benchmark for sustainability in North America. This point system is designed to encourage owners to add sustainable features in the design of their facilities. It touches all aspects of the design, from site to materials to design innovations. To incorporate these features in healthcare facilities, however, is no small challenge as they are complex building types with highly sophisticated mechanical and electrical systems. Think, for example, of the requirements for high rates of air changes to control infection; on the other hand, reliance on daylight is perfectly in tune with “hospitalable” design. And for once, capital and operating budgets will be considered holistically. These are just a few of the projects that have received LEED certification so far, but there is no doubt that design will be greatly affected by this newcomer.

Conclusion
This brief overview of current trends in healthcare architecture is based on facilities from North America and Europe. These trends, however, are going global as the approach to healthcare as a commodity, a view promoted by some international organizations and private insurance providers, migrates to other continents, particularly to countries with an underdeveloped public system. Some countries in the Far East, for example, are building hospitals that are perfectly in keeping with western standards to welcome “medical tourism”14. This migration towards the top of Maslow’s hierarchy of needs does not augur well for people still at the bottom, concerned with mere survival.

Author
Martin Fiset is an architect with more than 30 years of experience in healthcare facilities planning and design. He has worked as a consultant, design architect and project manager on numerous projects across Canada and the United States and abroad. Since starting his career in 1970, he has prepared master plans, functional programmes and architectural concepts for numerous healthcare facilities, ranging from small community hospitals to large teaching medical centres, in Ontario and Alberta in Canada; in Boston, Washington DC and Baltimore in the USA; and in Egypt, Germany, Saudi Arabia, Argentina, Algeria, India and the Bahamas.

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CONTINUING PROFESSIONAL DEVELOPMENT: A NORTHERN PERSPECTIVE

ARTICLE BY DR IAN STARKE, MD, MSC, FRCP (LOND.), FRCP (EDIN.)

Abstract

CONTINUING PROFESSIONAL DEVELOPMENT (CPD) IS OF THE GREATEST IMPORTANCE IN MAINTAINING A DOCTOR’S FITNESS TO PRACTICE, IN SUPPORTING CHANGES IN PRACTICE AND IN DEVELOPING NEW PROFESSIONAL ROLES. CPD FORMS A KEY ELEMENT IN THE REVALIDATION PROCESSES OF MOST COUNTRIES. IT IS THEREFORE NECESSARY THAT THE QUALITY OF CPD EVENTS AND MATERIALS IS ASSURED, AND THAT THE EFFECTIVENESS OF CPD IN MAINTAINING GOOD PROFESSIONAL PRACTICE CAN BE DEMONSTRATED. INTERNATIONAL RECOGNITION OF CPD ACTIVITY WILL BE FACILITATED AS QUALITY AND EFFECTIVENESS ARE FURTHER DEVELOPED.

Continuing Medical Education (CME), as applied to the medical profession, is a process whereby doctors remain up to date and fit to practice. It addresses mainly knowledge and skills, whereas Continuing Professional Development (CPD) is broader than CME and includes attitudes and behaviours, and should address all aspects of a doctor’s professional life.

The Academy of Medical Royal Colleges in the United Kingdom defines CPD as: “A continuing process, outside formal undergraduate and postgraduate training, that allows individual doctors to maintain and improve standards of medical practice through the development of knowledge, skills, attitudes and behaviour. In addition CPD should also support specific changes in practice.”

Ideally, CPD provides a systematic and coherent approach to education, which identifies learning needs and meets those needs through didactic teaching, reflective practice, audit, portfolio development and other methods. Effective CPD should promote a culture of curiosity and lifelong learning.

The outcome of successful participation in CPD will be the delivery of healthcare that meets the requirements for safe (threshold) standards of practice, whilst seeking to attain the highest quality (aspirational) standards. These standards apply to all the roles of doctors that directly or indirectly affect the quality of healthcare, including teaching, research and management.

Relationships with regulatory authorities

The United States, Canada, the United Kingdom and the other countries of Europe have different ways of ensuring that doctors remain fit to practice, and the regulatory authorities in each country differ in the detail of their requirements. However, all require some form of participation in CME or CPD as part of this process. Participation in CPD may or may not be mandatory in itself, but demonstration of CME/CPD activity is generally required for a continued licence to practice.

In the United Kingdom the General Medical Council (GMC) is responsible for revalidation and re-licensing of doctors, and has issued guidance on the seven domains in which evidence of fitness to practice is sought. These are:

- good clinical care;
- maintaining good medical practice;
- relationships with patients;
- working with colleagues;
- teaching and training;
- probity;
- health.

The requirement for revalidation may be summarized as the regular demonstration by doctors that they remain up to date and fit to practice medicine, and that they have been practising in line with the principles of “Good Medical Practice”.

The GMC has also issued guidance on CPD which emphasizes:

- the importance of continued education in all of the professional roles that a doctor undertakes;
- the role of professional organizations in the setting of standards of best practice for doctors and the setting of standards for CPD;
- the involvement of patients and the public in the planning, standard setting and monitoring of CPD.

It follows that, to be effective for revalidation purposes CPD must be:

- able to meet needs in all domains, both clinical and non-clinical, and therefore should cover a wide spectrum of knowledge, skills, attitudes and behaviours;
- available to all practising doctors following completion of postgraduate training;
- accessible and timely to meet the needs of Personal Development Plans, without undue financial or other constraints from employers;
- of high quality, based on a robust approvals process and systematic feedback to providers;
Management in practice: CPD

- verifiable through audit or other methods;
- of demonstrable effectiveness through the demonstration of participant satisfaction, change in knowledge and change in practice;
- seen as robust and effective by public and politicians through transparency of structure, process and outcome.

CPD/CME credit systems and quality assurance

In most countries a range of educational activities attract CME/CPD points, and most frequently one point equates to one hour’s activity. A common target is 50 points per year, but this is not universal. The categories of “points” and the balance between categories that is required vary widely. However, it is acknowledged that different people learn in different ways, and that it is important to provide a corresponding range of educational opportunities.

Activities, events or educational materials are approved or accredited for CPD/CME by a designated approving or accrediting body. Again, there is wide variation in the relationship between the CPD accrediting authorities and the national regulatory authorities and governments. The accrediting body should be an expert organization with an understanding of educational methods and with access to specialist advice regarding the content and quality of educational events.

The accrediting body may accredit providers of CPD materials, or may approve individual events and products. There are advantages and disadvantages to both approaches, but the quality criteria expected are broadly similar between different countries and systems. Commercial or other bias, or conflict of interest, is strongly discouraged and an event or product which shows evidence of this is very unlikely to be approved.

Other key elements of quality assurance are:
- that the educational content is relevant to the practice of doctors;
- that the learning objectives are explicitly defined, clearly stated and appropriate for the target audience;
- that the educational methods used will achieve those objectives;
- that those delivering the event or product have the expertise to achieve the stated learning objectives;
- that there is a method of feedback to the provider to enable quality improvement to take place over time.

Effectiveness of CPD/CME

Not only do public and patients have a right to expect that their doctors will be up to date and fit to practice but, in publicly funded healthcare systems, the public have a legitimate interest in knowing that their contributions are being used effectively.

The effectiveness of CPD/CME may be assessed simplistically by recording the participation of the doctor in the activity and by evaluating the doctor’s own satisfaction with the activity. However, there is also a need to demonstrate learning and, if possible, a change in behaviour or reinforcement of good practice. Improvement in patient outcome is clearly the ultimate goal of CPD activity, but with the wide range of influences on outcomes it is very difficult to attribute change directly to CPD/CME.

Personal satisfaction of the doctor with the educational experience may be established using recognized feedback mechanisms, and feedback should be used to improve the future educational materials from that provider. Demonstration of change in knowledge may be achieved by including objective self-assessment as an integral part of educational events, while change in attitudes and behaviour may be assessed through annual appraisal.

Change in a doctor’s behaviour may also be assessed by using:
- multisource feedback (360° assessment);
- feedback from patients through patient satisfaction questionnaires;
- feedback from the recipients of teaching activities.

There are responsibilities of learner, provider and accrediting body in relation to CPD. In order to improve the educational effectiveness of CPD activity the learner should:
- set learning goals based on needs assessment;
- select targeted educational activities
- participate in learning activities that have clear learning objectives;
- choose activities that are interactive rather than didactic;
- choose activities that will permit a cycle of Learn – Practice – Learn.

The provider should:
- Provide the doctor with an opportunity to reflect upon present and desired levels of performance;
- Facilitate interaction and communication between participants;
- design activities with the Learn – Practice – Learn model in mind.

The accrediting or approving body should:
- ensure compliance with the quality criteria set out above;
- recognize and support those educational activities which demonstrate recognition of the responsibilities of the provider and learner;
- demonstrate fairness, validity, innovation, honesty and consistency in accreditation practices;
- promote continuous quality improvement of the accreditation process as well as the education systems it supports;
- ensure there is no commercial bias in the activity.

International Reciprocity of CPD/CME credits

There is increasing movement of doctors round the world, and increasing importance of national and international specialist societies and other organisations in driving medical progress and disseminating knowledge. It is therefore increasingly important to develop agreement on international standards for CPD/CME events that will allow doctors to...
accumulate quality CPD/CME credits when they participate in events outside their home country. Some progress is being made to this end, and a reciprocal agreement exists between Europe and the United States. However, further work is needed to ensure that the quality standards and the approval or accreditation systems are equally robust and effective in the countries participating.

One area where this is particularly difficult is in web-based learning, where it is more difficult to ensure continued quality of an event over time. Web-based educational materials need to have at least the same quality standards applied to them as do events in real time. Some additional criteria might include:

- feedback from the user integral to the completion of the learning exercise;
- a requirement for evidence of interactivity between user and the educational material;
- feedback to the user available to improve his or her performance;
- a valid assessment of learning included as an integral part of the educational package;
- the assessment of learning and any “pass rate” should of a standard appropriate for CPD/CME at the level of the designated target audience.

Conclusions

Continuing Professional Development in medicine is assuming increasing importance worldwide as most countries now recognize that there needs to be a system in place by which doctors keep up to date and fit to practice, and are supported in their professional development. The importance of defining quality standards for CPD and the need to demonstrate its effectiveness are increasingly recognized. At the same time there needs to be a steady move towards international recognition of CPD activity, which should be based on common quality standards and demonstration of effectiveness.

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CONTINUING PROFESSIONAL DEVELOPMENT: A SOUTHERN PERSPECTIVE

ARTICLE BY DR SAMSON NDEGE

Abstract

ONE OF THE CHALLENGES OF CONTINUING PROFESSIONAL DEVELOPMENT (CPD) IS TO ENSURE THAT MEMBERS OF THE MEDICAL PROFESSION MAINTAIN AND IMPROVE THE COMPETENCIES IN MEDICAL PRACTICE. CPD IS AN EVOLVING SYSTEM AND DIFFERENT COUNTRIES IN AFRICA ARE AT DIFFERENT LEVELS OF DEVELOPMENT. THIS ARTICLE FOCUSES ON THE DEVELOPMENTS AND CHALLENGES OF CPD AMONG MEDICAL AND DENTAL PRACTITIONERS IN AFRICA.

Continuing Professional Development (CPD) is defined as a "continuing process, outside formal undergraduate and postgraduate training, that enables a medical or dental practitioner to maintain and improve standards of medical practice and care through training and development of knowledge, skills, ethical attitudes and behaviour". The broader concept of CPD supercedes Continuing Medical Education (CME), which describes continuing education in the field of knowledge and skills of medical practice.

The purpose of CPD is to improve patient care and simultaneously ensure that members of the medical profession maintain and improve the competencies inherent in medical practice that cover wider domains of professionalism (e.g. medical, managerial, social and personal subjects) needed for high quality professional performance. In CPD, the basic assumption is that the profession itself bears a major responsibility, with medical associations and other professional organizations functioning as major initiators, providers and promoters in many countries.

In certain countries, major institutions provide CPD; some are privately run on a commercial basis, illustrating that education marketed as a purchasable commodity is growing. Others are government-run and often provide systematic specialists (postgraduate) training in addition to CPD courses. National medical councils or associations are yet another model for the provision and development of CPD.

Opportunities to benefit from CPD on a day to day basis depend to a large extent on the working environment. For instance, a thriving clinical research environment with ample resources and access to international workshops and conferences differs from working in a rural area. Information technology and the concept of distance learning can remedy some of the handicaps in these rural settings.

CPD is an evolving system and different countries in Africa are at different levels of development. This article focuses on the developments and challenges of CPD among medical and dental practitioners in Africa.

Developments

In many African countries, the human resource development policy provides for the establishment of mechanisms that ensure relevant continuing education and supportive supervision of all health workers. However, the approach to CPD varies from country to country.

In South Africa, it became mandatory from 1999 for all doctors to show proof of CPD participation to the Health Professions Council of South Africa (HPCSA) for them to be retained in the Council’s register. CPD is categorized into organizational (seminars, workshops and conferences), small groups and individual activities with varying credit points. The country has a well defined CPD structure with an Accreditors Forum and a clear accreditation process. Recent advances include the introduction of electronic application procedures for CPD activities for both providers and accreditors.

In Uganda, CPD is obligatory under the Uganda Medical and Dental Practitioners Council (UMDPC) Statute of 1996. The Statute provides that no medical or dental practitioner would remain in the register unless he/she undergoes minimum continuing education prescribed and organized by the Council. However, the Council can delegate this role to professional associations. At the national level, CPD is coordinated by a national steering committee (NSC) and is supported by the government. The NSC secretariat is housed at the Department of Human Resource Development, Ministry of Health (MoH). There is a clear CPD administrative structure that is well coordinated from the national level through to the district.

Tanzania’s CPD programme started formally in 1981 but was mainly donor-driven. Currently, CPD is not mandatory but is included in the national health policy. The programme is decentralized into zonal continuing education centres coordinated by the director of Human Resource Development, MoH. The decentralization aims at making districts and regions participate actively in CPD activities. There exist national CPD...
Law and jurisdiction alone cannot regulate CPD. There is a need for motivation from the perspective of the individual doctor in order to appreciate the benefits from CPD.

guidelines that have been developed to assist planners and trainers in implementation. There are initiatives to put in place management, information and resource support systems coupled with lobbying and proactive marketing of CPD among stakeholders.

In Zimbabwe, CPD has been recognized as a life-long ethical responsibility for practitioners and the Medical and Dental Practitioners Council of Zimbabwe (MDPCZ) with support from professional associations has developed a draft CPD proposal. The proposal seeks to address the establishment of CPD structures and accreditation.

CPD in Kenya is not provided for in any of the existing laws. The Kenyan government with donor support established a national continuing education programme in 1983. This program focused on training mid and lower level cadres of health workers majority of whom worked in rural health settings. The program managed to institutionalize continuing education activities before it was disbanded in 2000 due to lack of funding. Since then, CPD activities have been provided by the MoH, non-governmental organizations (NGOs), faith-based health institutions and private institutions/organizations but with minimal coordination and no structural support.

With the inception of the East African Community (EAC), the three member states (Kenya, Uganda and Tanzania) saw the need to initiate collaboration in health sector. In 2002, the medical associations and regulatory bodies (board/councils) from the three East African member states came together to address health as a common agenda within the region. One of the areas addressed was reciprocal recognition of medical and dental practitioners within the region. For this to be implemented, it was acknowledged that CPD, among other requirements, would be a pre-requisite for all practitioners in order to improve the quality and safety of healthcare in the region. This necessitated the harmonization of CPD programs within the EAC member countries. Subsequently, Kenya and Tanzania were required to make CPD mandatory, each country to establish a national steering committee (NSC) on CPD and the Ministries of Health to commit themselves to provide funding. Each country is in the process of implementing these recommendations albeit at different stages.

Challenges

Legal framework for CPD is important as it legitimizes the organization and implementation structures. It also provides the basis for enforcement of CPD as a requirement for medical and dental practitioners. Most African countries are faced with the challenge of implementing and enforcing CPD programs without legal backing since CPD is not provided for in their legal frameworks.

Law and jurisdiction alone cannot regulate CPD. There is a need for motivation from the perspective of the individual doctor in order to appreciate the benefits from CPD. The working environment for most health professionals in Africa limits their ability to offer optimal care for their patients and meet societal demands. As a result, most health workers do not achieve job satisfaction and are often subjected to “burn out”.

The financial resources necessary for CPD are usually perceived as part of the operational costs of the healthcare sector. Given that most African economies have limited budgetary allocation to the health sector, allocation of financial resources for implementation of CPD activities remains a major challenge. In countries where CPD funding is predominantly donor-dependent (vertical programmes), sustainability is not guaranteed.

The issue of human and material resources is yet another challenge facing most countries especially among the health workers working in rural settings where access to reading materials and other resources is limited.

The reading culture has not been inculcated among the medical and dental practitioners since most training institutions across the continent still employ traditional teaching methods as opposed to the innovative approaches that ingrain a culture of self-directed learning. Upon qualification, such practitioners may not value the importance of CPD.

Some challenges are inherent in the development of CPD programmes. Where the concept of CPD and its potential in provision of quality health services has not been fully internalized by policy makers, health workers etc. and where professional associations are weak, the initiation and implementation of CPD may be slowed down.

The few countries that have implemented CPD programmes are faced with newer challenges. Some of these include domination by lectures with little interaction between learners and providers. In some of the programmes, emphasis may be on the acquisition of credits/points and the content, not responsive to learners’ needs and thus the purpose of CPD.

Solutions and the way forward

To further facilitate the development of CPD in Africa, there is need to give CPD legitimacy by establishing legal framework for CPD where this has not been done. The aim should be to make CPD obligatory for all medical and dental practitioners. For purposes of implementation, clear policies and structures to support CPD should be put in place.

There is a need to identify ways of making CPD demand-oriented. This may include ensuring that the content enhances roles and competencies (theoretical knowledge and clinical skills), organization of work (team building and leadership), communication and medical ethics. It should also be evidence based and relevant to the area of practice.

The culture of life-long learning should also be inculcated into the medical and dental practitioners during their formal training to ensure continual search for new knowledge.

There is need to develop and improve resource mobilization strategies as a way of addressing financial constraints facing implementation of CPD programme. This would involve pooling resources from various sources e.g. donors, NGOs,
the private sector (e.g. pharmaceutical firms) and consumers of CPD. Governments should also make commitments by making budgetary allocations for CPD.

To address the challenges posed by lack of human and material resources in rural settings, there is a need to develop and use of the distance learning model. In addition, linkages between well developed research and training institutions and rural health facilities should be established to support practitioners working in these settings.

In conclusion, CPD in Africa is evolving despite the numerous challenges that most countries are facing. Support is required to establish the necessary systems/institutions and strengthen those that are already in place.

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CURRENT HEALTHCARE SECURITY ISSUES AND COUNTERMEASURES

ARTICLE BY FREDRICK G. ROLL, MA, CHPA-F, CPP

Abstract

CURRENT HEALTHCARE SECURITY ISSUES AND COUNTER MEASURES DISCUSSES THE MOST COMMON RISKS AND VULNERABILITIES IN THE HEALTHCARE ARENA, AND FIVE CURRENT ISSUES REQUIRING ATTENTION BY INDIVIDUALS RESPONSIBLE FOR THE SECURITY PLAN AND PROGRAMME. THESE INCLUDE VIOLENCE, THE CAMPUS SETTING, ACCESS CONTROL/ VISITATION, INFANT/PEDIATRIC ABDUCTION AND TERRORISM. THE CONCENTRIC RINGS OF PROTECTION ARE DISCUSSED AS A MEANS TO CREATE DEFENSIVE MEASURES AT EACH LOCATION. THE USE OF APPROPRIATE SECURITY TECHNOLOGIES ARE ADDRESSED AS THEY APPLY TO HEALTHCARE SETTINGS. IN THE CONCLUSION, THE SECURITY SPHERE IS DISCUSSED AS TO HOW TO COMBINE FOUR BASIC ELEMENTS NEEDED TO PROVIDE FOR A REASONABLE, APPROPRIATE, COST-EFFECTIVE AND DEFENSIBLE SECURITY PROGRAMME IN A HEALTHCARE SETTING.

The author has created two concepts related to a pro-active approach to healthcare security issues. These are a simple statement “Security is incident driven”, and a question that asks “What would you do tomorrow if you had an adverse security incident occur today?” As part of their security evaluations, healthcare organizations can use these concepts to identify risks and vulnerabilities and develop proactive countermeasures to either prevent an incident from occurring, or mitigate the affect of the incident. Through the author’s consulting practice, the philosophy of a reasonable, appropriate, cost-effective and defensible approach is used, and recommended to identify opportunities for improvement to enhance the security posture of an organization.

Most common risks and vulnerabilities

Some of the most common risks and vulnerabilities identified over the past several years by the author include:

+ uncontrolled after-hours access;
+ lack of or poor visitation policy;
+ inadequate “security sensitive areas”;
+ inadequate security staffing and deployment;
+ inadequate security training;
+ environmental security issues;
+ inadequate security policies and procedures;
+ lack of/inadequate security equipment.

All of the above risks and vulnerabilities have a potential application to utilize appropriate security technologies along with policies and procedure, and security personnel.

Current healthcare security issues

Some of the most current security issues facing the healthcare environment include:

+ violence;
+ Campus setting issues;
+ access control/visititation;
+ infant/pediatric abduction;
+ terrorism.

Although these risks and vulnerabilities are universal and the frequency may vary, the impact and severity are equally experienced regardless of the size and scope of the organization.

Violence

Violence can and does occur in the healthcare setting for a number of reasons. Healthcare organizations are often times a major employer which creates the same types of issues faced in the workplace related to disgruntled employees. Victims of violence are brought to the hospital emergency department for treatment and are sometimes followed by the perpetrator to “finish-the-job”, such as in a gang involved incident, or in a domestic dispute. These issues can also carry over to departments such as surgery, recovery and/or intensive care. Long waits in the emergency room waiting area can sometimes escalate into a violent act as a result of frustration.

Violence can also occur in areas such as the behavioural health unit or in the maternity area where more then one person arrives and believes he is the father. These issues are often addressed with appropriate staff training, security personnel, and physical and electronic security enhancements.

Campus setting issues:

As healthcare facilities continue to expand, they face some of the same issues as university and school campuses. Parking facilities are created, both surface and multi-level, in various directions from the buildings. This places patients, visitors and staff outside of the building compartment for greater periods of time.
and makes standard security patrols more challenging. Other issues include basic exterior campus type issues of lighting, fencing, hiding locations, etc.

**Access control/visitation:**
As an extension of the campus setting issues, access control and visitation create significant security challenges. Building designs and compliance with fire safety standards, along with the concept of “open visitation” have created numerous opportunities for security improvements. In many cases too many doors are kept open, both during and after normal business hours, thinking this enhances customer service. Although a very important aspect of patient care, customer services should compliment a reasonably safe and secure environment event that could have been prevented will significantly impact the customer service and public relations image of an organization.

Minimizing non-staff access portals and controlling staff entrance will provide access points which will allow for better screening (security) and enhanced greetings and direction to patients and visitors (customer service).

**Infant/pediatric abduction**
Although the frequency of an abduction occurring has decreased and is statistically small, the severity is extremely significant. The National Center for Missing and Exploited Children has been monitoring and advising hospitals on infant and child abductions since 1983. The publication *For Healthcare Professionals: Guidelines on Prevention of and Response to Infant Abductions* is in its eighth edition. This document emphasizes staff training, policies and procedures, and physical and electronic countermeasures. Information on the National Center for Missing and Exploited Children can be found at www.missingkids.com.

**Terrorism**
As discussed in *Security Planning for Terrorism: A Preparedness and Action Tool for Health Care Facilities*, by the author, healthcare organizations need to protect their campuses and facilities from both a primary and secondary target perspective. Terrorist effects on healthcare facilities can create a significant psychological impact. The author recommends that countermeasures against the terrorist threat be combined with basic security countermeasures to provide an overall enhanced security posture that is reasonable, appropriate, cost-effective and defensible.

**Concentric rings of protection**
As a basic premise, security can be viewed from a three ring concentric circle perspective. The first ring begins at your property perimeter which can utilize fencing, signage and if appropriate, the ability to control pedestrian and vehicular access at perimeter points, to limit access especially during emergency situations.

The second ring would be at building perimeter points such as doors and windows. Access control at these points can range from a person controlling access, to locks and keys, to more advanced electronic controls such as coded, computerized or biometric access systems. Alarms and automatic locking systems can also assist in building perimeter protection.

The inner ring usually includes areas identified as “Security-Sensitive Areas” (SSA), by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Environment of Care Standards, as determined by the hospital.

**Security technologies**
There have been numerous enhancements in security technologies, particularly as a result of the Oklahoma City and the 11
Management in practice: hospital security

As part of a remote access control system in concert with intercoms, and remote release devices. Monitoring methodologies must be detailed in policies and procedures. Recording of images ranges from video tape, to digital imaging including multiplexed technology, and network digital video recording (NDVR). Systems can be centrally or remotely monitored and/or recorded, and with the appropriate safe-guards viewed remotely at approved individual computers.

**Alarms** – can include intrusion, hold-up or duress/panic devices. Requires staff training and system testing.

**Article surveillance/personal tagging systems** – can include article tracking and theft detection. Personal tagging can be used for infant protection and geriatric/dementia patients that may wander from their units.

**Metal detectors/protective enclosures** – can be used to help protect staff members. Metal detectors are sometimes used in emergency departments. These can be used in a hand-held or walk-through methodology. Protective enclosures can range from partial protection to bullet-resistant glass. In any event, security technologies and equipment should be outlined in policies and procedures. All staff training should be documented and competency-based. Security equipment should be tested on a regular and documented basis. Malfunctioning equipment should be repaired, replaced or removed to avoid creating a false sense of security.

The use of security technology should be reasonable for each facility. This should include the institutional philosophy, budget, public relations guidelines, and be understood by and relatively convenient for the staff. Systems should also be appropriate based upon the national, local or organizational systems standards.

Wherever possible, consideration should be given to integrating the various security technologies. This is typically the combination of CCTV, alarms, access control systems, and emergency phones/intercoms. One example of an integrated security system would be to place the CCTV monitors in the telecommunications area, which may be reluctant or afraid to monitor cameras, and allow the computer to use the alarm activation to automatically bring up the appropriate camera to full screen for viewing. Another example would be to have a time-delay exit alarm in an infant

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In any event, security technologies and equipment should be outlined in policies and procedures.

Security equipment should be tested on a regular and documented basis. Malfunctioning equipment should be repaired, replaced or removed to avoid creating a false sense of security.
care area and upon activation send the alarm and bring the appropriate camera to full screen at the identified monitoring station. This would allow the person viewing the monitors to automatically view and provide the description of the person activating the alarm and to radio dispatch the location of the alarm and description to security or response personnel, prior to the door releasing. The recording capability would be used for evidentiary purposes.

**Conclusion:**
Security technology will continue to advance and have various applications for the healthcare environment. Technology is however only one of four areas necessary to provide for a reasonable and appropriate protection program. The author outlines this concept in the Security Sphere.

This includes:
1. Well trained security personnel (or other designated individuals).
2. Reasonable utilization of security equipment.
3. Appropriate policies/procedures, records/reports.

When used in the proper combination, healthcare organizations can provide a reasonable, appropriate, cost-effective and defensible security programme.

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DEVELOPING AND IMPLEMENTING AN INNOVATIVE PATIENT SAFETY IMPROVEMENT MODEL

ARTICLE BY CHRISTINE GOESCHEL AND PETER J. PRONOVOST (PICTURED)

Abstract

IN SPITE OF INTERNATIONAL AGREEMENT ON THE NEED FOR IMPROVED QUALITY OF CARE AND PATIENT SAFETY, EVIDENCE FOR HOW TO SUCCESSFULLY TRANSFORM IS SCARCE. WE CREATED A DYNAMIC PARTNERSHIP AND AN INNOVATIVE IMPROVEMENT MODEL THAT IS ACHIEVING BREATHTAKING RESULTS, AND WE BELIEVE IT CAN BE WIDELY REPLICATED. THIS ARTICLE DESCRIBES OUR PROJECT.

The need to improve quality and safety in healthcare is a widely accepted imperative both in the USA and elsewhere. Evidence is scant, however, on how to successfully transform. Since 1999, when The Institute of Medicine (IOM) created a compelling case for patient safety in its report To Err is Human: Building a Safer Health System, awareness has continued to grow, but consensus on patient safety goals and agreement on priorities and methods for quality and safety initiatives have been slow to emerge. Similarly, although the IOM followed To Err is Human with a strategy map for redesign in Crossing the Quality Chasm now, five years after the publication of these reports, evidence of improvement is limited and largely confined to enhanced dialogue. Large-scale reform of US healthcare is nowhere in sight.

Igniting rapid and effective quality and patient safety improvement under these conditions requires creativity and commitment. A few success stories are beginning to emerge. In this manuscript, we will describe one. We created a dynamic partnership and an innovative improvement model that is achieving breathtaking results, and we believe it can be widely replicated. Our goal: hospital executives, physicians, nurses and all healthcare stakeholders must be able to confidently answer the questions: Are we safer? How do we know?

In early 2003 we developed a novel partnership which links expert patient safety researchers with a large cohort of hospitals that are committed to improving care. The pivotal connection between national leaders and local providers is the state hospital association. It serves as the node for dissemination of evidence-based tools and coordinates regional implementation of improvement strategies developed and field tested by the national leaders. The association is trusted by the hospitals and its primary focus is working with hospitals collectively. It is an effective node for rapid and effective translation of evidence into practice.

The Hospital Association: A Node for Improving Safety

The Michigan Health and Hospital Association (MHA) is a typical healthcare trade association with voluntary dues-paying members and a primary focus on health policy and advocacy. With all hospitals facing intense public scrutiny in the wake of the IOM reports To Err is Human, and Crossing the Quality Chasm, the association wanted to provide meaningful support on patient safety challenges. The question was, how?

MHA leaders recognized that understanding and effectively addressing quality and safety issues requires specialized knowledge by both the association and providers, and a strategic commitment to improvement. The evolution of a separate infrastructure to work explicitly in this arena was gradual, but culminated in early 2003 with creation of The MHA Keystone Center for Patient Safety and Quality. The Center has as its mission: to facilitate the translation of quality and patient safety evidence into practice. The following action strategies were developed to achieve the mission:

- build relationships;
- create will;
- partner with experts;
- use our voice;
- be courageous.

The Strategy

The MHA Keystone Center elected to focus initially on improving safety in intensive care units (ICUs), one of the most expensive, complex, and risky components of our health system. Costly and complex, ICUs were also the site of significant research and successful improvement activity at Johns Hopkins Medical Institutions. Michigan hospitals had expressed interest in improving ICU care and Keystone strategies demanded partnering with experts. The potential for improvement through a formal partnership between Johns Hopkins patient safety researchers, the hospital association and individual hospitals was compelling. We agreed to work together, “to go where no state had gone before” and to share what we learned.

As project leaders, we sought to provide hospital senior leaders and ICU caregivers with the ability to answer the tough question: How do we know we are safer?
Our framework combines evidence-based medicine with quality improvement. Our goal: to prevent harm and ensure patients receive the interventions they should.

This was translated into four questions:

+ How often do we harm patients?
+ How often do we do what we should?
+ How often do we learn from our defects?
+ How well do we improve culture?

Though we applied these measures initially to ICUs, we provided hospitals with a framework to apply these measures throughout their hospital. Our framework combines evidence-based medicine with quality improvement. Our goal: to prevent harm and ensure patients receive the interventions they should. This model has two main components: a generic component that applies throughout the hospital and focuses on learning from mistakes and improving culture, and a discipline specific component that focuses on ensuring we do what we are supposed to and eliminating harm. The generic component is called the Comprehensive Unit-based Safety Program (CUSP) and includes the following 6 steps:

+ measure culture of safety;
+ educate staff on the sciences of improving patient safety;
+ assign a senior executive to partner with the unit;
+ identify defects;
+ learn from one defect per month and implement one teamwork tool per quarter;
+ re-measure culture.

The discipline specific intervention, called the reliability model, seeks to combine evidence-based medicine and quality improvement. This intervention, developed and initially implemented at Johns Hopkins, includes the following five steps:

+ Identify a patient population and outcome you want to improve based on unit/hospital-specific data.
+ Using the approach of evidence-based medicine, identify interventions that improve the outcome you are targeting.
+ Using standardized tools consistently applied, measure how often patients are receiving the appropriate interventions.
+ Change the system to ensure patients receive all the interventions they should.
+ If possible, evaluate if outcomes improve.

The players

The Keystone ICU project brings together one of the largest regional cohorts of intensive care units ever assembled in a single initiative (127), as well as patient safety leaders from the Johns Hopkins Quality and Safety Research Group (JHQSRG), the Michigan Health and Hospital Association (MHA) Keystone Center and 77 individual hospitals. Initiated as one of 13 projects awarded an Agency for Healthcare Research and Quality (AHRQ) patient safety matching grant in October 2003, Keystone ICU includes a diversity of providers reflective of healthcare throughout the USA. Participants include small rural, non-teaching and community-based hospitals as well as larger urban, teaching and academic healthcare systems. The project is prominent in all regions of Michigan and includes five non-Michigan hospitals that are part of a national health system headquartered in the state. Providing value to each of them could have been an exercise in contrasts, but it was not. We found substantive common ground which fostered synergistic improvement.

Project management

The MHA Keystone Center manages project operations and Johns Hopkins manages project content. To support teams we provide evidence-based measures, standardized data collection tools and performance reports, dedicated project web space, weekly recorded conference calls, and provide consistent encouragement and individualized coaching when it is requested.

Beyond long distance sharing, biannual workshops allow teams and the Hopkins faculty to work side by side as colleagues. As project leaders, we periodically send letters to hospital CEOs providing them with progress reports and asking for specific executive help. We use project specific letterheads that lists each hospital, thus with each formal communication leaders are reminded that they are part of a larger partnership, contributing to improvement of care throughout the entire state. With teams we focus on strict adherence to rigorous data collection and an equally strong commitment to share what is being learned. The overall project design focuses on a balance between being scientifically sound and feasible, a sweet spot that often proves elusive.

The transformation process

Through experimentation and reflection, we developed a transformation model that guides our efforts (Figure 1). We recognized that culture change must precede process redesign. Thus our interventions include both a culture change tool, CUSP; and a focused intervention, reliability model. In addition, we recognized that senior leaders, project leaders (generally ICU physicians and nurse managers), and front-line staff need to do the following:

+ understand; understand how this project makes the world a better place;
+ execute; understand exactly what needs to be done and ensure staff have resources to do it;
+ evaluate; answer the tough question: are we safer?

The programmes we implemented are evidence-based, feasible, and have meaning at the bedside as well as for senior leaders. Through this partnership we have been able to meet the disparate needs of small/large, urban/rural and teaching/non-teaching hospitals. While Keystone ICU focuses on the intensive care unit, we are monitoring organic spread of the interventions beyond the ICU, where early indications suggest the enthusiasm and the outcomes will be equally noteworthy.

The outcomes

During the first nine months of data collection, the whole state has moved from the 50th percentile in the country in bloodstream infections and ventilator-associated pneumonia to the 10th; 68 ICU teams eliminated catheter-related bloodstream infections or ventilator-associated pneumonia. (we define eliminate as going six months without an infection). Clinical outcomes continue to...
show steady improvement. Culture resurvey data are not yet available but teams report anecdotally that unit culture has noticeably improved. More than 90% of teams routinely participate in conference calls. Nearly 100% of the 127 teams attend biannual workshops, and evaluations have averaged 4.5 on a 5.0 scale. The project’s impact on length of stay, cost avoidance and nurse turnover data are currently being analysed, but individual institutions are reporting significant improvements in all three.

With each conference call or introduction of a new intervention, it seems teams become more energized and more cognizant of their power to change the way care is delivered, to improve patient outcomes, and to enhance unit culture. CEOs have begun to speak with firsthand knowledge regarding infection rates, safety issues, and the renewed sense of satisfaction that is permeating their ICUs. Variation in achievement spans the demographic mix of participants, and the sharing of what works and does not work is universally valued. Hospital administrators and clinicians express commitment to the new model. The demand for continuation of the partnership and more “Keystone” initiatives is steady and strong.

This level of engagement by clinicians and administrators inspired us to think more deeply and more broadly about what Michigan providers could contribute to the growing body of patient safety knowledge. Thus, in addition to the original ICU measures, we are consciously working to advance the science of quality improvement. We have begun using structured survey instruments to evaluate leadership behaviors, team behaviors, culture, degree of information technology, and staffing to identify factors that predict team success and will link these organizational variables to empiric outcome measures. As such, we are helping to better understand how the structure of organizations predicts the ability to improve quality and safety. This research is just beginning.

**The Impact of engaging organizations**

This effort has validated a new role for state hospital associations and transformed what it means to provide value to members. As neutral convener and project leader, the ability of an association or similar regional consortium to bring national expertise to a large cohort of facilities can provide powerful stimulation for local implementation of data-driven, evidence-based care. This expedites learning by the research team, brings efficiencies of scale to hospitals throughout the state or region, and offers the potential to rapidly improve care.

At the institutional level, project related transformations are also taking place. Cultural assessments, education on the science of safety, explicit leadership engagement, clinical interventions based on sound evidence, rigorous adherence to standardized data collection, and a commitment to “Ohana” (a family type relationship among all participants and the research team), have come together to create a powerful force for change. While teams are quick to acknowledge that this is very hard work and is not without its setbacks, in the same breath
they clarify that this project is bringing joy back to their work and reminding them why they chose a healthcare profession. The commitment from providers throughout the state to work collaboratively to improve ICU care has created a strong support network for what is at times an arduous journey. We have been told that this state initiative creates a virtual learning community in a way that national efforts have not been able to accomplish. Teams know they will be missed and contacted if they are less than fully participative. There is a sense of healthy competition to make certain all intensive care units improve. The Keystone ICU partnership has re-ignited hope, unleashed energy, and given substance to a passion for safety that is transcending the project and impacting care even beyond ICUs.

Hospitals participating in Keystone ICU are no longer limited by a vision of healthcare bounded by what “is”. This partnership and improvement model have helped them move together to a realm where the job is to create “what could be”.

The Opportunity
And so we recall our initial questions: Are patients safer? How do we know? Across an entire state we have the data and can say with confidence that ICU patients are safer and care is improved. We believe our model can be applied effectively throughout hospitals. We look forward to broad implementation and learning how to further improve quality improvement. This model is rigorous and requires a commitment of resources. Senior leaders need to evaluate whether they have the courage to start this journey.

Author
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Dr Pronovost has written more than 130 articles and chapters in the fields of patient safety, ICU care, quality healthcare, and evidence-based medicine. Within the Johns Hopkins community, he is the medical director for the Center for Innovations in Quality Patient Care and co-chairs the hospital’s Patient Safety Committee. Nationwide, he is chair of the ICU Advisory Panel for Quality Measures with JCAHO, chair of the ICU Physician Staffing Committee for the Leapfrog Group, helps lead an effort to develop the ideal ICU design with the Institute for Healthcare Improvement, and is developing standards for ICU quality nationwide.

Dr Pronovost is currently leading two large nationwide safety projects, funded by the Agency for Healthcare Research and Quality. In the first, he is implementing an error reporting system in 30 intensive care units in the USA. His second project is working with the Keystone Center for Patient Safety and Quality at the Michigan Health and Hospital Association to improve care in more than 127 ICUs in Michigan. In a previous study, Dr Pronovost evaluated the association between ICU organizational characteristics and outcomes, which formed the basis for the Leapfrog Group’s ICU purchasing specification.

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References
In hospitals, it’s a matter of UltraGenda

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AN UPDATE ON THE LEADERSHIP IN GLOBAL HEALTH TECHNOLOGY (LIGHT) INITIATIVE

ARTICLE BY HARRY MCCONNELL BSC MD FRCPC

Abstract

This article is an update on the work of the Leadership in Global Health Technology Initiative and the national ICT strategies of selected countries including Kenya, Ethiopia, Sri Lanka and also regional and international initiatives including the Pacific Open Learning Health Network, Asia Pacific Network of Community Practice for Health Practitioners and the Tsunami Reconstruction and South-East Asia eHealth Initiative.

The Leadership in Global Health Technology (LIGHT) Forum is a global review of national and international programmes and major activities for Health Information Infrastructure and eHealth, launched at the International Hospital Federation regional conference in Dubai and in the concurrent 75th Anniversary issue of World Hospitals and Health Services Journal. The LIGHT Initiative stemmed from a comprehensive review of eHealth National Policies at the International eHealth Association’s annual conference, eHealth 2003, in London. Since the Dubai conference, there have been further summits in Geneva with IeHA and the eHealth Initiative (eHI) alongside the World Health Assembly; in Berlin, at the IIF and European Hospital Association Congress; in the USA, at both the HIMSS Conference and Exhibition and alongside eHi’s “HIT” Congress; in London at IeHA’s eHealth 2004, and, in September, at eHealth 2005; in Mexico in association with Forum 8; in Kiribati at the ISOC Regional Conference in August, 2005; and continuing with an online forum and discussion, including contributions in preparation for WSIS and further regional summits planned.

The LIGHT goals and objectives are to:

+ initiate a global dialogue and build a community of international learning around eHealth and the creation of an interconnected, electronic health information infrastructure among both industrialized and developing nations;
+ review conceptual and analytic frameworks for exploring key barriers, strategies and imperatives for promoting IT and the creation of an interconnected, electronic health information infrastructure;
+ share information regarding the challenges, strategies employed, and lessons learned related to IT and the electronic health information infrastructure in supporting (1) measurement of outcomes, (2) delivery of clinical care, (3) public health surveillance, management and response, (4) eLearning and eCapacity building initiatives, and (5) essential health information.

In the March 2004 issue of World Hospitals and Health Services, we reported on the National Health Information Infrastructure efforts in Canada, the USA, United Kingdom, Mozambique, Saudi Arabia, Mexico, Malaysia, South Africa and the Democratic People’s Republic of Korea. We have since had important updates in hearing about the Canadian eHealth infrastructure as well as news from other countries in the eHealth section of the Journal. In this section we will report further on activities in eHealth in Kenya, Ethiopia and Sri Lanka, as well as on some important regional and international activities relating to eHealth that ISHED is pleased to be part of. In the accompanying article in this reference book, Drs Doupi and Hämäläinen provide a detailed analysis of the National eHealth strategies and activities in Denmark, Finland, Iceland, Norway, Sweden, Estonia, Latvia and Lithuania. We also present here a proposal for principles in eHealth in providing sustainable aid in developing countries.

Update on selected national initiatives

Kenya

The Kenya eHealth Initiative began in September 2004, and has been supported by ISHED, The (UK) NHS Information Authority and CISCO Philanthropy. The purpose of this development stage was to investigate the potential benefits of using an online diagnostic and knowledge management tool for rural dispensaries and health centres in Kenya. The Initiative has also been investigating what content and infrastructure will be needed to offer the best support for Kenyan clinicians.

The development phase of the project demonstrated that this tool had many potential benefits for the community of Kenyan health workers and for the health of the greater Kenyan community. But, this phase also showed that greater improvements in health and community
development could be strengthened with greater support and investment in ICT that is integrated with the current online technologies and with future projects.

Like many developing countries, Kenya’s poverty impacts on health, which impacts on poverty, and there have been many non-government and government initiatives to address both. But there has been little integration of these initiatives or attention paid to the benefits of a scalable wireless communications infrastructure to deliver benefits. The Kenya eHealth programme integrates the work of existing efforts, addresses content and cultural change issues and offers a scalable programme for capacity building of the healthcare sector in Kenya using innovative solutions. The objectives of the Kenya eHealth Initiative are to:

+ adapt the content of a highly useful clinical diagnostic aid already widely available and used in industrialized countries for use in Kenya and East Africa;
+ extend proven use of handheld devices for healthcare as a tool for knowledge management and continuing professional development (CPD) in hospitals, and in rural health centres;
+ demonstrate cost-effectiveness of sustainable eHealth solutions and software for hospitals in East Africa;
+ demonstrate benefits of wireless networks within Kijabe Hospital to handheld devices;
+ demonstrate wireless connectivity between health facilities;
+ Kenya National Steering Committee for Continuing Professional Development is set to support testing of diagnostic aids, use of PDAs and use of wireless infrastructure to support CPD initiatives, including those being developed by AMREF;
+ to integrate with and complement related existing programmes of Afri Afya established to harness ICT for community health in Kenya and the World Health Organization (with its Health Academy) to provide eLearning for health, particularly for communities that now have connectivity.

The Kenya eHealth Programme is established to emphasize a sustainable, locally owned and managed eCapacity Building System that meets identified needs for the region.

Over the next three years, EMREI will begin to address the widening gap in Ethiopia’s healthcare system by sending a team of GWU medical school students and United States-based physicians each year to rotate through Ethiopia’s medical clinics with four primary goals:

+ provide medical care;
+ provide continuing medical education (CME) and training for Ethiopian physicians, nurses and other healthcare practitioners;
+ lay the groundwork for continuing and sustainable professional relationships with the Ethiopian medical community. It is hoped that this will link with the recently launched project of the Ethiopian Government, World Bank, African Development Bank and International Monetary Fund who are working with CISCO to wire the entire country within the next three years. This is seen as a priority for development not only in health but across all sectors.

Ethiopia

In June 2004, the Students for International Medical Action (SIMA), George Washington University (GWU) started its pilot project, the Ethiopian Medical Relief and Education Initiative (EMREI). A key goal of this project was to establish sustainable eHealth education for healthcare practitioners of all levels in Ethiopia. The first step of this initiative was a comprehensive needs analysis completed by students in the second half of 2004. The needs analysis has set the format for the eHealth training materials to be developed. Now completing its second phase, in June 2005 SIMA continued to support the Ethiopian medical community through training and education using innovative ICTs, including a second needs assessment to determine the specific type of training Ethiopian physicians would like to receive in 2006.

Sri Lanka

The 2004 Boxing Day tsunami devastated many countries in the South-East Asia Region including Sri Lanka. Efforts are now underway to work towards addressing the crucial healthcare issues for Sri Lankan healthcare facilities, infrastructure, and the general population affected by the tsunami.

ISED, WHO and the World Bank have agreed to start working towards reconstructive efforts in collaboration with key stakeholders in the country. These three organizations will provide assistance to the Sri Lankan people through strengthening the provision of healthcare through the provision of eLearning and distance mentoring. The project will complete an in-depth needs analysis in its initial phase, however key
aspects are expected to include eCapacity enhancement, Clinical and Public Health Curriculum, Training of Trainers, Language Specific Training, Networks Direct Clinical Care, eLearning and eMentoring.

While this initial tsunami reconstruction eHealth initiative considers the establishment of strategies that will assist in the redevelopment of the Sri Lankan healthcare system, it is evident that efforts to strengthen health services by increasing the efficiency of infrastructure rebuilding, and empowering the local healthcare workforce using innovative applications of appropriate technology, is not only applicable to the tsunami affected districts of Sri Lanka. While this project will initially be geared towards capacity building initiatives in tsunami affected areas of Sri Lanka it is expected that this same process of capacity enhancement through training and e-consultation will be progressively phased into other areas affected by the tsunami, to all of the districts of Sri Lanka, including those not affected by the tsunami and to other countries in the South-East Asia Region. Furthermore, despite the problems that have arisen as a result of the tsunami, there are now opportunities to improve and revitalize the healthcare infrastructure and systems to deliver services to better standards than those available before the tsunami.

Working towards the reconstructive efforts in collaboration with key stakeholders in the country, WHO, World Bank and ISHED want to work in collaboration to provide assistance to the Sri Lankan people through strengthening the provision of healthcare through the provision of e-learning and distance mentoring:

a. to complete a needs analysis for the curriculum requirements of Sri Lankan health professionals;

b. to establish basic infrastructural requirements in healthcare centres in areas of greatest need;

c. to complete trials of eLearning for health using various networks and ‘blended learning’ techniques.

Another related critical initiative in Sri Lanka is the e-Sri Lanka Development Project. This has been established in collaboration with the World Bank to (i) promote the use of Information and Communication Technologies (ICT) to enhance growth, employment, and equity; (ii) increase access to public information and services online; and (iii) promote competitiveness of private sector, particularly of knowledge industries and Small & Medium Enterprises (SMEs). The e-Sri Lanka Development Project consists of six key programmes:

- the ICT Policy, Leadership and Institutional Development Programme;
- the ICT Human Resources Development and Industry Promotion Programme;
- the Regional Telecommunications Network;
- the Telecenter Development Programme;
- the Reengineering Government Programme and
- the e-Society Programme.

**Regional Initiatives**

**Pacific Open Learning Health Network**

Several Pacific countries have recently become involved in the Pacific Open Learning Health Network (POLHN). This initiative has been supported by funding from the Japanese Government and has been conducted in two phases. The first of these established a number of computer laboratories as resource centres for health professionals in ten Pacific countries. In the second phase, these computer centres became resource centres for continuing education. Through POLHN various courses and seminars providing new training and education were provided to professional health workers. As a result of the successful pilot study these courses are still offered and the network continues to grow in strength and numbers. ISHED is pleased to have been able to support both the evaluation of the programme and the workshop for country task forces to plan the way forward. The conclusions of this workshop and details of POLHN were presented to the Pacific Ministers of Health meeting in March and are now available online6.

**Asia Pacific Network of Community Practice for Health Practitioners**

The Global Development Learning Network has teamed up with the Australia National University for a pilot of an Asian Pacific Health Communities of Practice to offer a platform for cross country dialogue and debate over an extended period of time and to enhance the potential to establish long-term international professional alliances. The CoP has had three successful meetings and endeavours to complement other regional health networks such as the WHO/WPRO support of the Asia Pacific Academic Consortium for Public Health and the Asia Pacific Health Economist Network.

**Tsunami Reconstruction and South East Asia eHealth Initiative**

A programme of the Institute for Sustainable Health Education and Development (ISHED) to work in collaboration with WHO, SEARO, World Bank, Sri Lankan professional societies, WorldSpace, Second Opinion Software and the Wesley Hospital, the initial focus is on blended learning for CPD. The country specific objectives described above for Sri Lanka are the start of what is hoped will become a region wide capacity enhancement programme. This programme will look at eCapacity Building in a broader sense using a regional model for implementation. This will include clinical support, hospital management support, eLearning and CPD and health information systems.

It has been recognized that effective, applicable training in order to maximize capacity building benefits will be best established if training programmes are delivered through a “training of trainer” format. Many of the objectives from the WHO’s tsunami eHealth logical framework proposal recognise that an important assumption for successful completion is the willingness of medical practitioners and centres to participate in associated activities and to make use of their current ICT systems. The provision of a “training of trainer” format will ensure that the training provided has a maximum impact in a sustainable manner. It will also maximize the capacity of existing expertise in teaching as well as in clinical care and public health.

In stage I, the Network focus will be WorldSpace supplemented by the Global Development Learning Network, as well as CD-ROMs and printed materials. This will allow for real time videoconferencing, data-streaming, asynchronous eLearning; Stages II and beyond will also include web-based training as well as use of other networks. The effective use of WorldSpace will ensure that all health facilities have access to real
The effective use of WorldSpace will ensure that all health facilities have access to real time eLearning and health information systems in a cost effective manner as well as to other computer based training.

International Initiatives

The Global Review

The Global Review for Health Information is an international effort to look at the issues relating to the availability of essential health information in developing countries. Participating organizations include the Alliance on Health Policy and Systems Research, Association for Health Information and Libraries in Africa (AHILLA), BIREME (Latin American and Caribbean Centre on Health Sciences Information), BMJ, The Cochrane Collaboration, Forum for African Medical Editors, Global Forum for Health Research, Interactive Health Network/ISHED, International e-Health Association, The Lancet, Medical Library Association, Society for the Internet in Medicine, South Asian Public Health Forum, Wellcome Trust, WHO, and the WHO Eastern Mediterranean Regional Office.

Dialogue at face-to-face meetings is complemented by a series of moderated discussions on HIP-net at WHO. We expect to see a real increase in financial commitment to health information activities. The Global Review will then serve as a mechanism for those in positions of influence to take into account the needs of diverse groups of constituencies and stakeholders. The Global Review has an important role in addition as a platform for collective advocacy.

WHO Global eHealth Emergency Response Committee

The first meeting of the Global eHealth Emergency Response Committee took place in March in Seoul, Korea, with video links to Brisbane and Washington DC. It was hosted by the Korean eHealth Association and included representatives from ISHED, GDLN, WHO, SEARO, CISCO and the European Space Agency. It was discussed that by making optimum use of the potential of eHealth for action in crises it will be possible to:

+ improve crisis preparedness—for strengthening overall capacity to crises;
+ improve crisis response—for effective action to address main public health priorities by making health systems more efficient;
+ improve crisis recovery and rehabilitation—to ensure local health systems are back to functioning through facilitated access; and
+ improve crisis mitigation—to reduce vulnerability of health systems to disasters and crises by improved coordination and communication;

The purpose of the meeting is to convene members of the task force and:

+ review the status of the tsunami eHealth project; strengthening primary healthcare through eHealth for healthcare delivery in tsunami affected areas of Sri Lanka;
+ confirm pledges from partners for the project;
+ review the status of the project proposal to mitigate the effects of the tsunami crisis through strengthening of eHealth in India;
+ develop a strategy for offering the concept for the strengthening of primary healthcare in developing countries and areas of crisis through eHealth for healthcare delivery as a standard modality, available upon request by countries when a crisis breaks out.

It was discussed that eReadiness is critical for dealing with the health ramifications of disaster situations and recommendations were put forward for Electronic Health Records, electronic referral systems, Teleconsultation services and eLearning services.

References

1. Roll out of the electronic version of 350 care pathways to provide knowledge support to the NHS in England is underway.
2. For Example: http://www.care2x.org/ Proposals to do this using Kenya Data Networks/Swift Global services are being considered.
3. Wireless links to a Kijabe Hospital HIV/AIDS and Outpatients clinic 10km line of sight – to support extension of a hospital-based service.
4. Wireless communication from Kijabe to support two nearby health centres (one is Government-run) and test use of WiFi enabled PDAs.
5. Wireless communications established between Kijabe and Narok Hospital (90km away), with further extension of wireless communications to four other sites to extend project 5.2 to prove the concept of enabling health facilities to act as communication hubs for providing connectivity for communities.
7. See http://www.ished.org/default.asp
8. Review the status of the tsunami eHealth project; strengthening primary healthcare through eHealth for healthcare delivery in tsunami affected areas of Sri Lanka
10. For the purpose of the meeting is to convene members of the task force and:
11. Review the status of the project proposal to mitigate the effects of the tsunami crisis through strengthening of eHealth in India
12. Develop a strategy for offering the concept for the strengthening of primary healthcare in developing countries and areas of crisis through eHealth for healthcare delivery as a standard modality, available upon request by countries when a crisis breaks out.

Knowledge Map, Online Consultation and Framework for Health and ICTs

ISHED is working with Healthlink Worldwide and Afri Afya to produce a Knowledge Map of activities relating to health and ICTs in developing countries. This will also include establishing a taxonomy representing these with respect to ICTs, MDGs and public health issues. We are establishing an online consultation to obtain input from all sectors and will produce a framework paper outlining prioritize and ways forward to see the use of ICTs maximized for healthcare in developing countries and used as a means to assist in achieving the MDGs. This is supported by InfoDev and will set out the priorities, best practices, lessons learned and ways forward for using ICTs in Health and Development.

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CONTEMPORARY ISSUES, CHALLENGES AND DEVELOPMENTS IN BLOOD AND CELLULAR THERAPIES

ARTICLE BY JAMES REILLY

Abstract

BLOOD COLLECTION AND CELLULAR THERAPIES IS A DYNAMIC FIELD ENCOMPASSING MULTIPLE THERAPIES UTILIZING BIOLOGICAL PRODUCTS DERIVED FROM HUMAN SOURCES (I.E. HUMAN BLOOD OR TISSUE DonATIONS). THESE INCLUDE TRADITIONAL BLOOD AND BLOOD COMPONENTS, AS WELL AS THE EXPANDING FIELDS OF TISSUE BANKING AND TRANSPLANT, CORD BLOOD BANKING, HEMATOPOIETIC PROGENITOR CELL FACILITIES AND MANY OTHER CELLULAR THERAPIES. THE INDUSTRY CONSTANTLY FACES THE NEED TO ENSURE EVERY DONOR’S SAFETY AND SAFEGUARD EVERY PATIENT AGAINST THE THREAT OF KNOWN AND UNKNOWN TRANSMISSIBLE VIRUSES. THE SOLUTION TO THESE CHALLENGES REVOLVES AROUND THE PRESENCE OF A COMPREHENSIVE QUALITY MANAGEMENT SYSTEM AND CONSISTENT APPLICATION OF A CONSTANTLY EVOLVING SET OF INDUSTRY STANDARDS COVERING EVERY ASPECT OF DONOR RECRUITMENT, COLLECTION, DONOR AND PRODUCT TESTING, PRODUCT PREPARATION, STORAGE, DISTRIBUTION AND ADMINISTRATION. IF THESE ARE IMPROPERLY MANAGED, FACILITIES RISK CAUSING HARM, OR EVEN LOSS OF LIFE, TO DONORS AND/OR PATIENTS.

Blood and cellular therapies are derived from human sources, and consequently, are subject to the biological variability of their donors and the constant threat of newly emerging transmissible diseases. These variabilities create ongoing challenges to maintaining high levels of safety for every donor, every donated product and ultimately for every patient. The variabilities can be as simple as ensuring ABO compatibility between a unit of donated blood and the recipient patient to the transmission of a known infectious disease, such as AIDS or hepatitis, between a donor and the recipient patient. More difficult is the challenge created by the constant threat of new transmissible diseases that may or may not have a simple donor screening test or process.

The industry has responded to these known and unknown challenges by developing comprehensive industry standards and incorporating quality management systems into their collection, preparation, storage and distribution systems. Governments have also responded with licensing and regulatory requirements to ensure product safety. These combined responses create a situation where the industry has the ability to quickly identify new risks or failures in the existing system, combined with a process to quickly develop and introduce new human and technology driven safeguards to the process.

The ability of these systems to comprehensively respond to the issues and challenges is largely based on a combination of the developmental maturity of the therapy itself and/or the infrastructure of the medical delivery systems within a given country.

Developed countries
In areas of the world with well developed societal infrastructures and medical care delivery systems the issues and challenges facing the blood and cellular therapy fields vary slightly depending on how well developed the product and therapy are within the medical establishment. In well developed areas of the world, such as Western Europe and North America, they can generally be broken into two categories, with a generic description of the risks and solutions for each category provided below:

Traditional therapies
1. Traditional therapies with well known and consistently applied industry standards and government regulations (i.e. the use of blood and blood components).
   a. RISK: transmission of a known virus because of improper application of standards or the inadvertent transmission of an emerging and unknown virus.
   b. SOLUTION: regular assessment of facilities for the adherence to industry standards, comprehensive quality management systems to constantly monitor activities, track safety data, and initiate corrective actions or responses to system failures or emerging risks in a timely manner.

New therapies
2. Therapies which have only recently become accepted medical practice that lack consistently applied industry standards and government regulatory systems for the collection, preparation or storage of the products (i.e. cord blood, hematopoietic progenitor cells, tissues and other cellular therapies).
   a. RISK: none, divergent or...
Specific issues, such as the industry’s past experiences with the emergence of the AIDS virus and CJD, will continue to challenge the field of blood and other human based cellular therapies.

Inconsistently applied standards for donor and patient safeguards which may or may not have equal efficacy and no quality management system to constantly or consistently monitor for existing or emerging risks.

b. SOLUTION: Through professional societies and other organizations develop industry standards and assessment and accreditation systems that cover these new human based products and therapies.

Less developed countries

In countries with less developed infrastructures such as road systems, utilities and medical care and delivery systems the issues are more basic, but require more complex, expensive and, sometimes, politically or culturally controversial solutions. Examples of these countries would include many countries in Africa, Asia, Eastern Europe and South America. In these environments there are, again, generally two basic challenges:

+ the availability of adequate numbers of safe volunteer donors;
+ adherence to, or lack of, standards for donor collection, product testing, storage, distribution and administration and no quality management system in place.

In these environments the responses are largely dependent on the support of third party donor organizations and government programmes from the developed world. One example of such a programme is the US$ 1.9 billion dollar United States “President’s Emergency Plan for AIDS Relief” which, among other things, includes approximately US$ 50,000,000 dollars for improvements in the blood supply systems in 14 countries in Africa and the Caribbean. Past programmes around the world have or are being funded by the European Union, the Gates Foundation and other donor organizations.

Conclusion

Specific issues, such as the industry’s past experiences with the emergence of the AIDS virus and CJD, will continue to challenge the field of blood and other human based cellular therapies. However, our ability to rapidly identify risks and respond with new donor screening techniques or improved collection and testing technologies has, and almost always will be, based on the existence of a comprehensive and consistently applied set of industry standards, an assessment and accreditation programme and a quality management system.

Author

James Reilly is director of Global Development for AABB’s Consulting Services Division and chief operating officer for the AABB Africa/Caribbean PEPFAR Project where he is responsible for expanding the AABB’s blood banking and cellular therapies consulting business, the association’s overall expansion of representation of the profession of blood banking globally, and provision of technical assistance to the National Blood Transfusion Services in four of the PEPFAR funded countries. Previous to this position he held various senior executive positions and the position of president of the American Blood Resources Association. He is a frequent participant in forums of national and international organizations related to blood and plasma safety, including past participation in the World Health Organization’s Global Collaboration on Blood Safety. He is the recipient of special citations and awards of recognition from the US Food and Drug Administration Commissioner, World Federation of Hemophilia, Food and Drug Law Institute and the American Blood Resources Association.

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NURSING MANAGEMENT TODAY: AN ICN VIEWPOINT

ARTICLE BY JUDITH OULTON

Abstract

POPULATION-BASED HEALTHCARE HAS BECOME THE FOCUS OF HEALTHCARE SERVICES AROUND THE WORLD SO THERE IS AN EVER-INCREASING NEED TO TRAIN AND SUPPORT NURSE MANAGERS WHO CAN LEAD AND NURTURE NURSES AS THEY WORK TOWARDS PROVIDING OPTIMUM LEVELS OF SATISFACTION AND SAFETY IN THE CARE THEY GIVE TO THEIR PATIENTS.

Globally, healthcare services are evolving not only at the rate of need and innovation, but also in response to a large-scale shift towards population-based healthcare – a shift mandated by tighter budgets, populations more involved in shaping the care they receive and the re-evaluation of healthcare goals.

As health systems around the world evolve in the face of new challenges, nursing has stepped to the fore in assuming a position of leadership in healthcare. Nursing management is of vital importance in guiding both care providers and care beneficiaries towards optimal health outcomes.

Role of nurse managers

Nurse managers have long worked to ensure quality in nursing care, and respect and recognition for the work of nurses within healthcare environments. Today, nursing management aims to ensure that a vibrant and skilled nursing workforce can flourish and respond effectively to the diversifying needs of healthcare recipients and the general public.

This two-part task is the modern mission of nursing management – one that entails ensuring healthcare environments are responsive to the needs of providers and users. In nursing, healthcare is defined as a symbiotic relationship of trust, respect and knowledgeable exchange between systems designed to develop and sustain health and populations able to access and fully benefit from such systems.

Increasingly, the healthcare models of modern societies resemble macro versions of the nurse-patient relationship in their pursuit of holistic approaches to health.

As leaders in nursing care, the prerogative of nurse managers is to provide leadership in ensuring that health systems deliver quality outcomes to all they serve. Patient satisfaction and safety are foremost on the nursing agenda and the strategies by which these are achieved fall within the area of expertise of nursing management.

Patient satisfaction and safety are rooted in the quality of care available within healthcare systems. The free flow of valuable information from care provider to user, and vice versa, is a first step in ensuring satisfaction and safety. Patients must be equal partners in their care, enjoying open and informative dialogue, and two-way information sharing. Community outreach through education and awareness raising is vital in creating an overall social environment conducive to healthy living and healthy exchanges between populations and the health systems they rely on.

The extension of healthcare services into the domain of the public is another means by which nursing has brought, and continues to bring, healthcare to all that need it. Home care initiatives and telenursing are but two examples of concrete initiatives that increase flexibility in healthcare delivery and widen the reach of this invaluable resource. Nursing management is essentially a leadership portfolio for nursing professionals. In their capacity as leaders, nurses have increased their scope of practice, providing new avenues of delivery, which reflect the needs of populations, and the resources provided by innovation. Leadership is growth and strong leadership is critical in order to maximize effectiveness and efficiency in healthcare.

Healthcare systems are extremely complex organizations with relatively simple goals. Nursing is a profession with a core body of skilled professionals, rich in talent and ability, in the service of public health. Nursing management is an interface whereby the complex resources of modern healthcare are marshalled to achieve one simple outcome: good health.

As noted above, patient safety,
Clinical care focus: clinical and nursing care

Such personal circumstances need to be taken into account and nurses are well placed to understand the personal and living circumstances of people and to use this knowledge in providing individualized care.

Cultural awareness
Knowledge and awareness of culture is essential in order to meet the needs of patients. There is a need for nursing managers to ensure culturally appropriate training and education of their nursing staff in order to provide patient care that is culturally suitable. Nursing management must foster in their colleagues a culture of understanding that reflects the cross-cultural and democratized societies we inhabit today. Cultural and social sensitivity is no longer simply a soft additional option for nurses working internationally or in the inner cities. Today, almost any hospital anywhere in the world will be serving patients from a broad cultural spectrum. The International Council of Nurses code of ethics states clearly that, “in providing care, the nurse promotes an environment in which the human rights, values, customs, and spiritual belief of the individual, family and community are respected”.

Because patient safety and satisfaction is in direct relation to quality of care, nurse managers must create an environment that accommodates the nurse’s mandate to deliver individualized care and guarantee patient safety and satisfaction.

Creating safe and comfortable environments
Nurse managers have a particularly salient role to play in creating safe and comfortable environments within that most central of healthcare environments: the hospital. A variety of traditional managerial and healthcare cultures have long ensured that hospitals are impersonal and isolating settings in which patients are ill at ease.

Nurse managers have brought a culture of healing and caring to the hospital environment, a culture of individualized care plans that humanize an unfamiliar and sometimes threatening setting. Healthcare clients have taken on a new status within health services: today we talk regularly of expert patients who are key stakeholders in the care they receive. Nursing has played a significant role in shaping hospital environments in which individuals can flourish in these new roles as active participants in their own care.

Nurses make up the majority of healthcare workers on every continent, placing them front and centre within healthcare environments globally. The centrality of the nursing role has come into even sharper focus as a result of near universal health policy reforms: nursing has shone as an effective and affordable means of delivering healthcare to a wide swath of humanity.

Nurse managers are directly responsible for managing nursing services, and ensuring that these are in turn well equipped to manage other health services. While they may be employed within programme areas, departments or organizations where they report to nurse or non-nurse managers, in all cases it is the nursing profession that is accountable for the scope and standards of nursing practice.

In supporting quality of care, nurse managers must foster an environment where nurses can fulfil their potential to deliver individualized care – and advocate for and defend this environment every day. In virtually every country on earth, healthcare systems are faced with growing nursing shortages. These shortages decrease the effectiveness of individual nurses and healthcare workers in general and, in turn, increase the dangers faced by healthcare providers and clients. They feed the phenomenon of nurse migration away from nations in desperate need of healthcare workers and act as a deterrent to young generations of nurses and potential nurses.

In an age of increasing dependency on the care of nurses, these shortages are the first step into a vicious cycle that undermines healthcare effectiveness. These shortages are a management challenge for nursing. The leadership of nurse managers is needed in order to steer health systems towards a modus operandi that guarantees professional and personal satisfaction and safety to all their members. Healthcare systems are an open-ended agreement between provider and client, and this agreement is one that must be entered into and accepted at both ends: respect and regard are the due of provider and client. One cannot thrive without the other.

New approaches
The professional fundaments of nursing science (care, healing and nurture) have ensured that the work of nurses is particularly well suited to the needs of
communities and societies: nurses approach populations not as hives of disease and infirmity from which a cancer must be driven out, but as a healthy group entirely capable of maintaining levels of well-being through care and education. As a managerial vision, nursing is inherently optimistic and decidedly grounded.

Nursing management is a field in full bloom. As societies in both hemispheres retool their health systems to tackle challenges such as the ageing of populations, new and emerging diseases, the retention of health professionals, access to health services and the bottom line, nursing has emerged as a vital conduit for positive evolution. Many of the healthcare precepts that have filtered into the mainstream through nursing, are now deployed as effective arms of modern health services. Nursing management must position itself to further exploit the potential of nursing to improve the health of populations globally, while guaranteeing that nursing remains a viable and satisfactory personal and professional vocation for all nurses.

Leadership
Achieving this demands of nurse managers that they dispose of a wide spectrum of skills honed through training and education. Management is leadership: it is the ability to voice the needs of those one represents and transform needs into progress, translate vision into action.

Achieving quality management in nursing requires an investment in nurse leaders and in broadening the definitions and outcomes of nursing education. The nursing profession must play its part and support the evolution of new and existing disciplines of the nursing sciences, designed to foster leadership in nurses and maintain a vibrant academic and professional environment in the field of nursing management.

Nursing leadership includes coaching and mentoring others, and creating an environment and conditions for ongoing development and quality care. Leadership through professional nurses associations both develops the profession and positions it strategically to influence health planning and policy.

Maintaining networks and linkages with and between key stakeholders is essential to effective leadership and management. Also critical is the ability to continually assess the environment, to monitor performance, and to create or adapt to change as required.

Educational preparation for management will vary according to the roles and career paths of nurse managers. Professional nursing associations can offer support by identifying relevant opportunities and promoting these to their members. Individual nurses must take responsibility for their own education, and develop the ability to plan and manage this strategically.

Nursing management is a vital part of an effective healthcare system. It is a partner in professional satisfaction for nurses and a partner in achieving good health for individuals and societies alike. By investing in nursing managements, we are investing in the health of populations and in the positive evolution of healthcare in our times.

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References
THE IMPACT OF DIABETES ON HEALTHCARE AND HOSPITALIZATION

ARTICLE BY MARTIN SILINK, AM, MD, FRACP

Abstract

DIABETES IS A SERIOUS CHRONIC CONDITION ASSUMING EPIDEMIC PROPORTIONS. PEOPLE WITH DIABETES HAVE A THREE FOLD GREATER HOSPITALIZATION FREQUENCY THAN CONTROLS. A CONSERVESTIVE ESTIMATE IS THAT 15% TO 20% OF ALL HOSPITALIZED PEOPLE HAVE DIABETES. THE VAST MAJORITY OF HOSPITALIZATIONS IN DIABETES OCCUR FOR CO-MORBID CONDITIONS AND NOT PRIMARILY BECAUSE OF THE DIABETES. OPTIMIZED DIABETES MANAGEMENT IN HOSPITAL IMPROVES HEALTH OUTCOMES AS WELL AS REDUCING HEALTHCARE COSTS.

Diabetes is a serious chronic condition that is assuming epidemic proportions worldwide. The International Diabetes Federation (IDF) considers it essential for hospitals to make provision for good diabetes management and care. Expert diabetes care can improve the quality of life for sufferers and their families, while at the same time reduce the development and progression of diabetes complications, improve health outcomes of hospitalization and reduce the enormous economic impact of the condition.

A serious condition on the rise

Diabetes is the fourth or fifth leading cause of death in most developed countries and it is estimated that each year, over three million deaths worldwide are attributable to related causes. It also contributes to higher rates of morbidity as people who have the condition are at increased risk of heart disease, blindness, kidney disease, lower limb amputations and other chronic conditions. In 2003, IDF estimated that approximately 194 million people around the world had diabetes. By 2025 this figure is expected to rise to 333 million, amounting to 6.3% of the world’s population. Yet, in many parts of the world, the seriousness of the condition and its psychological and economic impacts are largely unrecognized.

It is estimated that 90 to 95 percent of all diabetes cases have type 2 diabetes, a complex metabolic disorder in which there is a combination of resistance to the action of insulin and insulin deficiency. Type 1 diabetes is an autoimmune disease in which the body’s insulin producing cells are destroyed; it represents 5% to 10% of cases and occurs most often in children and young adults. It is particularly the prevalence of type 2 diabetes that is rising at an alarming rate throughout the world. The increase is due to a series of factors: it is a consequence of population growth, longer life expectancy, urbanization and obesity, which in turn is due to physical inactivity and unhealthy dietary patterns. Type 2 diabetes occurs most often in adults over the age of 40, although as a consequence of increased obesity and inactivity among the young, it is now also affecting children and young adults. Type 2 diabetes is usually of insidious onset and up to 50% of sufferers are unaware of their condition and are undiagnosed.

Demographic changes trigger the diabetes epidemic

Although all risk factors are important, it appears that longer life expectancy will have a considerable impact on the increase of diabetes in the next 25 years. Estimates that the number of people with diabetes is expected to nearly double between 2000 and 2030 are based upon demographic changes only. Most of the expected population growth in the next 25 years will be concentrated in the urban areas of the world. However, the most striking demographic change across the world in the next 25 years will be the increase in the proportion of people over 65 years of age. A study reported by Sarah Wild, Gojka Roglic et al, in 2000 on global diabetes prevalence by age and sex showed the importance of age on the prevalence of diabetes.

As Figure 1 illustrates, the prevalence of diabetes is increasing with age and, in 2000, over 10% of the population aged 60–64 years had the condition. In developing countries, the majority of sufferers are in the 45 to 64-year age range. In contrast, the majority with the condition in developed countries are aged over 64. By 2030, assuming that age-specific prevalence remains constant, it is estimated that the number of people with diabetes over 64 years of age will be over 82 million in developing countries and over 48 million in developed countries.

To summarize, even if the prevalence of obesity remains constant in the next 25 years, which seems unlikely, it is expected that the diabetes epidemic will continue as a consequence of longer life expectancy, population ageing and urbanization. Given the increasing prevalence of obesity in many countries of the world, it is likely that the figures given, provide an underestimate of future diabetes prevalence.

The costs of diabetes

IDF estimates that the annual direct healthcare costs of diabetes worldwide, for people in the 20-79 age bracket,
Clinical care focus: diabetes

to be at least 153 billion international dollars, and may be as much as 286 billion US dollars, or more. A study on the economic costs in the US in 2002 indicated that people with diabetes had medical expenditures that were approximately 2.4 times higher than those that would be incurred by the same group in the absence of diabetes. Direct medical and indirect expenditures attributable to the condition were estimated at 132 billion US dollars. Direct medical expenditures alone totalled 91.8 billion US dollars of which 25% (23.2 billion US dollars) were attributed to direct care of uncomplicated diabetes and diabetes-related supplies, 27% (24.6 billion US dollars) were attributed to chronic complications related to the condition and 48% (over 44 billion US dollars) to general medical conditions (such as visits or in-patient days where the primary diagnosis is neither diabetes nor one of the usual chronic complications – heart, eye, kidney disease, lower limb amputations, etc.). Indirect medical expenditures to the amount of 40 billion US dollars referred to lost productivity due to disability and early mortality.

In addition, the study shows that 51.8% of direct medical expenditure is incurred by people with diabetes over 65 years of age. For instance, sufferers over the age of 65 would visit their physician twice as often as people with diabetes in the age range between 45 and 64 years. The use of the emergency department is also substantially higher for the population over 65 years of age compared with the groups between 45 and 64 years, and under 45 years.

Although people with diagnosed diabetes only represent slightly more than 4% of the United States population, it is estimated that almost one in five US dollars is spent on healthcare in the United States is for a person with diabetes. Also, because the prevalence of type 2 diabetes increases with age, people with diabetes incur a substantial proportion of long-term healthcare services. For example, more than one dollar in four is spent on nursing homes, home health services and hospice care providing for diabetes sufferers.

The projected increase in the number of people with diabetes suggests that the annual cost of diabetes could rise to an estimated US dollars 156 billion by 2010 and to 192 billion US dollars by 2020 (based on the 2002 value of the dollar). Hospital in-patient costs for the treatment of complications are the largest single contributor to direct healthcare costs of diabetes. Of these complications, cardiovascular disease represents the biggest burden. In Spain the CODE-2 Study of costs in Type 2 diabetes indicated that hospital care accounted for 32% of healthcare costs.

Hospitals face an increasing number of “patients” with diabetes

As a general statement people with diabetes have a three fold greater hospitalization frequency than people without it. The risk of hospitalization for any reason is increased in diabetes. This risk increases with age, duration of diabetes and the number of diabetic complications (macro or microvascular).

The true prevalence of diabetes in hospitalized patients is not known as there is under-reporting of diabetes as a principal or subsidiary diagnosis. Umpierrez reported diabetes in 26% of patients admitted to a community hospital, with a further 12% having previously undiagnosed diabetes or stress induced high blood glucose levels during critical illness. Because its prevalence rises with age, the particular demographic of a hospital may well determine the prevalence of diabetes amongst its patients. However, given the ageing of the population and the fact that people with diabetes have an increased need for hospitalization, a conservative estimate is that 15% to 20% of all hospitalized people, regardless of the reason for their hospitalization, will have diabetes.

The vast majority of hospitalizations occur for co-morbid conditions (especially cardiovascular, cerebrovascular and peripheral vascular diseases, which are complications of diabetes) and not because the patient’s condition required acute therapy. As a consequence, diabetes management is rarely the focus of care during hospitalization for people with diabetes and issues such as glucose control, optimization of diabetes management and re-education of self-care of diabetes.
management are not usually addressed in hospital during such admissions.

Controlling high blood glucose levels improves outcomes

Studies have shown that improved glycaemic control with the use of insulin therapy may significantly improve morbidity and mortality in hospitalized patients with high blood glucose levels, with or without a previous diagnosis of diabetes. Whatever the cause, the presence of an elevated blood glucose level on admission to hospital has been associated with adverse hospital outcomes. The evidence was compelling enough for the American College of Endocrinology and the American Association of Clinical Endocrinologists to issue a joint position statement emphasizing the need for improved glycaemic control (preprandial target glucose level of 6.0 mmol/l (110 mg/dl)) regardless of whether the patient has or has not had a previous diagnosis of diabetes. The benefits of improved control may relate to the deleterious effect of high glucose levels on immune function and clot formation, while others relate to the beneficial effects of insulin therapy per se on improving heart contractility and lowering inflammatory mediators.

Diabetes expertise and management systems needed

The above facts underline the need for diabetes management expertise to be available and accessible in hospitals now and even more so in the future. Hospitals should have systems in place for the management of diabetes sufferers. This management needs to include access to education about the condition for people who are in hospital for reasons other than their diabetes.

The recommendation for tighter control of blood glucose levels in hospitalized patients creates new challenges for hospitals. The increased emphasis on lowering blood glucose levels increases the risks of hypoglycaemia (low blood glucose). Insulin is a potent medication which demands high staff overview and surveillance. Hospital staff need to be able to respond quickly to hypoglycaemia and have access to immediate bedside glucose monitoring and appropriate medication (oral glucose for mild hypoglycaemia; intravenous glucose or glucagon for severe hypoglycaemia). Nursing staff need to be expert in bedside monitoring of glucose levels and quality assurance programmes need to be in place to ensure reliability and accuracy of results.

In hospitals, therapeutic outcomes are usually superior when standardized treatment protocols are in place. A team approach is needed to establish, maintain and continually review the effectiveness of such systems. Hospitals also need to have in place systems for the initial education in self management of the patient with newly diagnosed diabetes. Referral pathways for ongoing care of the condition after discharge need to be available.

New systems to deal with challenges

In conclusion, the rise in diabetes and the compelling evidence that controlling blood glucose levels improves health outcomes in hospital has led to a new set of challenges for hospitals. IDF recommends that hospitals need to consider new systems to deal with these challenges. The benefits of tight blood glucose control to the patient are considerable and the demonstrated reductions in bed days, hospital costs and improved outcomes justify the increased emphasis on improved glucose control.

References


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Professor Silink has been a member of many professional societies including the American Diabetes Association, the European Association for the Study of Diabetes, and the Lawson Wilkins Pediatric Endocrine Society (USA). Previous appointments include President of the International Society of Pediatric and Adolescent Diabetes (ISPAD) (1999-2002) and Chairman of the IDF Consultative Section on Childhood & Adolescent Diabetes (1994-2003).

Professor Silink was awarded the IDF Presidential Outstanding Service Award in 2000. He has been honoured a Member of the Order of Australia.
ELECTIVE FULL-BODY SCREENING EXAMINATIONS: A PLEA FOR MRI

ARTICLE BY: MATHIAS GOYEN (PICTURED LEFT) AND JÖRG F DEBATIN, MD, MBA

Abstract

The use of imaging is generally focused on detecting and characterizing suspected or known disease in symptomatic patients. Experience with preventive imaging, aiming at the detection of disease prior to its symptomatic manifestation, is limited. Screening involves the evaluation of asymptomatic individuals at risk for the presence of a particular disease. A screening test is designed to detect a targeted disease at a stage which still permits treatment to succeed in avoiding morbidity and/or mortality. Diseases worthy of screening should be associated with high morbidity and/or mortality if proper treatment is not applied sufficiently early. The screening test itself must not cause harm to the examined patients. For the test to be cost-effective, the target disease should be highly prevalent in the screened population.

To date, radiological approaches to screening have included chest radiography for tuberculosis screening throughout Europe in the 1960s and 70s and two decades later mammography. While mammography has become well established in the United States as well as in several European countries, it remains a subject of ongoing controversy. Recently, the use of multi-slice computed tomography (CT) has been suggested for preventive imaging. Driven by dramatic increases in scanning speed, early manifestations of cardiovascular disease, as well as lung and colon cancer are being targeted with this technology. Recently, elective full-body CT-screening services have become available for health-conscious individuals in the United States and are now opening in Europe too. However, all of these CT-based approaches are burdened by considerable exposure to ionizing radiation. In April 2002 the US FDA (Food and Drug Administration) issued the following statement: “A CT examination with an effective dose of 10 mSv may be associated with an increase in the possibility of fatal cancer of approximately one chance in 2000. ... nevertheless, this small increase in radiation-associated cancer risk for an individual can become a public health concern if large numbers of the population undergo increased numbers of CT screening procedures of uncertain benefit.”

At this time the FDA knows of no data demonstrating that whole-body CT screening is effective in detecting any particular disease early enough for the disease to be managed, treated or cured and advantageously spare a person at least some of the detriment associated with serious illness or premature death. Public health agencies and national medical societies – the American College of Radiology, the American College of Cardiology, and the American Heart Association do not recommend CT-screening.

Despite the disclaimers, the public remains interested in CT screening, as shown by the rapid growth of private imaging boutiques often located in malls offering elective full-body CT-screening. It is predicted that within five years from now there could be as many as 4000 screening centres in the United States alone. Offering unreimbursed medical screening services puts radiologists in a new market, the consumer market and family doctors are afraid that they lose much of their power over patients as the latter can bypass the healthcare system and directly go for elective screening services. Radiologists have to be aware that no procedure that uses ionizing radiation should be promoted to stimulate patient demand until its efficacy has been demonstrated. Furthermore, no agreement exists so far as to the recommended age of commencement or the proper interval between follow-up studies.

In Europe the legal situation is different. The European Union has passed legislation prohibiting the use of exams based on ionizing radiation for screening purposes except mammography. Recognition thereof has focused attention on magnetic resonance imaging (MRI). Lack of ionizing radiation and contrast agents void of any nephrotoxicity in conjunction with high diagnostic accuracy based on unsurpassed soft-tissue contrast as well as high spatial and temporal resolution make MRI a natural candidate for preventive imaging. MRI emerged as the imaging modality of choice in the evaluation of many organs. Among them, the central nervous system features prominently: inflammatory, neoplastic and vascular disease are reliably detected.
Radiologists have to be aware that no procedure that uses ionizing radiation should be promoted to stimulate patient demand until its efficacy has been demonstrated.

Similarly, the arterial system is accurately assessed with MR angiography (MRA). Compared to catheter-based angiography, MRA has been shown to be equivalent in virtually all territories including the carotid, the renal and the peripheral arteries. Motivated by the systemic nature of atherosclerotic disease, the concept of whole body MR angiography, encompassing the arterial tree from the carotids to the trifurcation vessels has recently been introduced. In addition, cardiac MRI permits the evaluation of regional and global myocardial contractility, valvular function, as well as myocardial viability and perfusion. Finally, MR imaging has been shown to be capable of detecting mass lesions exceeding 10mm in the lungs and the colon with high sensitivity and specificity.

To date cost concerns and lengthy data acquisition times have prohibited the use of MR for preventive imaging. Recent hardware and software advances combining towards faster data acquisition over several body regions have opened new possibilities. Thus, a comprehensive 60-minute MR protocol permitting the detection of early cardiovascular disease as well as lung and colon cancer has been developed.

Full-body MR-screening
We are taking a head-to-toe look at asymptomatic individuals in a 60-minute comprehensive MR-based screening exam containing five components:

1. The cerebrum is assessed by fast T1- and T2-weighted spin echo as well as diffusion-weighted imaging. The intracerebral arterial system is visualized by axial 3D Time-of-Flight MR angiography.

2. Whole-body MR angiography is based on the acquisition of five slightly overlapping 3D coronal data sets acquired in immediate succession using a fast 3D FLASH sequence. Each data set is collected over 12 seconds. The addition of a 3 second pause for table movement from one body region to the next translates into a total acquisition time of 72 seconds. For arterial enhancement paramagnetic contrast Gadobutrol, Gadovist® 1.0 (Schering AG, Berlin/ Germany) is administered intravenously at a dose of 0.2 mmol/kg bw.

3. Axial HASTE imaging (slice thickness 8mm) of the thorax is performed to depict the pulmonary parenchyma as well as cardiac morphology.

4. Subsequent functional assessment of the heart is based on segmented steady-state free precession-cine-measurements (TrueFISP) collected in the left ventricular short axis. Standard valvular views (4-chamber, 2-chamber, outflow) are added. A 3D segmented inversion recovery turbo gradient-echo-sequence, collected in both the short and long axis about 20 minutes following the contrast administration for whole-body MRA, is assessed for areas of “late enhancement” denoting myocardial infarction.

5. For MR-colonography all subjects undergo a standard preparation for bowel cleansing. Scopolamine (40mg) is administered intravenously to minimize bowel motion. The colon is filled with 1500-2500 ml of warm tap water via a rectal enema. T1w 3D gradient echo images (96 sections) of the colon are collected breathheld over 23 seconds before as well as 60 and 90 seconds after the intravenous administration of gadobutrol at a dose of 0.1 mmol/kg BW.

Preliminary results
Within a 12-month period 300 asymptomatic individuals (249 male, 51 female, age range 31–73 years, mean age 49.7 years) were examined. All volunteers tolerated the comprehensive MR-examination well.

Vascular disease
Twenty-one per cent of the 300 subjects revealed signs of cerebrovascular, peripheral vascular or cardiovascular disease including macro- or microangiopathic changes within the cerebrovascular system or unknown cerebral infarctions. One individual showed a tandem stenosis of the extracranial internal carotid artery.

In 20 subjects (7%) whole body MR-angiography revealed relevant signs of atherosclerosis, including two high-grade stenoses of the proximal internal carotid artery, a focal dissection of the infrarenal aorta in a 40 year old smoker, and a dissection of the superficial femoral artery (52 year old smoker). In two subjects one intracerebral aneurysm (size 5mm) and one fenestration of the basilar artery as risk factor for the development of cerebral aneurysms were detected.

Cardiac MRI revealed a previously unknown subendocardial infarction in a 62 year old male, demonstrated by late enhancement. Five individuals, all males, showed regional or global myocardial dyskinesia with reduced ejection fractions (below 50%). Seventeen subjects revealed left myocardial hypertrophy, 11 had valvular disease.

Pulmonary disease
The HASTE data sets revealed nine pulmonary lesions ranging in diameter between 3 and 7mm in five subjects. Of those, seven were classified as probably benign. Only in two cases computed tomography was performed for further evaluation; in these cases the lesions could be confirmed to be benign, the single masses were found to be partially calcified.

Colonic disease
Twelve examinations of the colon showed unequivocal polyps ranging in diameter between 5 and 13mm. Diverticular disease was diagnosed in 15 volunteers, which was rated as “non-relevant side finding”. All colonic polyps were confirmed at colonoscopic polyectomy.

Other findings
Beyond the targeted organs (arteries, brain parenchyma, heart and colon) additional findings were reported, particularly in the abdomen, such as renal or liver cysts, cholecystolithiasis and vertebral hemangiomas. Beyond one renal tumour, no other malignancies were encountered.

Conclusions
All five parts of the comprehensive MR-examination are based on well established and highly accurate protocols. Image quality was sufficient to readily detect pathologies in the targeted organ...
systems as well as in the surrounding tissues. The incidence of relevant findings in an asymptomatic population identified in both targeted and non-targeted organs is reasonably high, underscoring the potential impact of such an MR-based screening strategy.

Clearly, the limited number of individuals cannot provide relevant data regarding the value of MR-based screening from a societal perspective. This will need to be accomplished in larger scale studies. For this reason, we have started a population study of 12,000 asymptomatic subjects over the next six years to compare the financial cost with the health care benefits, i.e. the life-years saved. The outlined protocol could become a cost-effective screening method for large populations, with none of the concerns about radiation exposure associated with consumer CT-scans in the United States.

Public health concerns associated with MRI are minimal. Thus, exposure to magnetic resonance as a patient has never been associated with any harmful side-effects. Side-effects may however be associated with the administration of paramagnetic contrast agents, which must be considered an integral part of the proposed exam. Although rare, anaphylactoid reactions may occur. Hence individuals need to be monitored during the examination procedure. Nephrotoxicity, a worry with iodinated contrast agents on the other hand, is of no concern.

In conclusion, we think that our data point toward an increased use of MRI for preventive imaging in the future.

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References (continued)


CURRENT AND FUTURE CHALLENGES FOR THE HOSPITAL LABORATORY

ARTICLE BY PROFESSOR CHRISTOPHER P PRICE

Abstract

TECHNOLOGY INNOVATION IN LABORATORY MEDICINE IS OUTSTRIPPING THE ABILITY OF HEALTHCARE ORGANIZATIONS TO IMPLEMENT IT EFFECTIVELY. EXPLOITATION OF THIS TECHNOLOGY IS OFTEN HAMPERED BY THE INABILITY TO LEVERAGE THE VALUE OF THE INVESTMENT BECAUSE THE BENEFIT LIES BEYOND THE BOUNDARIES OF THE BUDGETARY SILO. INvariably NEW TECHNOLOGY ALSO Requires A CHANGE IN CLINICAL PRACTICE.

The hospital laboratory provides one of the most under-utilised resources in the healthcare system, not from the point of view of the efficiency of the service but from the potential impact it can have on health outcomes. Indeed the efficiency of the service, and the technology that it embraces, is beginning to outstrip the ability of users of the service, to change the way that medicine is practised in order to make the best use of the opportunity that it presents. Three core technologies alone serve to illustrate the point at this stage in the debate – namely the discoveries from the “human genome project”, automation and nanotechnology. Thus there will be a whole raft of newly discovered biomarkers bursting upon the scene in the next decade, automation of the majority of current laboratory tests, as well as miniaturized analytical devices that could make the large central laboratory redundant. This vision argues strongly for recognizing the current challenges and embarking upon a process of radical change that recognizes the way that healthcare will be delivered ten years from now.

However, will the greater change be within the laboratory service, or amongst the recipients of the service? Herein lies a second, and connected, important question – is the laboratory perceived as a supplier of results, or of information and knowledge?

Challenges in present laboratory service organization and provision

The second question is important, because the productivity of most laboratories is measured by the number of tests results reported; over the last three decades that productivity has risen dramatically – by several hundred percent. The efficiency has also risen, with significant reductions in the turn around time for delivering results – especially for the more esoteric tests. The main driver of this improved efficiency has been an increase in automation of analytical methods and the manufacture of high quality reagents. Thus the laboratory technologist has moved from being an analyst in the true sense of the word, to an engineer responsible for ensuring the maintenance of analytical methods performed by sophisticated analyzers.

The challenge now lies in the pre- and post-analytical phases of the process – and it is in these phases where many of the errors lie today. Appropriate timing of collection of samples, identification of samples and fast delivery to the laboratory are all important to obtaining reliable results. Similarly, ensuring accurate reporting of results, with interpretation and easy availability to the requester are essential. Several of these elements are facilitated through the use of an integrated IT network that links the electronic request from the doctor or carer to the laboratory analyzer, and the result/information back to the requester/carer and into the electronic patient record. The link between the information and the decision making of the doctor/carer still remains a challenge both in terms of the availability of the information at the most appropriate time, and also in how the information is used. Thus there are examples in the literature where the faster availability of results does not appear to have improved the speed of decision making, therefore not giving the opportunity for a shorter length of stay or consultation period. On the other hand (rapid) access to a laboratory result is only helpful if it is used properly, perhaps illustrated best by the positive impact of telephone support systems in the management of blood glucose results, in the care of diabetes.

New technology presents a major challenge to the payer because of the way that laboratory services are funded and managed. Laboratory services suffer from the vagaries of a system based on “silo budgeting” and even “silo management”. This approach mitigates against the best use being made of the laboratory services, where the benefits are always to be seen in “another silo”. The emphasis is always on efficiency (within the silo), rather than effectiveness (across a family of silos). The practical consequence of this situation is that new diagnostic technologies are slow to be introduced, and both clinical and economic outcomes.
The foundation of any service lies in its personnel, and this is the area of the greatest challenge in laboratory medicine. Are compromises. It is possible that management based on “payment by results” will challenge this approach – although an earlier incarnation of this philosophy, the “diagnostic related groups” (DRGs) does not appear to have had a positive impact.

The foundation of any service lies in its personnel, and this is the area of greatest challenge in laboratory medicine. On the one hand there are significant shortages in the staffing of many laboratories, with recruitment and retention of staff being a major issue. Whilst it could be argued that technology could solve that problem, the rigid approach to “silo budgeting” even within the laboratory service can negate that opportunity. On the other hand the opportunity to take a broader perspective on the roles and responsibilities of laboratory service, with staff working beyond the conventional boundaries of the laboratory, including more point-of-care testing, requires breaking down of the “silo barriers”. A clear strategy for re-profiling of staff, which has at its core a vision of a more integrated service is essential to solving the future staffing problems in the laboratory.

Changes in present healthcare organization and provision

Two of the major changes featured in most health systems across the world, and not entirely unconnected, are the desire to keep patients out of hospital, and empowering patients to take greater personal responsibility for their own health. One of the underlying reasons for these trends are the escalating cost of healthcare – the above providing a more immediate, and (hopefully) a longer term solution, respectively. In practical terms however these strategies represent a conflict of change – especially for the laboratory services. On the one hand the practical aspect of patient care is focussed on “keeping patients out of hospital”, whilst at the same time economies of scale in the provision of laboratory services are directed at the centralization of services into core laboratories, possibly as part of local area networks. It is obvious that the economy of scale is best achieved by use of a large centralized core laboratory, preferably located close to the largest proportion of clinical activity generating the work. However if a rapid turnaround service is required, and a large proportion of the work is coming from distant sites then the core laboratory is only going to be the solution if there is a huge investment in logistics (transport and IT).

One of the increasing healthcare burdens today is the management of chronic disease. There are considerable efforts being made to shift this sector of care away from the hospital to the community, and even into the patients’ home. This is not a decision based purely on economics, but also based on some evidence of improved care probably resulting from a number of factors. One of the key factors is increasing access for patients to care, increasing the opportunity for improved compliance with care packages. This increased access increases the opportunity for counselling and greater involvement of the patient with their disease management.

Technology solutions

IT and connectivity. Minimizing errors and maximizing access to results underpin the investment required in IT. Electronic requesting and unique identification of patients and samples (e.g. by bar coding) minimizes the most common pre-analytical error, whilst also reducing staff time requirements for sampling and laboratory reception areas. Most laboratories have information systems that manage all of the data generated, and so the next level of investment is concerned with the transmitting of data back to the requester and into the patients record. Where testing is performed outside of the laboratory then connectivity of equipment to the patient record is equally important. The technology to achieve these benefits already exist – and are typically in common usage in supermarkets!

Automation

The automation of laboratory processes brings improved quality, as well as efficiency. The improved efficiency comes from reduced loading time, transfers between machines and aliquoting prior to storage. This enables faster throughput of samples, higher workload capacity and a reduction in staff requirement – which may prove to be a major benefit in regions where staff recruitment and retention is problematic.

Point of care testing

This is probably the area where technology has outstripped the ability of the health services to implement it to greatest effect. It is now possible to miniaturize all of the tests currently performed on blood or urine, in robust single use, pre-calibrated devices, which can be used by a person with minimal training. Crucially these devices can be used at the time of the clinical consultation – or in an emergency when the result is required to make a life saving intervention. Thus, for example, it is possible to detect drugs and poisons, blood gases and electrolytes, cardiac markers, D-dimer, cholesterol, chlamydia, HbA1c, and prostate specific antigen using a small amount of blood in a short space of time – at the time that the doctor is considering what action to take. This is the important point about this technology.

It is probably in chronic disease management that we will see the greatest impact of this technology, where the doctor can see the patient (with, for example, diabetes or heart failure), and check the status of their therapy at that clinic visit – making any adjustments based on the results obtained. The advantage is a clinic visit saved and a better interaction between patient and carer – with longer term benefits.

The value of laboratory medicine

The metrics of value will depend on the evaluator, but to the patient it is improved morbidity and mortality – with the tangible consequences being a pain free lifestyle with the freedom to move, see, hear and understand, etc. To the clinician it may be measured in terms of the ability to make decisions that impact favourably on patient morbidity and mortality –
If a laboratory investigation helps to maximize benefit, minimize risk or can improve the efficiency of care, then it is worth investing in that test.

primarily the effectiveness of care. To the healthcare provider organization or payer organization, the value will be more of an overt balance between maximization of benefit and minimization of risk at reasonable cost. Thus the patient will want to know that the best tests are available, at the optimal time to offer the best quality of care. The provider may have to make more complex decisions depending on the resources available – but with a common purpose of maximizing benefit, minimizing risk, and at reasonable cost. If a laboratory investigation helps to maximize benefit, minimize risk, or can improve the efficiency of care (e.g. by reducing length of stay, thereby improving overall cost) then it is worth investing in that test. However that is taking a “cross silo perspective”, which is not typically how laboratory services are managed.

Change management and leveraging value
The point was made earlier that the benefit from the “laboratory silo” is always seen in “other silos”. Some examples include:

+ improving the management of diabetics (e.g. by use of self blood glucose monitoring, and regular checking of the HbAlc and urine albumin creatinine ratio) reduces the rate of onset of complications, which would be seen in a reduction in patients requiring dialysis;
+ in addition better management is demonstrated by using point-of-care testing, thus reducing the number of clinic visits;
+ a rapid cardiac marker service in the emergency room reduces the number of unnecessary admissions to the coronary care unit, reducing the cost of the unit;
+ a rapid screening service for chlamydia reduces the complications of infection because patients don’t have to make a second visit to collect the result and the drug treatment – which is important because a significant number of patients do not return for the second visit;
+ an intra-operative parathyroid hormone measurement reduces the need for re-operation in a significant number of patients, which carries a risk, but most importantly has enabled the procedure to move to a day case option.

These are all documented examples, where a laboratory test, often at the point-of-care, has generated a tangible saving, but that saving has only been possible by a change in clinical practice.

So, leveraging the real value from a laboratory test will invariably require a change in clinical practice. This requires evidence from good outcomes studies, economic modelling of the new model of care, and then a good change in management strategy. Who has the greatest challenge? 

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Further reading
CP Price and Bill Christerson. (Eds) Evidence Based Laboratory Medicine: from principles to outcomes. AACC Press, 2003, pp208.
Developments around laboratory medicine are very active at the moment. Technology progresses ever faster and new, smarter and cheaper methodologies are emerging. There are also demands that the service provided at clinical laboratories must be fast, cheap and accurate. It is also desirable that hospital laboratories are accredited and work according to an ISO standard.

In the part of the world where I am working we have at least two big challenges for hospital laboratories, as I see it:

- recruitment and retention of qualified personnel;
- development of point of care testing (POCT) and self-testing devices.

Starting with recruitment, there are problems in finding young people who wish to become biomedical scientists. They say that salaries are too low and the possibilities for professional development are not good.

Many newly qualified students go directly on to higher studies, obtaining PhDs and rarely apply for jobs in hospital laboratories following their studies.

On the other hand there are problems finding people with the right amount of academic education to work in clinical laboratories. In Sweden laboratory managers are starting to employ people with qualifications in sciences other than biomedical laboratory science. This makes biomedical scientists concerned about the patients’ safety; if there are too many with the “wrong” competencies in any one laboratory as is necessary to keep to turnaround times and also to staff the laboratory around the clock.

As indicated earlier, we need to produce accurate test results and it is becoming increasingly difficult to staff laboratories with the appropriate competencies.

There is also the problem of retaining fully qualified staff. There are many kinds of employers, other than clinical laboratories, who want to have biomedical scientists as their employees.

Pharmaceutical companies and manufacturers of diagnostics devices often offer higher salaries, more attractive terms of employment and better career development. Consequently, many very experienced biomedical scientists are attracted to such positions.

We need to make working in clinical laboratories more interesting, establish clear career pathways and seek higher salaries for employees. We “oldies” need to emphasize the reasons why we have remained in clinical laboratories; what makes the everyday work so interesting, and what personal thrills can be obtained from it. The healthcare authorities need to see the importance of laboratory medicine within healthcare. Without biomedical scientists you cannot give proper treatment to most patients or be able to monitor treatment of different diseases.

Laboratory services only absorb 3–4% of the total healthcare cost but they are still urged to cut down their costs. This inevitably becomes an equation that cannot be realistically balanced.

The only ones who can change the development and create a better position for the clinical hospital laboratories are the people who work there. This is a challenging task for the future.

Point of care testing

In my opinion, the second challenge for the hospital laboratories is that of POCT and self-testing. This is an unavoidable development. However, we need to put our feet down and advise on how POCT should be performed and by whom.

In many hospitals a range of tests are performed in the wards, by staff who are totally uneducated in laboratory sciences and who may not even have the relevant skills in quality assessment to carry out the tests competently.

It is my belief that POCT should
Biomedical scientists should organize systems so that patients who have a test performed, such as a POCT, have the same assurance as when an analysis is performed in a hospital laboratory.

be taught and controlled by biomedical scientists from an accredited clinical laboratory. They should set up the SOPs (Standard Operating Procedures), decide what devices to use and teach quality management. Biomedical scientists should organize systems so that patients who have a test performed, such as a POCT, have the same assurance as when an analysis is performed in a hospital laboratory. As a future patient I want to be able to trust all of the results of tests which may be done on me.

Self testing
The second part of this challenge is fairly new; suddenly the pharmacies are selling many self-testing devices and this market is expanding. Here my biggest concern is not how it affects the hospital laboratories but what will be the consequences on public health if patients start to test (and treat) themselves.

A hypothetical problem is that if a patient believes they have a genital chlamydia infection, they can do a test on themselves and then buy antibiotics from the internet. If we go down this road what happens with epidemiological knowledge, or the possibility of tracing who might have been infected, and who will give advice on how to avoid spreading the illness, for example?

Conclusion
The challenges facing hospital laboratories will be ever increasing in the future, but these are the issues which are currently most apparent to me and I consider that we, as a profession, should actively do something about them. The future of the hospital laboratory is in our hands and we have to take responsibility for its future development.

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Offices held in organizations are: President of the International Federation of Biomedical Laboratory Science, Vice President of the The Swedish Institute of Biomedical Laboratory Science, and also a council member of EQUALIS – External Quality Assurance in Laboratory Medicine in Sweden.

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INFECTION CONTROL PRACTITIONERS: THEIR ROLE AND FUTURE

ARTICLE BY JEANNE PFEIFFER

Abstract

INFECTION CONTROL PRACTITIONERS (ICPs) ARE AT A PIVOTAL POINT IN THE HISTORY OF THEIR PROFESSION. THEY HAVE THE IMPORTANT EPIDEMIOLOGIC TOOLS REQUIRED TO ANALYSE DATA AND TO CREATE A CLINICAL ACTION PLAN RELATED TO THE PREVENTION OF HOSPITAL-ACQUIRED INFECTIONS. INFECTION PREVENTION IS ALSO A PRIORITY IN THE PATIENT SAFETY MOVEMENT. ICPs USE EPIDEMIOLOGIC METHODS TO ASSIST COLLEAGUES WITH OTHER ADVERSE EVENTS. ICPs ARE RECOGNIZED BY LEGISLATORS, QUALITY GROUPS AND CONSUMERS AS PEOPLE TRAINED TO PROVIDE THE INFORMATION TO SATISFY MANDATORY REPORTING OF INFECTIOUS AGENTS. ICPs ARE ALSO CRITICAL TO THE BUILDING AND MOBILIZATION OF BIOLOGICAL EMERGENCY PREPAREDNESS PLANS.

Infection prevention and control professionals (ICPs) are challenged daily with issues that directly affect the safety of patients in every country. Patients who need hospitalization are vulnerable as they place their lives in the hands of each healthcare professional that provides care for them. Consumers of care are more aware now than ever about hospital-acquired infections and in some cases are demanding to have public disclosure of infection rates by each hospital. Third party payers are increasingly more interested in the cost of adverse events on the bottom line. While ICPs support the consumer’s right to know the information, they realise that this data is complicated to collect and to interpret. These ICPs are leading the way to demand a national standard to accomplish the work outlined in the position paper published in March 2005 by the Association for Professionals in Infection Control and Epidemiology (APIC).

If we consider the key elements that must be present to create the right conditions for anyone to acquire an infection we are constantly reminded of the public health model of the “chain of infection”. The elements in the chain are: the agent, the reservoir, the portal of exit, the mode of transmission, the portal of entry and the susceptible host. Infections may be acquired in the community or as a result of necessary interventions after being admitted into a healthcare system.

Infection control professionals around the world are challenged daily to evaluate the physical surroundings that patients are subjected to as they enter our medical systems as well as the practice standards of the professionals who care for them. They must plan for usual and unusual biological events. I am often reminded of a passionate plea from my mentor, a highly respected neonatologist in the newborn intensive care in the early 1970s who would emphasize “It is not the big things that are going to kill these babies, but all of the little details that are neglected”. This physician engaged the entire healthcare team that worked for her to focus on the details that made up the process of care for each of those infants. She led by example and expected that each of us would consistently demonstrate our understanding of these principles as we carried out our daily care of these babies.

The infectious agents that hospitalized patients are subjected to are usually bacteria, viruses and fungi. Some of these bacterial agents arrive with each of us as the normal flora of our bodies; some bacteria are more likely to be introduced in the water that we use; fungi are floating in the air that we breathe; and viruses need living cells to multiply and thus would naturally be associated with patients, staff, students, volunteers and visitors. Can you visualize the dynamics at work as our patients are subjected to the care of many who serve them?

Each of these infectious agents must be present in a dose large enough to cause disease. The place where they grow or replicate is referred to as the “reservoir”. The reservoir may be found in human or environmental sources such as standing water. The ICP needs to be evaluating the potential “reservoir” each time a new protocol is introduced or a physical change is made to the structure of the building or interior furnishings.

+ Can we adequately clean that piece of furniture between patients?
+ How will the air to vulnerable patients and staff be compromised by a future

Consumers of care are more aware now than ever about hospital-acquired infections and in some cases are demanding to have public disclosure of infection rates by each hospital.
construction project?
- What barriers must be in place to protect these patients and the staff who work with them?
- How many hours can a solution of tap water be safe to use with a disinfectant?
- What precautions do we need for the patient who is not in control of their bladder or bowels?
- What precautions do we need for the patient with the large burn wounds or the trauma patient with the open abdomen?
- Where should we restrict plants and flowers from critically ill patients?
- What challenges does delivering infants in a tub of water present to infection prevention?
- Reservoirs must be constantly evaluated and removed or contained to protect others.2
- How would the plan change if a natural or man-made biological event should occur?
- Are we prepared for the first unusual event?
- How quickly can we increase capacity should a community outbreak affect the hospital?

The “portal of exit” is the next component of the chain...This is the place where the agent leaves the reservoir. This may occur through spills of standing water from flowers, or from shedding from a patient whose body contains a large reservoir of a particular agent, or from splattering of blood and body fluids during a procedure, and so on. Procedures must be in place to address cleaning of the environment between patients, daily while the patient occupies the bed and after accidental spills.

Our healthcare providers become the key performers in the patient care theatre. The values they hold dear are played out minute by minute during their working day. It is their understanding of the “mode of transmission” and their vigilance to the details of preventing agents from being transmitted through the air or by direct or indirect contact that is the success factor that can be measured. Studies show that increased infections, bleeding, and cardiac and respiratory failure are associated with inadequate numbers of nurses. Nurses also defend against medical errors. For example, a study in two hospitals found that nurses intercepted 86% of medication errors before they reached patients.3

The best defence we all have to prevent infections in
ourselves is intact skin. We are born with natural openings into our body where diseases may gain entry such as eyes, ears, nose, mouth, rectum, vagina etc. Fortunately nature provides each of us with “normal flora” or a collection of bacteria that reside in these moist areas protecting us from other agents. Patients who enter hospitals have all of the natural openings plus more, perhaps from from accidents preceding their hospitalization, from burns or from trauma. They are admitted to hospitals for interventions that will cure their illness or treat their traumatic injuries. When these patients arrive, the healthcare team immediately begins to invade their bodies with intravenous and urinary catheters, endotracheal tubes inserted into the airway to assist with breathing when attached to a ventilator, and other invasive procedures such as surgery. Each procedure is a new entry through the protective layer of skin, putting patients at risk of infection, while the healthcare team fight to save their lives from the initial event which brought them to the facility. ICPs work with every group of healthcare providers to develop procedures that reflect the science of preventing invasion of environmental agents through the portals of entry into patients. They routinely evaluate new products or procedures, audit practices for correct disinfection steps, and review previously written policies and procedures at regular intervals to make certain that they reflect the most current national guidelines.  

Finally, we must consider the “susceptible host” or the person who is most likely to resist or develop an infection. We are all susceptible to childhood diseases such as rubella, rubeola, varicella etc. until we have had the natural disease or have been vaccinated. Ministries of health around the world have determined that the best use of public health dollars is to vaccinate the population from these viral agents. The community members who are at greatest risk of serious community acquired infections are the very young or old. The healthiest population on any given day is the working age group without underlying health issues. When any of these groups enter the hospital they come with their underlying risk factors or lack of them and their current reason for admission. We invade their bodies to stabilize them; we give them antibiotics to attack the most likely agent causing their infection and may change the protective “normal flora” in the moist mucous membranes simultaneously; and we subject them to invasive diagnostic procedures to identify the problem and determine the appropriate corrective interventions. We encircle them daily with very busy healthcare professionals and we trust that each of them will invest consistent attention to infection prevention strategies that they have been taught. The National Nosocomial Infections Study (NNIS) sponsored by the Centers for Disease Control and Prevention has been collecting infection data from hundreds of member hospitals in the United States. This surveillance data is published in an aggregate form for all hospitals to use to compare their individual infection rates with. Traditionally the data has been collected by manually extracting information from medical records, the laboratory and other sources. While this is a relatively accurate method of identifying infections, it is labour intensive and requires a sophisticated level of training to perform. ICPs are responsible for surveillance in hospitals but their time needs to be balanced with more proactive prevention activities to use the data to meet with unit managers and educators about enforcing current or introducing new best practices.  

Electronic data mining activities have recently been introduced into the marketplace. These hold promise by assisting with sorting available hospital data into epidemiologic trends that can be investigated by the ICP. These systems are able to use current laboratory information of interest to the ICP that would help identify infections faster. The current downside to this technology is the annual cost to hospitals and the shortage of current success stories that could be used to convince hospital administrators that this technology would really affect them financially. ICPs are gaining interest in the usefulness of this technology to get to critical information in “real” time. Finally, many organizations, regulators and individuals in the United States are demanding that hospitals publicly report information about hospital-acquired infections. On 7 and 8 February 2005, APIC convened a consensus conference, “Healthcare-Associated Infections: Realizing the Benefits of Mandatory Public Reporting”. Joining APIC in presenting this conference were the Centers for Disease Control and Prevention, the American Hospital Association, Consumers Union, National Quality Forum, and the Society for Healthcare Epidemiology of America. Since then six states have passed legislation in 2005 making public reporting mandatory and many more states have initiated some language in relation to mandatory reporting. This seems simple enough to a consumer, but it is a complicated process dependent upon using standardized definitions and methods for identifying infections.  

The best defense we all have to prevent infections in ourselves is intact skin. Our healthcare providers become the key performers in the patient care theatre. The values they hold dear are played out minute by minute during their working day.

Many organizations, regulators and individuals in the United States are demanding that hospitals publicly report information about hospital-acquired infections.
We fully recognize that emergency preparedness is a way of life and ICPs are the first community resource to be called on to recognize the situation and to get effective controls into place. While not all infections are preventable, we believe that healthcare professionals have the ability to contribute significantly to the prevention of these costly adverse events. We recognize that healthcare industry partners must work together to ensure that evidence-based practices are introduced into our basic health sciences curriculum and consistently adopted as the standard operating procedure thereafter in all healthcare facilities.

Author
Jeanne Pfeiffer is currently an infection control consultant in the School of Nursing at the University of Minnesota. Jeanne was the 2004 President for the Association for Professional in Infection Control (APIC). She retired in January 2005 from her career at Hennepin County Medical Center, a Level I trauma and public teaching hospital where she had 25 years’ experience as Infection Control Program Coordinator. Prior to being elected APIC’s National President, Jeanne was a member of their National Board of Directors from 1997 to 1998 and is currently serving as immediate past president.

Jeanne is co-chair of the APIC International Steering Committee. Other professional positions include Chair of APIC National Text Revision Committee 1997–2001, member of APIC National Bioterrorism Task Force 1999–2002, and member of APIC American Scientific Committee for the Global Consensus Conference in Toronto, Canada 1998–1999. She is also currently serving on the Certification Board of Infection Control (CBIC) and the APIC national Nominating and Awards Committee. Jeanne has held offices and continues to serve on committees for APIC Minnesota, her state association.

Jeanne has also served as Infection Control Consultant in the Minnesota–Tbilisi, Georgia (2000–2002) and Minneapolis–Moldovan (1993–1999) medical partnerships sponsored by the American International Health Alliance and funded by USAID. She has served on numerous city, county, state and national task forces concerning infection control and the welfare of the public. She was invited as a guest speaker and infection control consultant to Japan in 2004 and represented APIC National at the International Federation of Infection Control (IFIC) in Croatia in 2004. She has just returned from Cochin, India where she was sponsored by Children’s Heart Link in Edina, Minnesota to serve as an infection control consultant to the Amrita Hospital.

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Biogel Eclipse is the new surgical glove from the makers of Biogel, the world's leading glove manufacturer — it’s innovation that will create a standard that eclipses all others.

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GLOBAL DEVELOPMENTS AND CHALLENGES IN CARE FOR COPD

ARTICLE BY RONALD DAHL

Abstract

CHRONIC OBSTRUCTIVE LUNG DISEASE (COPD) IS A SLOW AND PROGRESSIVE IRREVERSIBLE DESTRUCTION OF AIRWAYS AND LUNG TISSUE. THE DISEASE IS INCREASINGLY COMMON IN ALL COUNTRIES AND IS A MAJOR CAUSE OF MORBIDITY AND MORTALITY. EARLY DIAGNOSIS IS IMPORTANT AS INTERVENTIONS ARE AVAILABLE, ESPECIALLY SMOKING CESSATION. REDUCING INDOOR AND OUTDOOR AIR POLLUTION AND TOBACCO SMOKING WILL GREATLY REDUCE THE INCIDENCE AND EVENTUALLY THE PREVALENCE OF COPD. SYMPTOMATIC PATIENTS SHOULD HAVE OPTIMUM TREATMENT WITH BRONchodILATORS AND FREQUENTLY INHALED CORTICOSTEROID. REHABILITATION PROGRAMMES SHOULD BE AVAILABLE TO ALL IN ORDER TO IMPROVE MUSCLE FUNCTION, PHYSICAL FITNESS, NUTRITIONAL STATUS AND COPING WITH COPD. A MOST PRESSING ISSUE IS A RESTRUCTURING OF HEALTHCARE FOR CHRONIC ILLNESSES, INCLUDING COPD.

C hronic obstructive lung disease (COPD) is a chronic respiratory disorder which is often progressive. At present it is estimated that about 44 million people worldwide suffer from COPD. It is anticipated that the number of patients with COPD will increase further during the next decades in affluent as well as in less privileged countries. COPD will become the third most frequent cause of death and give rise to incredible human suffering because of the continuous and progressive loss of lung function and the consequences with progressive limitations in physical functioning over several years.

The burden of illness to the individual, their families and to society is very large. In most countries COPD is the most frequent cause for acute admission for inpatients to a medical hospital ward. The best intervention would be to prevent COPD developing in the first place. This is readily possible through prevention of exposure to inhaled toxic substances in indoor and outdoor air. The most significant cause of COPD is tobacco smoking and the pollution of indoor air with tobacco smoke making bystanders into passive smokers. Bad ventilation in houses with indoor use of biomass and other materials for heating and cooking are also important. Workplace exposure and outdoor air pollution are also important targets to be reduced. It is possible through public information and legislation to substantially reduce exposure to toxic substances in the air and a good example is the workplace ban of tobacco smoking. Ireland was the first European Union (EU) State to bring in this legislation, followed by Italy, Norway and Sweden. Many more EU States are in the process of bringing in legislation that eliminates passive smoking. The fight against tobacco gained strength through a very important World Health Organization (WHO) initiative – “The Framework Convention on Tobacco Control (FCTC)” which all 192 Member States agreed to in 2003, and which has since been ratified by more than 50 Member States. This will lead to national legislation to inhibit tobacco use and limit what is probably the biggest preventable killer today.

In recent years the attitude towards COPD has changed from pessimism to a realistic optimism. COPD patients were previously often neglected as the opinion held was that nothing could be done and that development of the disease was the patients’ own fault. Today several medications have proven effective as symptom relievers and possibly also result in fewer exacerbations, including inhaled corticosteroids and long acting bronchodilators (anticholinergics, beta2-agonists). New pharmacological treatments are being sought, including medications to reduce loss of lung function and also to restore lost tissue.

An important issue is to detect COPD at an early stage in order to make interventions including tobacco cessation. For many years COPD is a silent disease that people cope with and do not realise is there. When diagnosed, it is usual for a COPD patient to have already lost more than 50% of their respiratory capacity. We need to introduce an active attitude and mobilize primary care doctors to perform spirometry in all cases of smokers of more than 35 years of age with the slightest respiratory symptom. This is the only way to diagnose and take care of the huge number of COPD patients before too much lung function has been lost. This is a reasonable activity because there are effective interventions available that benefit the individual.

It is important that society and the medical care system can adequately take care of COPD patients, reduce their symptoms and improve their quality of life. Around the world, the rapidly shifting balance between acute and chronic health problems is placing new and different
The management of chronic conditions and COPD is not about what happens at doctor visits or hospital admissions, but how the patient manages his daily life.

demands on the healthcare workforce. Chronic disorders today account for 60% of deaths and 80% of health expenditure. To provide effective healthcare for chronic conditions, the skills of health professionals must be expanded to meet these new complexities. This requires a change in the organization and delivery of healthcare and even in medical education. Today most medical and nursing schools are focused on acute conditions, including acute worsening of chronic illnesses. The management of chronic conditions and COPD is not about what is happening at doctors visits or hospital admissions, but how the patient manages his daily life. For too long the care of patients with chronic conditions has taken place in a compartmentalized fashion, often with significant differences in the care plans of hospital, clinic and different health professionals for the same patient. We need to see the healthcare system from the patient’s point of view and our COPD patients should feel that they have the services of one cooperating healthcare system with common goals and common understanding of the condition and interventions necessary. A WHO initiative called the “Innovative Care for Chronic Conditions Framework” 4 points out that the care should be provided as patient-centered care. This implies that we have to make a shift from provider-centered care. This must allow for patients’ values, preferences and needs, with expertise to direct care for the chronic condition with which they live. This innovative view on chronic care has the potential to transform today’s healthcare to a new structure and function including the use of information and communication technology between healthcare professionals and also involving patients and their families. We need to engage patients in the long term management of their condition by partnering and always looking for developments and quality improvement.

In COPD as in any chronic disease it is important to mobilize a patient’s own resources and achieve as optimal a physical, psychological and social functioning. This is done through COPD rehabilitation programmes that usually include physical training to improve the physical condition and thereby improve work capacity including walking distance, daily activity functions etc. An evaluation of the nutritional status and intervention in case of under-nutrition and loss of muscle mass is important. Smoking cessation, optimization of pharmacological treatments, physiotherapy, patient information and education are also components in COPD rehabilitation. This type of intervention does not influence mortality but does greatly influence quality of life and reduce the overall cost of the disease, mainly because of shorter hospital stays. COPD rehabilitation should be available as an option to all patients with reduced physical functioning due to exertional dyspnoea. It should be delivered through a team of healthcare professionals usually consisting of a medical doctor, respiratory nurse, a physiotherapist, a dietitian and a psychologist. COPD rehabilitation highlights that COPD can also become a systemic disorder and that organs other than the lungs may be affected. These should not be overlooked, and depression, malnutrition, sleep apnea syndrome, and other problems should be actively looked for. 7

References


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THE NEED TO DEVELOP EFFECTIVE YOUTH SMOKING CESSATION PROGRAMMES

ARTICLE BY C W WARREN, N R JONES AND S ASMA FOR THE GTSS COLLABORATIVE GROUP

Abstract

WITH THE NUMBER OF PEOPLE DYING FROM TOBACCO-RELATED ILLNESSES EXPECTED TO REACH MORE THAN TEN MILLION BY 2030, THE WORLD HEALTH ORGANIZATION’S FRAMEWORK CONVENTION ON TOBACCO CONTROL (WHO FCTC) SET OUT TO ADDRESS THE ISSUES SURROUNDING THE WORLDWIDE TOBACCO EPIDEMIC, INCLUDING CESSATION STRATEGIES. THE WORLD’S FIRST PUBLIC HEALTH TREATY ON TOBACCO CONTROL ALSO SET OUT TO ADDRESS THE FACT THAT ALTHOUGH MOST SMOKING BEGINS IN YOUTH, MOST CESSATION PROGRAMMES ARE AIMED AT ADULTS.

Tobacco use represents the single greatest preventable cause of death worldwide. It has been estimated that more than one billion people aged 15 years and over smoke tobacco daily and that nearly 80% live in low- and middle-income countries. Every year, nearly five million people die from tobacco-related illnesses, and this number is expected to more than double by 2030. Member States of the World Health Organization (WHO) addressed the tobacco epidemic through passage of the WHO Framework Convention on Tobacco Control (WHO FCTC). The WHO FCTC was adopted by the 56th World Health Assembly in May 2003, and is the world’s first public health treaty on tobacco control. The WHO FCTC provides the driving force and blueprint for the global response to the pandemic of tobacco-induced death and disease. The WHO FCTC calls for Parties to the Convention to follow principles such as development of comprehensive multi-sectoral measures and responses to reduce consumption of all tobacco products at the national, regional and international levels. Cessation strategies are one component of a comprehensive tobacco control programme. Article 14 of the WHO FCTC, titled “Demand reduction measures concerning tobacco dependence and cessation” states:

“Each Party shall develop and disseminate appropriate, comprehensive and integrated guidelines based on scientific evidence and best practices, taking into account national circumstances and priorities, and shall take effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence.”

Interestingly, while most smoking begins in youth, most cessation efforts have been directed toward adult smokers. Until recently, insufficient data existed to address the interest in cigarette smoking cessation among young smokers. To fill this void, the WHO, the US Centers for Disease Control and Prevention (CDC) and the Canadian Public Health Association (CPHA) developed the Global Tobacco Surveillance System (GTSS) to assist all 192 WHO Member States in collecting data on youth and adult tobacco use. The GTSS provides a flexible system that includes common data items but allows countries to include important unique questions. The GTSS includes collection of data through three surveys: the Global Youth Tobacco Survey (GYTS), Global School Personnel Survey (GSPS) and the Global Health Professionals Survey (GHPS).

The purpose of this paper is to use data from the GYTS to answer the question: “To what extent do young smokers want to quit?” To date, the GYTS has been conducted in 395 sites in 131 countries and the Gaza Strip/West Bank among more than two million students aged 13–15 years between 1999 and 2005.

Methods

The GYTS provides systematic global surveillance of youth tobacco use. The GYTS uses a standardized methodology for constructing the sampling frame, selecting schools and classes, preparing questionnaires, carrying out field procedures and processing data. The GYTS includes data on prevalence of cigarette and other tobacco use, perceptions and attitudes about tobacco, access and availability of tobacco products, exposure to secondhand smoke, school curricula, media and advertising, and smoking cessation. Countries can use data from the GYTS to monitor tobacco use among youth; guide development, implementation, and evaluation of a comprehensive tobacco prevention and...
control programme (i.e. National Tobacco Control Action Plans); and allow comparison of national, regional and global tobacco-related data.

National level data have been collected in 93 countries, and state, province/region, or city data collected in 38 countries. WHO counts 192 Member States distributed among six regions: the African Region, the Region of the Americas, the Eastern Mediterranean Region, the European Region, the South-East Asia Region and the Western Pacific Region. GYTS has been conducted in 59 sites in 25 countries in the African Region, 118 sites in 37 countries in the Region of the Americas, 40 sites in 20 countries and the Gaza Strip/West Bank in the Eastern Mediterranean Region, 99 sites in 26 countries in the European Region, 36 sites in 7 countries in the South-East Asia Region, and 43 sites in 16 countries in the Western Pacific Region. The median student response rate was 88.2%, only five of the sites reported a school response rate of less than 80% and, in five of the sites, only more than two million students in more than 18,000 schools have completed the GYTS.

The prevalence measure assessed in this study is current cigarette smoking (defined as “the percentage of students who smoked cigarettes on one or more days during the past 30 days”). To measure cessation interest, current smokers were asked if they wanted to stop smoking now. Current smokers were also asked if they believed they could quit smoking if they wanted to.

The GYTS uses a two-stage cluster sample survey design that produces representative samples of students in grades associated with ages 13–15 years. The sampling frame includes all schools containing any of the identified grades. At the first stage, the probability of schools being selected is proportional to the number of students that are enrolled in the specified grades. At the second sampling stage, classes within the selected schools are randomly selected. All students attending school the day the survey is administered in selected classes are eligible to participate.

A weighting factor is applied to each student record to adjust for non-response (by school, class and student) and variation in the probability of selection at the school, class and student levels. A final adjustment sums the weights by grade and gender to the population of schoolchildren in the selected grades each sample site. SUDAAN, a software package for statistical analysis of correlated data, computes 95% confidence intervals. Differences in rates were considered statistically significant at the p<0.05 level. Regional aggregations were calculated for the six WHO Regions as means weighted by the population of the sampling frame. In many cases, the sampling frame was the country, but in areas where samples were drawn to be representative of a sub-national population, estimates were weighted by the population of the city, state or administrative region and included in the regional aggregation.

**Results**

**Current Smoking Prevalence**

Overall, 8.9% of students were current smokers (Table 1). The rate of current smoking was highest in the Region of the Americas (17.5%) and the European Region (17.9%) and least than 10% in the four other regions. Boys were significantly more likely than girls to currently smoke cigarettes in the African

<table>
<thead>
<tr>
<th>Region</th>
<th>Current cigarette smoking**</th>
<th>Current cigarette smokers who want to stop smoking now</th>
<th>Current cigarette smokers who think they could quit smoking – if they wanted to</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>8.9 (±1.7)</td>
<td>6.8 (±1.7)</td>
<td>74.4 (±8.9)</td>
</tr>
<tr>
<td><strong>African Region</strong></td>
<td>9.2 (±2.2)</td>
<td>13.0 (±3.6)</td>
<td>78.2 (±10.5)</td>
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<td><strong>Region of the Americas</strong></td>
<td>17.5 (±2.3)</td>
<td>17.5 (±2.6)</td>
<td>57.0 (±5.0)</td>
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<tr>
<td><strong>Eastern Mediterranean Region</strong></td>
<td>5.0 (±1.7)</td>
<td>6.7 (±2.3)</td>
<td>64.1 (±15.1)</td>
</tr>
<tr>
<td><strong>European Region</strong></td>
<td>17.9 (±2.7)</td>
<td>19.9 (±3.8)</td>
<td>61.4 (±6.8)</td>
</tr>
<tr>
<td><strong>South-East Asia Region</strong></td>
<td>4.3 (±1.2)</td>
<td>5.8 (±1.7)</td>
<td>68.7 (±7.2)</td>
</tr>
<tr>
<td><strong>Western Pacific Region</strong></td>
<td>6.5 (±1.6)</td>
<td>9.9 (±2.8)</td>
<td>77.3 (±10.1)</td>
</tr>
</tbody>
</table>

* Smoked cigarettes on one or more days in the past 30 days

<table>
<thead>
<tr>
<th>Regional aggregation</th>
<th>Total</th>
<th>Boy</th>
<th>Girl</th>
<th>Total</th>
<th>Boy</th>
<th>Girl</th>
<th>Total</th>
<th>Boy</th>
<th>Girl</th>
<th>Total</th>
<th>Boy</th>
<th>Girl</th>
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</thead>
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<tr>
<td><strong>African Region</strong></td>
<td>8.9 (±1.7)</td>
<td>10.6 (±2.4)</td>
<td>6.8 (±1.7)</td>
<td>66.8 (±8.0)</td>
<td>67.5 (±8.6)</td>
<td>71.9 (±9.4)</td>
<td>81.1 (±7.8)</td>
<td>83.4 (±8.7)</td>
<td>85.5 (±8.1)</td>
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<td><strong>Region of the Americas</strong></td>
<td>9.2 (±2.2)</td>
<td>13.0 (±3.6)</td>
<td>5.8 (±2.3)</td>
<td>74.4 (±8.9)</td>
<td>78.2 (±10.5)</td>
<td>67.0 (±12.7)</td>
<td>76.9 (±9.9)</td>
<td>76.1 (±12.9)</td>
<td>76.1 (±11.7)</td>
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</tr>
<tr>
<td><strong>Eastern Mediterranean Region</strong></td>
<td>17.5 (±2.3)</td>
<td>17.4 (±2.7)</td>
<td>17.5 (±2.6)</td>
<td>57.0 (±5.0)</td>
<td>55.5 (±5.9)</td>
<td>57.1 (±6.0)</td>
<td>86.4 (±5.3)</td>
<td>90.4 (±5.6)</td>
<td>90.0 (±5.9)</td>
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<tr>
<td><strong>European Region</strong></td>
<td>5.0 (±1.7)</td>
<td>6.7 (±2.3)</td>
<td>3.2 (±2.1)</td>
<td>64.1 (±15.1)</td>
<td>70.8 (±15.3)</td>
<td>64.7 (±16.0)</td>
<td>69.6 (±11.7)</td>
<td>78.7 (±11.4)</td>
<td>71.2 (±12.6)</td>
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</table>

**Table 1: GYTS Prevalence and Cessation Measures, by Gender and WHO Region, 1999-2005**

The desire to stop smoking was highest in the Western Pacific Region (77.3%) and the African Region (74.4%), and lowest in the Region of the Americas (57%)
Region, the South-East Asia Region and the Western Pacific Region.

**Desire to Stop Smoking**

Two thirds (66.8%) of current cigarette smokers stated that they wanted to stop smoking now (Table 1). The desire to stop smoking was highest in the Western Pacific Region (77.3%) and the African Region (74.4%), and lowest in the Region of the Americas (57%). There was no difference between boys and girls in the desire to stop smoking, in any region.

**Smokers Thought They Could Quit**

More than 80% of current smokers thought they could quit smoking if they wanted to (Table 1). Smokers’ thinking that they have the ability to quit was highest in the South-East Asia Region (90.1%) and lowest in the Eastern Mediterranean Region (69.6%). There was no difference between boys and girls in smokers who thought they could quit if they wanted to in any region.

**Discussion**

GYTS results show clearly the need for development and dissemination of effective evidence-based youth cessation programmes. The desire to quit smoking is very high in all six WHO Regions. The results from earlier GYTS studies indicate that smoking prevalence among youth is likely to increase greatly in the near future. Consequently, the need for effective youth cessation programmes will be even greater. Unfortunately, rigorous scientific studies upon which to base recommendations for youth cessation programmes are lacking, although cognitive-behavioural strategies for encouraging youth cessation appear to be promising.6-9 Given the high rate of tobacco use, it is important that strategies encouraging young smokers to quit are implemented within a comprehensive tobacco control and prevention framework. These strategies include policies to reduce exposure to second-hand smoke, tobacco price increases and mass media campaigns. In addition, there is a need to develop, evaluate and disseminate effective youth cessation programmes.10

The GYTS findings are subject to at least four limitations. First, because the sample of youth surveyed was limited to those who attend school, it may not be representative of all youth aged 13–15 years. However, in most countries, the majority of students in this age group attend regular, private or technical schools.11 Second, the data apply only to youth in school the day the survey was administered who actually participated in the survey. Third, data are based on self-reports from students who may under- or over-report their behaviour or attitudes. Though the extent of potential reporting bias cannot be determined, responses to questions about cigarette smoking and other tobacco use show good test-retest reliability.12 Finally, this report only includes information on the desire to quit among current cigarette smokers. Interest in quitting use of other tobacco products has been collected in a few countries because of the wide variation in the type of other tobacco products used around the world.

**Conclusion**

The high rates of smoking among youth and their interest to quit call for the need to intensify tobacco use prevention and control efforts. Due to paucity of effective youth cessation interventions at this time, there is a need to identify and develop strategies to encourage young smokers to quit. Countries need to create a supportive environment for youth cessation within a comprehensive tobacco control approach that includes clinical, educational and regulatory strategies. The WHO FCTC can provide a framework for such a comprehensive approach.

**Authors**

GTSS Collaborative group

Agencies supporting the GTSS include:

- World Health Organization Headquarters (WHO)
- Centers for Disease Control and Prevention (CDC)
- Canadian Public Health Association (CPHA)
- National Cancer Institute (NCI)
- Research Triangle Institute (RTI)
- GTSS was coordinated through WHO Regions.

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**The results from earlier GYTS studies indicate that smoking prevalence among youth is likely to increase greatly in the near future.**

**Smokers’ thinking that they have the ability to quit was highest in the South-East Asia Region (90.1%) and lowest in the Eastern Mediterranean Region (69.6%)**
References

INNOVATIONS IN WOUND CARE AND THE EUROPEAN WOUND MANAGEMENT ASSOCIATION

ARTICLE BY PETER J FRANKS (PICTURED) AND MADELEINE FLANAGAN ON BEHALF OF THE EWMA COUNCIL

Abstract

WOUND CARE CONSUMES SUBSTANTIAL HEALTHCARE RESOURCES. THIS ARTICLE WILL REVIEW SOME OF THE MOST RECENT DEVELOPMENTS IN OUR UNDERSTANDING AND MANAGEMENT OF WOUND CARE. IT WILL ALSO INDICATE HOW THE EUROPEAN WOUND MANAGEMENT ASSOCIATION (EWMA) IS RESPONDING TO SOME OF THESE CHALLENGES. PARTICULAR EMPHASIS IS GIVEN TO THE PROBLEM OF WOUND INFECTION, LYMPHOEDEMA AS A HEALTHCARE ISSUE AND THE IMPORTANCE OF RISK FACTOR ANALYSIS IN CHRONIC VENOUS LEG ULCER RESEARCH, THE ROLE OF SURGERY IN VENOUS ULCERATION AND HOW STANDARDIZED EDUCATION AND SERVICE DEVELOPMENT ARE LIKELY TO BECOME EVER MORE IMPORTANT IN ENSURING THAT PATIENTS RECEIVE OPTIMAL CARE.

Wound care consumes a substantial proportion of the healthcare budget of westernized countries. As an example of this it is estimated that in Sweden the cost of patients with leg ulceration varies between €1,332 and €2,585 per patient per year and €814 to €1,994 in the United Kingdom1. With an estimated prevalence of 1.48/1,000 and a population of 455 million in the European Union, this could translate to 673,000 patients costing €547 to €1,740 million per year2. The management of leg ulceration is just one example of wound care. Other conditions that consume large financial resources include pressure ulceration, diabetic foot ulceration, burns, lymphoedema, traumatic and surgical wounds. It is estimated that the management of all types of wound may account for 2–4% of the total healthcare budget in each country. In addition, there may be other costs to society both financial and in terms of the impact on patients by affecting their quality of life 3.

Wound management is clearly a vast area, which is touched on by many specialties and different healthcare professionals. This article will review some of the recent developments and the “state of the art” in wound care. It will also indicate how EWMA is responding to some of the challenges. Clearly this is not an exhaustive list, but does illustrate areas of care where there are important advances to improve the quality of care for patients with specific wound types, a number of which are being addressed by EWMA.

The management of wound infection

Infection is a major complication of wound care. With increasing public and professional scrutiny of acquired infection particularly in relation to bacterial resistance and its morbidity and mortality there is a clear need to understand this complex issue. In wound management one of the most important issues is the definitions used to describe infected wounds.

Identifying criteria for wound infection

EWMA has identified the importance of an appropriate classification of wound infection4. In its position document are a number of papers that identify and describe the condition in different wound types. Included are the results of an international Delphi panel which has described criteria for defining infection in six wound types. Of importance is the recognition that different wounds may present with different clinical signs.

Box 1 | The European Wound Management Association

The European Wound Management Association (EWMA) was founded to promote advancement of education and research into native epidemiology, pathology, diagnosis, prevention and management of wounds of all aetiologies. It undertakes one major conference each year in different countries of Europe, and includes simultaneous translation between English and the host language. EWMA has developed a close relationship with the 24 co-operating organizations from 19 European countries. The EWMA journal is published twice yearly in English, with 10,000 copies distributed through the EWMA co-operating organizations. The EWMA Position papers describe the “state of the art” in certain aspects of wound care and are translated into five languages.
EWMA has developed a focus document that examines how patients with lymphoedema may benefit from compression.

Lymphoedema as a healthcare issue
Lymphoedema is defined as the accumulation of lymph in the interstitial spaces, caused by the failure of the lymph conducting system to accept or conduct lymph back to the blood system. While lymphoedema may or may not be associated with wounds, many of the management procedures are similar to those that are considered good wound practice, namely: skin care, compression bandaging/hosiery and infection prevention.

In many countries lymphoedema management is poor with an emphasis on the management of patients with cancer related lymphoedema. In the United Kingdom a recent study estimated the prevalence of lymphoedema in the community and examined the impact of the condition on patients and health services. There was evidence that patients had significant deficits in their quality of life, with one third receiving no treatment for their lymphoedema.

Lymphoedema bandaging in practice
EWMA has been developing a focus document that examines how patients with lymphoedema may benefit from compression. The articles within it examine the science of bandaging, guidance on bandaging upper and lower limbs, the development of lymphoedema services through the Lymphoedema Framework and bandaging of difficult areas such as head, breast and neck.

The document is written by acknowledged experts supported through a rigorous editorial approach, which is particularly important when examining the evidence for an area of health where few randomized controlled trials of therapy exist.

Risk factors for healing venous ulceration
Studies of factors that are associated with delayed healing in venous ulceration have been undertaken over the past 15 years, but it is only recently that these studies have been considered in terms of clinical and research applications.

In the early 1990s Skene et al identified large ulcer area, long ulcer duration, older age and the presence of deep vein disease as indicators of poor venous ulcer healing. However, it was not until the new millennium that researchers have developed this work further to apply these to predictive models of ulcer healing. A number of studies have determined that both ulcer size and ulcer duration are important predictors of healing, and that change in ulcer area over the first four weeks of treatment can predict whether an ulcer will heal at 24 weeks.

While it is clear that change in ulcer area does not allow for risk factor modification (to improve outcomes), the use of these predictive models may have other uses, namely predicting whether patients will fail to heal using compression therapy. Patients who are considered unlikely to heal may benefit from earlier specialist intervention, rather than waiting for six months for non healing to occur. A further important application of these predictive models are as surrogate end points for treatment. At present most clinical trials report on patients who have been followed for 24 or 52 weeks of treatment. A surrogate end point that does not require such long follow up will allow researchers to quickly determine the likely effectiveness of new treatments without the need for long follow up.

Surgery for venous ulceration
Venous disease is a major cause of ulceration of the leg. While compression therapy is the mainstay of the management of patients with venous ulceration, the value of superficial vein surgery was not clearly understood.

Non randomized comparisons of surgery versus no surgery in patients with healed ulceration have been undertaken indicating a potential benefit, yet definitive randomized trial evidence has until recently been lacking. The ESCHAR trial randomized patients with open or recently healed venous ulcers to be treated with superficial vein surgery and compression therapy or compression therapy alone. Two trials were undertaken; those with open wounds were followed to investigate the effect of surgery on ulcer healing; those with healed ulcers who were followed up to determine the relative recurrence rates. The healing rates in the two groups were similar (65% versus 65% after 24 weeks), but showed lower recurrence rate in patents who were randomized to vein surgery (12% versus 28% after 12 months).

This trial shows that superficial vein surgery does not improve ulcer healing, but reduces recurrence rate in those who have a superficial venous incompetence. It can be estimated that there are four million people in the European Union with healed ulceration at risk of recurrence. Reducing recurrence rates by more than half could have a profound effect on health outcomes and patients’ quality of life throughout the western world.

Education in wound care
Education is the key to improving care for patients suffering from wounds. However, healthcare professionals have different responsibilities in different countries. As an example, in the UK and Scandinavia community (district) nurses often assess and make decisions on the management of patients in wounds. In other countries nurses provide care, but do not make decisions on how patients are managed.

Other countries rely on medical practitioners to provide both decisions on care and the treatment. Any system which provides wound care education must be sensitive to the approaches of different healthcare systems, whilst offering a framework which is applicable to all.

The EWMA educational initiative
The wound education project was initiated in October 2000. Its aim was to produce a flexible framework for the delivery of education within wound management. The focus of this was to define the content of specific wound management modules to facilitate the development of education and training in countries or areas that currently do not benefit from structured wound healing initiatives. It is anticipated that this structured approach will ultimately support a range of practice development initiatives across Europe in order to raise awareness of wound care best practice.

The Education panel has extended its activities considerably in the past year.
The past 15 years has seen the development of evidence and the collation of wound care evidence through institutions such as the Cochrane Wounds Group (www.cochranewounds.org). There are 60 reviews available, including the use of compression for venous leg ulcers, skin grafting, laser, hyperbaric oxygen and therapeutic ultrasound in ulcer healing. While these reviews are invaluable in determining the “state of the art” of certain treatments, there is a need to place the evidence within guidelines14 and from these to develop clinical services using the evidence15.

Cost effectiveness and service development in eastern Europe
EWMA is assisting national organizations in the development of evidence based leg ulcer services.

The past 20 years has seen major changes to the management of patients suffering from chronic leg ulceration in many countries. Innovations include:
+ the community assessment of patients using Doppler ultrasound,
+ the appropriate use of dressing materials, and high compression bandaging,
+ compression hosiery in patients who achieve complete healing to prevent recurrence16.

Underpinning these changes has been the development of appropriate education to health professionals, guideline development, together with the availability of modern wound care products. Evidence of the success comes from the United States and Western Europe, particularly Scandinavia and the United Kingdom, where there is good availability of products and expertise. The evidence from other countries of Europe is scanty or non-existent. Discussions with wound management societies in Eastern Europe indicate that while modern wound care products are generally available, they are only used when the patient can afford to pay for them. The only reimbursed wound care product is saline gauze, a product which is known to be poorly cost effective, and which leads to prolonged healing times, and probably has a deleterious affect on patients’ quality of life17. Much of the argument around failure to adopt modern wound care practices is due to the high unit cost of products, ignoring the potential for cost effectiveness of modern wound care products18. Clearly this system of care leads to a two-tier system based on the patients’ ability to pay for products.

The aim of this project is to assist countries of eastern Europe in developing a rational approach to the management that will be available to all patients with chronic leg ulceration, irrespective of their ability to pay. EWMA has been working with wound management societies in these countries for a number of years, and they are keen to work with EWMA to develop wound management procedures and expertise. The experience and evidence from these projects will be used to justify the wider adoption on a national basis. We expect this to be the first in a number of initiatives in the healing and management of wounds in Europe. It is anticipated that the experience gained in these countries will be transposed to other countries where expertise is lacking, and modern wound materials are severely restricted.

We would expect that this model could be adapted to develop similar protocols for pressure ulcer management and diabetic foot ulceration and other wound types.

Conclusion
The management of wounds is an important but often neglected area of healthcare. This article has reviewed some of the issues that have developed over the past few years, and indicated how EWMA has addressed some of these issues through its Position Papers and projects that aim to change wound care practice. It brings together expertise from around Europe with the goal of providing the best quality care for patients with wounds. This process is being enhanced through educational initiatives by
developing a network of academic institutions and industry partners who wish to provide high quality education in this discipline. Education is also a key requirement of changing practice, and EWMA is working to develop high quality co-ordinated care in a variety of health settings in the countries of Europe. While this may seem an ambitious aim, this is an exciting time with European expansion that will allow for greater uptake of quality wound care throughout Europe.

References


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