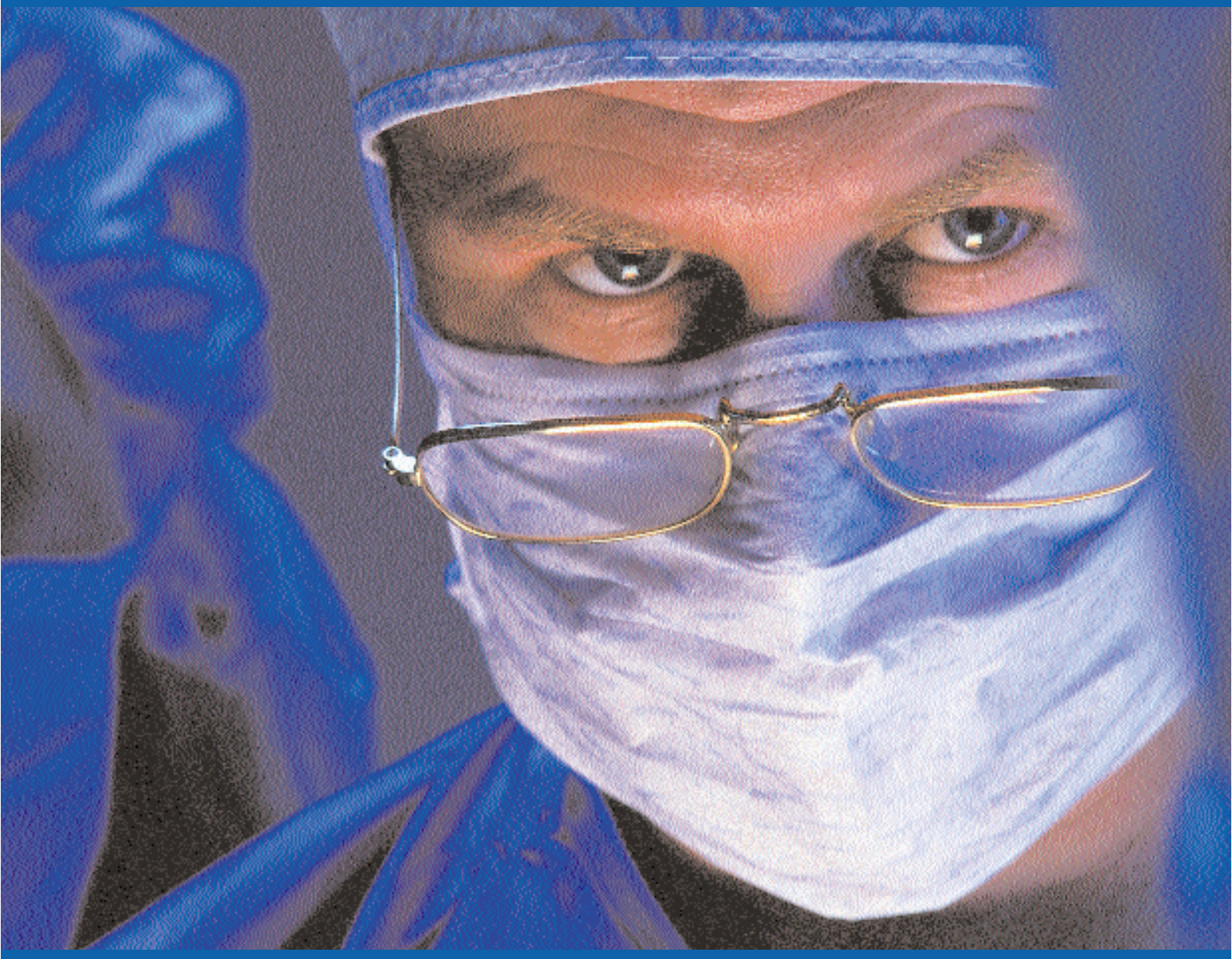
TRIPLE HELIX

Millennium Edition

Celebrating Christian commitment to Medicine



PAST AND FUTURE
Special issue for the BMA Millennium Festival of Medicine

JESUS
Pivot of history and medical care

2000 YEARS
The Christian contribution to medicine

THE WORLD'S CHILDREN
Our future

GLOBAL PRIORITIES
The 4/2 divide

20/20 VISION
Defeating preventable blindness in our generation

DESIGNER PEOPLE
Will it mean happiness?

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Contributions
The editor welcomes original contributions which have both a Christian and medical content. Advice for preparation is available on request.

Authors have reasonable freedom of expression of opinion in so far as their material is consonant with the Christian faith as recorded in the Bible. Views expressed are not necessarily those of the publishers.

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MILLENNIUM FESTIVAL of MEDICINE

CMF

'JE LE PENSYT, DIEU LE GUARYT'
(I DRESSED IT [THE WOUND],
GOD HEALED HIM).
AMBROISE PARE

Faith in Medicine

This special edition of Triple Helix comes to you as part of CMF's contribution to the British Medical Association's Millennium Festival of Medicine; under the twin theme 'Celebrating the Past - Shaping the Future'.

There would, of course, be no millennium festival without Jesus Christ. Christian doctors motivated by his teaching and example have been profoundly influential in shaping healthcare's history. You may be surprised, as I was, to learn just how many of medicine's pioneers were men and women of faith: Pare, Pasteur, Lister, Paget, Barnardo, Jenner, Simpson, Sydenham, Osler, Scudder, Livingstone and many more. In the pages that follow we celebrate their unique contributions in a fast-moving historical survey and in personal cameos.

Christians remain active in all fields of medicine today but particularly in AIDS care and education, drug rehabilitation, child health, palliative care, relief of poverty and in service to the developing world. In four articles by Christian specialists at the cutting edge we focus on ophthalmology, the world's children, global priorities and the genetic and information technology revolutions.

Jesus Christ's dynamic entry into first century Palestine was marked by miraculous healing of many illnesses for which even today there are no known treatments. But along with his compassion to restore health he brought a message of healing of broken relationships - between human beings, between human beings and the planet and most crucially between human beings and God.

In his historical account of those events, Luke, probably the first ever Christian physician, tells us that Jesus sent his followers out 'to preach the kingdom of God and to heal the sick'(Luke 9:2). He is still sending them out today - to attend to the spiritual and physical needs of a suffering world.

Peter Saunders is CMF General Secretary

Sandy Macara

'LIVES OF THE GREAT MEN
ALL REMIND US WE CAN
MAKE OUR LIVES SUBLIME'
LONGFELLOW

Our Invisible Means of Support

As Peter May says in his contribution to this issue which marks our entry to the third millennium, 'there can be little doubt' that the most important 'global figure' of the last two millennia is the 'person of Jesus Christ'.

Longfellow, who is best known for his trilogy 'Christus' reminds us that the unchanging, unifying message of Christ for his followers is that he can make our lives, if not sublime, at least rich in service to others. He is 'not for an age, but for all time' to paraphrase Jonson. We are reminded throughout this issue of the inspirational service of their fellow beings by Christian physicians, surgeons, nurses and others through the ages; not least in harnessing painstaking research, scientific discovery and practical innovation to the prevention, diagnosis and treatment of disease and, when no more can be done, 'comforting always'.

The review of 'Changing World Unchanging Values' challenges the catch-phrase 'change is the only certainty', averring that although we can treat more conditions than ever before, we hardly ever cure anyone. Unarguably, however, what has changed is the sheer pace of change, both in the explosive sequence of advances in medical science and technology, and in the matching escalation in expectations, whether of a perfect baby, an 'instant' ambulance or an uncomplicated operation. Medicated survival and the demoralising demands of draconian 'governance' add their daunting challenges to the dedicated professional worker, even struggling with the factor which never seems to change - inadequate resources. But we are also reminded in this issue of the missionaries of mercy at home and abroad - who have not complained and do not complain about infinitely greater problems and infinitely poorer resources.

Arguably there is one factor in medical practice which never changes other than in its context and character. Dilemmas are the external litmus test of professionalism. Vain is the person who fondly imagines that such dilemmas of life and death as abortion, surgery on multi-handicapped children, euthanasia (now, alas, semantically corrupted) and the removal of life-support machines in 'brain-dead' patients, can readily be resolved by some clever mathematical formula or by an eager local ethical committee. The very word 'dilemma' denotes two - it may be more - equally valid assumptions which can rarely, if ever, be reconciled to everyone's satisfaction. But if Christian practitioners draw on their 'invisible means of support' they may continue to hope that whatever the third millennium may throw at them, they will be given the strength to cope. Ask not that the cup shall pass from me, but that I shall be given the strength to drink from it.

To echo the sacrament of Holy Communion - and is it too much to hope that a truly ecumenical new millennium will at least allow us all to partake in good faith - as often as we drink this cup, we share afresh the assurance that right will prevail over might, and redeeming love over evil and hatred.

Sir Alexander Macara is a former chairman of Council of the BMA and Medical Officer for the City of Bristol.

'It is true that it must depend entirely on myself (under the blessing, if I may humbly say so, of Almighty God in Jesus Christ) whether I succeed or not.'

Joseph Lister

Peter May profiles the wandering teacher and healer behind all the celebrations of AD 2000

Jesus - the pivot of history and medical care

'THE CARE OF THE SICK, AS IT IS PRACTISED AROUND THE WORLD TODAY, HAS ITS ORIGINS IN THE COMPASSION OF CHRIST.'

It seems strange that the birth of any individual should become the internationally agreed pivotal point for counting history. How did this come about? Last year, BBC Radio Four carried out an opinion poll to name the most important English man or woman of the last millennium. A shortlist of six emerged with William Shakespeare being judged the winner.

If the same exercise were conducted throughout the world for the most important global figure of the last two millennia, a different shortlist would emerge. However, there can be little doubt that the person of Jesus Christ of Nazareth would rise above the others.

Why has his influence permeated the nations and the centuries? Is it right that he should be so honoured in our modern age?

His uniqueness has first of all to do with his radical values. He produced a short list of the sort of people who find God's approval. Then as now, 'the happy people' were seen to be the wealthy, the befriended, the self-confident, the fulfilled, the strong, and the successful. Christ, however, taught that the ones who are really 'blessed' are the poor, the bereaved, the unpretentious, the dissatisfied, the merciful, the peacemakers, the oppressed and those whose integrity is unblemished before God.

At the start of his ministry, he had announced that he would bring good news to the poor, freedom to captives, sight to the blind and release to the oppressed. The story of two millennia is that these things have been done in his name in all the nations of the world, both physically and spiritually.

For instance, in the past century, the overthrow of both communism and apartheid owed more to the influence of Christ than any other figure. In the previous century, the abolition of slavery and the Factory Act were major reforms driven by Christian activists. Now, at the start of a new millennium, the campaign for international debt relief for the developing countries, initiated and driven by Christians, is being brought to fruition.

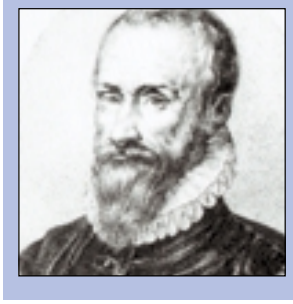
Of course, some terrible things have been done in his name as well. Cynics would even argue that they outweigh the good: murderous crusades, torturous inquisitions, appalling wars and atrocious acts of evil. However, while the perpetrators justified their deeds by claiming Christian allegiance, the hollowness of their pretensions is obvious. Christ's clear teaching condemns them all.

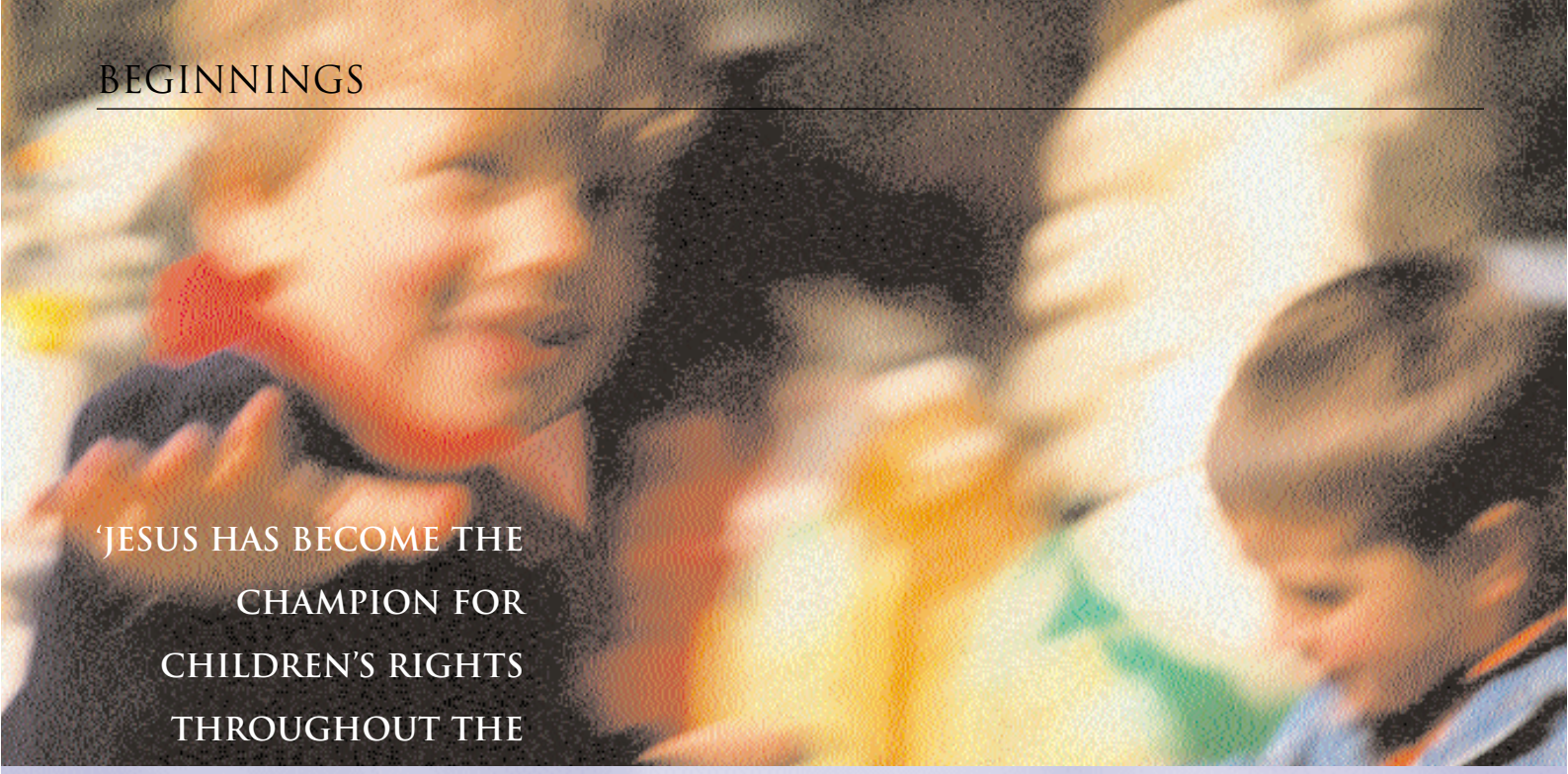
'Blessed are the peacemakers,' he taught. 'Those who take the sword will perish by the sword.' 'If someone strikes you on the cheek. offer him your other cheek as well. And if someone wants to sue you and take your tunic, let him have your cloak as well.' 'Forgive, and you shall be forgiven.' 'You have heard it said of old, love your neighbour. But I tell you, love your enemies and pray for those who persecute you, that you may be sons of your Father in heaven.'

Such language continues to stick in the gullet. When Archbishop Robert Runcie prayed for the defeated Argentinian soldiers at the Falkland Memorial Service in St Paul's Cathedral, he caused an outcry.

Ambroise Pare Surgical Innovator

Ambroise Pare (1510-1590) is remembered for the radical change in surgical practices that he brought about. One innovation was abandoning the cautery. During a very severe battle he ran out of boiling oil and did the best he could to treat the remaining patients with an egg and turpentine mixture. After noticing that the turpentine-treated patients recovered much faster and suffered far less pain, Pare gave up using the cautery. When congratulated for saving a man who was severely damaged, Pare replied; 'Je le pensyt, Dieu le guaryt' (I dressed it [the wound], God healed him). On patient care he once said: 'You will have to render an account, not to the ancients, but to God for your humanity and skill.'





'JESUS HAS BECOME THE CHAMPION FOR CHILDREN'S RIGHTS THROUGHOUT THE WORLD. HIS STATEMENT THAT A WOMAN WAS BETTER OFF BEING EDUCATED THAN SLAVING AWAY IN A KITCHEN, WAS CLEARLY TWO THOUSANDS YEARS AHEAD OF ITS TIME!'

Edward Jenner Smallpox prevention

Edward Jenner (1749-1823), a GP from Gloucestershire, was responsible for one of the most significant discoveries in preventative medicine; that smallpox could be prevented by vaccination. Within three years knowledge of vaccination was widespread and many doctors were practising it.
Jenner had a strong Christian faith and was married to a vicar's daughter who established a Sunday School for the village children. He refused many offers of more prestigious positions but remained in his village, vaccinating the poor free of charge.

Christ's golden rule, that we should treat others as we would want them to treat us, was unique to him. Others had put it negatively: you should not do to others what you would not want them to do to you. To live your life by that ethic would lead you to receive the pathetic epitaph, 'a lie never did anyone any harm' - a far cry from the imaginative, costly love that Christ demonstrated.

Many of Christ's values have been so absorbed by civilised nations that we take them for granted. We assume that children deserve our respect, but Christ had to reprimand his disciples who were driving them away. He taught his hearers not to look down on children. On one occasion, he called a child to the centre of the crowd and taught, 'Unless you change and become like little children, you will never enter the kingdom of heaven. Whoever humbles himself like this child is the greatest in the kingdom of heaven. And whoever welcomes a little child like this in my name welcomes me. But if anyone causes one of these little ones who believe in me to sin, it would be better for him to have a large millstone hung around his neck and to be drowned in the depths of the sea.' Those who abuse children today as slaves, prostitutes, soldiers and objects of neglect and violence need to hear that chilling warning in our own time. Jesus has become the champion for children's rights throughout the world.

His statement that a woman was better off being educated than slaving away in a kitchen, was clearly two thousands years ahead of its time!

His attitude to the sick is of particular interest to health professionals. Whatever we are to understand by his healing miracles, it is clear from our sources - the Gospels - that healing the sick was a central part of his work. A woman with severe kyphosis, a boy with epilepsy, a man born blind, a woman with metrorrhagia, the paralysed, the oedematous, the manic, the deaf, the mute, the infected and the lame all received his compassion. We are told he healed them all - and if that was true, then he must have performed miracles, for these were not psychosomatic diseases.

While so-called healers have always existed (and there is no shortage today), modern, scientific medicine has its roots in ancient Greece. The study of illness and the treatment of disease are traced back to the school of Hippocrates. However, for all the intellectual interest they had in medicine, the ancient Greeks had little interest in hospitals. There has not been much prospect of cure until the last century. 'The real challenge down the ages has been to care.'

The care of the sick, as it is practised around the world today, has its origins in the compassion of Christ. The embracing of Christianity by the Roman Empire from AD313 allowed the rise of institutions devoted to nursing care. Important hospitals were rounded in Caesarea (369), Edessa (375), Monte Cassino (529), Iona (563), Ephesus (610) and St Albans (794).

By the Middle Ages, across Europe, churches and religious orders cared for the elderly, the weak, the insane, the

sick, and the dying, as well as passing travellers in need of shelter. The foundation charter of the Pantokrator hospital in Constantinople (1136) says that medical teaching also took place there.

In England, there are said to have been nearly 500 hospitals by the close of the fourteenth century. The main institutions were in cities. In London, St Bartholomew's had been founded in 1137; St Thomas's in 1215.

Christ taught that whenever the hungry are fed, strangers welcomed, the naked clothed and the sick or imprisoned visited, those deeds are done to Christ himself. A moving illustration as to how this worked out in practice comes from the history of the Knights of St John. This order was founded in AD 1113 and was formed from the sons of European nobility. Initially they worked for the care and protection of pilgrims en route to the Holy Land. Wherever they went, they built hospitals. They treated everyone, having no regard for race, creed, or colour. They cared for slaves as well as freemen, enemies as well as allies.

Knights provided care personally themselves, including the Grand Master. A twelfth century prayer from Acre (the modern Akko) records that they addressed their patients as 'Lord'. In the sixteenth century they were driven by the Turks to Malta, where they built the Grand Harbour of Valletta. Their hospital, overlooking the harbour, is nowadays an international conference centre. Its great ward is 520 feet long, and is still held to be the longest single roofed room in Europe. In its hospital days, it is said to have housed up to 600 beds. There were separate wards for the insane and the dying. They also ran an outpatient service and attended the bedridden in their homes. Not only did these aristocrats call their patients 'Lord', but also they served their meals on silver platters. (Napoleon eventually had them melted down for bullion, a hoard weighing 3,449 pounds.)

It wasn't just Christ's teaching that made the impact. His life was a vivid demonstration of his values. He practised what he preached. This is most movingly described in the events surrounding his arrest, torture and execution. Even as he hung on his cross, he prayed for his murderers. 'Father, forgive them for they do not know what they are doing.'

Prophetically, even in the first century, the breath-taking claim 'I am the Light of the World' was attributed to his lips. He spoke with an extraordinary sense of his own authority. He called his hearers, not just to take note of his teaching, but to believe in him. He shocked the Jews by saying that he forgave people their sins against God. He also said that to see him was to see God the Father.

The explosive growth of Christianity in the ancient world followed the discovery that his tomb was empty. His disciples claimed he had been raised to life. Even when put to the sword, they stuck to their testimony. Was this the greatest deception of all time, or a firm foundation for hope in a suffering world?

Has God uniquely declared himself in the person of Christ, holding out to all of us the possibility of forgiveness and a new start? We must each draw our own conclusions.

Peter May is a General Practitioner in Southampton and a member of the Church of England General Synod.

Thomas Sydenham Plague Doctor

Thomas Sydenham (1624-1689) has been called the 'English Hippocrates' and the father of English medicine. He was a man of deep Christian faith in the Puritan tradition and this was the spur that helped him discard much of the speculation and reliance on classical dogma. He stressed the importance of personal, scientific observation in medicine; 'You must go to the bedside. It is there alone that you can learn disease,' he often said. During the Great Plague of London, Sydenham gained enormous respect by remaining to treat the sick and dying when many doctors quit the capital. His clinical descriptions of diseases including scarlet fever and gout also won him acclaim. He opposed use of complicated prescriptions, prefering to promote simple and natural remedies.

Jesus the Holistic Teacher

Health has been defined by the WHO as a state of complete physical, mental and social well being: not simply an absence of illness or disease. This definition understands health as involving the whole person. It's holistic, even if it fails to mention the need for spiritual health!

But what did Jesus actually teach about health? Jesus is similarly holistic. He was, par excellence, concerned with the whole person. His teaching goes to the heart of problems - attitudes and aspirations - and not just their symptoms.

This is well illustrated in the Sermon on the Mount, a pithy summary of the main themes of what Jesus taught, recorded in the Gospel of Matthew.

5:24	Anger is bad for you... 'Be reconciled to your brother'.
5:28	Don't harbour bad thoughts... 'Anyone who looks at a woman lustfully has already committed adultery with her in his heart'.
5:37	Have integrity ... 'Let your "yes" be "yes" and your "no" be "no".'
5:39	Don't retaliate and make things worse... 'If someone strikes you on the right cheek turn to him the other also'.
5:44	Nursing grudges is bad for you... 'Love your enemies and pray for those who persecute you'.
6:14	Keep short accounts with people...'Forgive men when they sin against you'.
6:19	Cultivate simplicity of lifestyle... 'Do not store up for yourselves treasures on earth'.
6:25,33	Avoid anxiety... 'Do not worry about your life... but seek first his [God's] kingdom'.
7:12	Social concern... 'In everything, do to others what you would have them do to you'.

Here are recipes of how to live a healthy life in an unhealthy world. The Christian way is a way of health - in the WHO sense.

Brian Hogbin is a retired consultant in General Surgery

Eldryd Parry
profiles Dr Luke

Luke The Physician's Gospel

A PHYSICIAN WAS THE AUTHOR OF ONE OF THE MAIN HISTORICAL ACCOUNTS OF THE LIFE OF JESUS.

We all enjoy a good case report with accurate clinical detail, a problem which is none too easy to solve and, finally, a clear explanation of everything. This short and very readable book has just such reports, as remarkable today as they were at the beginning of the first millennium when it was written.

This is significant because the author, a cultured Greek, who would no doubt have assented to the Hippocratic Oath, did not personally witness much that he describes. However, in his introductory address to Theophilus, an unknown but educated first century Christian, he explains that he had carefully investigated everything from the beginning and had therefore written an orderly account so that Theophilus 'might know the certainty of the things that he had been taught'.

The book is therefore not just an interesting narrative but a book with a purpose, as Luke acknowledges in his second book, the Acts of the Apostles.

Luke refers to his first book as the one in which he described 'all that Jesus began to do and to teach'. Theophilus is to be left in no doubt, either about the works of Jesus, or about the sayings of Jesus, and all that they must mean for his life in the first century as a Christian.

When Luke describes events, he is careful to relate them firmly to the historical events and culture of the time. He recounts precisely, for example, the names of contemporary Roman imperial officials, as if to counter the contentions of subsequent sceptics that it is all a fairy story. As a keen clinical observer and scientist, he carefully describes his methods and the purpose of the book, just as any author of a modern scientific paper would do today.

What sort of person was Luke? His travelling companion, in many journeys through what is now Turkey and Greece, was Saul - later Paul - of Tarsus. This was a man who would be familiar with any potential weaknesses in Luke, but could effortlessly describe him as a 'beloved physician'.

Luke must have been a sweet tempered man, concerned for all sorts of people, and profoundly concerned for those who were sidelined and discriminated against in his day. Thus, when his account of the coming and the birth, the life, death and resurrection of Jesus Christ is compared with the two parallel contemporary accounts by Matthew and Mark, Luke distinctively accords a dignity and a remarkable prominence to women. Luke alone relates one of the most famous of all the parables, in which a culturally ostracised Samaritan shows how far he was prepared to go to help a Jewish man who had been mugged and badly beaten up on a road out of Jerusalem. And Luke alone tells the story of the hated and embezzling tax collector, who was prepared to climb a tree in order to see the strange Galilean prophet of whom he had heard so much.

If he shows his radical attitude to the prejudices and exclusions of the society in which he lived, he also shows a touching loyalty to his colleagues. He does not mention, as the other Gospel writers do, how a woman, who had been bleeding for many years, had suffered at the hands of her many physicians!

His clinical alertness throws much light on the perplexing problem of sickness and of demon possession. Luke carefully recounts how people who were brought to Jesus 'had various kinds of sickness' and how they were healed when Jesus laid his hands on them. At the same time he writes 'demons came out of many people, shouting you are the Son of God. But he rebuked them and would not allow them to speak because he was the Christ'.

In one of Luke's unique accounts of some of the women who accompanied Jesus, he is careful to state that they had been 'cured of evil spirits and diseases'. Indeed one of these women is identified both by her name, Mary (called Magdalene), and by the extent of her demon possession - 'seven demons had come out of her'. Luke records how, on a number of occasions, the power of the Lord was present to heal the sick, and the divine authority of the Son of God was sovereign over demons, which recognised this authority and even pleaded to be allowed to go away. These accounts of the recoil of demons from the authority of Christ have a thoroughly contemporary ring to them, whether in countries where a Christian church is just getting established, or within the secular materialism of the West: these same demons still spoil and bind lives, and are still cast out through the authority of Christ.

How should we regard the Gospel that Luke wrote? Is it merely an elegant and historically accurate account of the work and teaching of Jesus, rich in clinical detail, dramatic episodes of healing and of the casting out of demons? Or should it be acclaimed because it is socially radical - both in its assault on the attitudes and prejudices of the time and in the interest and care that Luke shows for those for whom nobody cared, the dispossessed and weak of his world?

It is all this, but it is so much more also. The radical social attitudes are indeed those of the author, but they are derived from the Galilean Jesus, whose life and teaching are the fabric of the book: it is the insistence of Jesus on setting his face towards Jerusalem, knowing that he must be rejected there, that he must suffer a cruel death, which becomes more and more evident as the book proceeds, reaching its climax in his conquest of death.

All this is the truth of which Luke wants Theophilus to be certain, just as Luke would want his colleagues of today to be equally certain.

Eldryd Parry OBE is Director of the Tropical Health and Education Trust.

The Christian Contribution to Medicine

Rosie Beal-Preston

Over two millennia, Christian doctors and nurses, inspired by the example and teaching of Jesus of Nazareth, have been at the forefront of efforts to alleviate human suffering, cure disease, and advance knowledge and understanding. And the Christian Church has played a major role in developing and shaping the practice of Medicine.

The Hospital Movement

Before Christianity emerged, there were several hospital-like centres in Buddhist regions. The ancient Greeks practised a very simple form of medicine and Greek temples included places where the sick could sleep and receive help. The Romans are believed to have established some military hospitals. However, it was the Christians of the Roman Empire who began to change society's attitude to the sick, disabled and dying, by their radically different outlook.

The Graeco-Roman world in which Christianity appeared was often cruel and inhumane. The weak and the sick were despised. Abortion, infanticide and poisoning were widely practised. The doctor was often a sorcerer as well being a healer and the power to heal equally conferred the power to kill. Among the pagans of the classical world only the Hippocratic band of physicians had a different attitude to their fellow human beings. They swore oaths to heal and not to harm and to carry out their duty of care to the sick.

However, it wasn't until Constantine granted the first Edict of Toleration in AD 311, that Christians were able to give public expression to their ethical

JESUS OF NAZARETH TAUGHT: 'WHATEVER YOU DID FOR ONE OF THE LEAST OF THESE BROTHERS OF MINE, YOU DID FOR ME.' (MATTHEW 25:40)

Denis Parsons Burkitt

Denis Burkitt (1911-1993) was a Christian surgeon who worked with the Colonial Service in Uganda (1946-64). He patiently followed clues leading to the identification of the vector and the causal organism of the tumour now known as Burkitt's Lymphoma. This discovery enabled chemotherapy to be adapted accordingly, and now the outlook of this childhood malignancy has dramatically improved. Another of his discoveries was the hitherto neglected value of fibre in nutrition and of the highly significant concept of Western diseases. 'This opened my eyes to the indisputable fact that a high proportion of disease in Western countries must be due to our life-style, and thus potentially preventable...'
One of his favourite sayings was:
'Attitudes are more important than abilities.
Motives are more important than methods.
Character is more important than cleverness.
And the heart takes precedence over the head.'

convictions and undertake social reform. From the fourth-century to present times, Christians have been especially prominent in the planning, siting and building of hospitals, as well as fundraising for them. Cities with significant Christian populations had already begun to change prevailing attitudes, and were already beginning to build hospices (guest houses for the sick and chronically disabled).

Stories of Christian caring had enormous impact, even before Constantine's decree of toleration. Clement, a Christian leader in Rome at the end of the first century of the Christian era, records how the Christian community was already doing much to relieve the plight of poor widows. In the second century when plague hit the City of Carthage, pagan households threw sufferers onto the streets. The entire Christian community, personally led by their bishop, responded. They were seen on the streets, offering comfort and taking them into their own homes to be cared for. A few decades after Constantine, Julian, who came to power in AD 355, was the last Roman Emperor to try to re-institute paganism. In his Apology, Julian said that if the old religion wanted to succeed, it would need to care for people even better than the way Christians cared.

As political freedom increased, so did Christian activity. The poor were fed and given free burial. Orphans and widows were protected and provided for. Elderly men and women, prisoners, sick slaves and other outcasts, especially the leprous, were cared for. These acts of generosity and compassion impressed many Roman writers and philosophers.

In AD 369, St Basil of Caesarea founded a 300 bed hospital. This was the first large-scale hospital for the seriously ill and disabled. It cared for victims of the plague. There were hospices for the poor and aged isolation units, wards for travellers who were sick and a leprosy house. It was the first of many built by the Christian Church.

In the so-called Dark Ages (476-1000) rulers influenced by Christian principles encouraged building of hospitals. Charlemagne decreed that every cathedral should have a school, monastery and hospital attached. Members of the Benedictine Order dedicated themselves to the service of the seriously ill; to 'help them as would Christ'. Monastic hospitals were founded on this principle.

In the later Middle Ages, in cities with large Christian populations, monks began to 'profess' medicine and care for the sick. Monastic infirmaries were expanded to accommodate more of the local population and even the surrounding areas. A Church ban on monks practising outside their monasteries gave the impetus to the training of lay physicians. It was contended that this interfered with the spiritual duties of monks. So gradually cathedral cities began to provide more large public hospitals with the support of the city fathers and this moved medical care more into the secular domain.

Nevertheless, expansion of health care by the secular authorities continued to be challenged and stimulated by the Church's example. Eventually there were few major cities or towns that were without a hospital. And there were particular diseases, such as leprosy, where the Church, inspired by the example of Jesus who made a point to touch and heal these outcasts from society, took a lead. And perhaps just as importantly, it heralded a new, more humane attitude to the sick and elderly.

In England suffering was caused when King Henry VIII suppressed the monasteries. The Reformation deprived many suffering and disabled people of their only means of support. Patients of hospitals like St Thomas's and St Bartholomew's, founded and run by monastic orders, were thrown onto the streets. The onus for health care was placed firmly on the City Fathers and municipalities were forced to pay more attention to the health problems of the community.

It was not until the eighteenth century that the Christian hospital movement re-emerged. The religious revival sparked in England by the preaching of John Wesley and George Whitefield was part of an enormous unleashing of Christian energy throughout 'Enlightenment' Western

Europe. It reminded Christians to remember the poor and needy in their midst. They came to understand afresh that bodies needed tending as much as souls.

A new 'Age of Hospitals' began, with new institutions built by devout Christians for the 'sick poor', supported mainly by voluntary contributions. The influence of this new age was felt overseas as well as in England. Health care by Christians in continental Europe received a new impetus. The first hospitals in the New World were founded by Christian pioneers. Christians were at the forefront of the dispensary movement (the prototype of general practice), providing medical care for the urban poor in the congested areas of large cities.

The altruism of these initiatives was severely tested when cholera and fever epidemics appeared. Larger hospitals often closed their doors for fear of infection. While wealthy physicians left the cities for their own safety, doctors and the staff of these small dispensaries, driven by Christian compassion, remained to care for the sick and dying. Christian philanthropists inspired setting up the London Fever Hospital to meet the desperate needs of those living without sanitation in overcrowded tenements. Christian inspiration continued to identify specific needs, leading to opening of specialist units: maternity and gynaecology hospitals, and institutions for sick and deserted children. When the National Health Service took over most voluntary hospitals, it became clear just how indebted the community was to these hospitals and the Christian zeal and money that supported them over centuries.

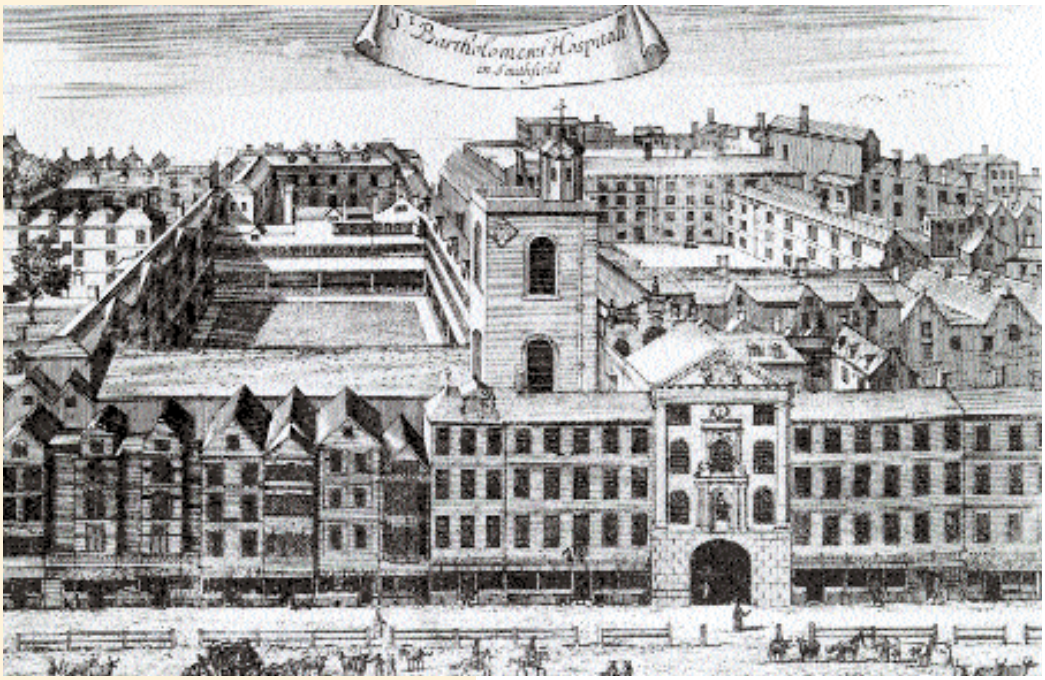
Advance of Medical Knowledge

As well as taking a leading role in caring for the sick, Christians also played a very important part in the furtherment of medical knowledge. Together, Jews and Christians took the lead in collecting and copying manuscripts from all over Europe after the burning of the Great Library at Alexandria. This rescued much medical knowledge for the religiously tolerant Arabic Empire and for later generations.

During the Dark Ages, Arabic medicine advanced considerably due to its access to these documents. In Europe, however, progress was comparatively slow. It was Christian thought that led to the formation of the Western universities. Founding of medical faculties was often due to Christian initiative. So too were attempts to raise standards of research and care.

During this period, the field of surgery saw most progress. Christians were among those advocating the need for cleanliness and less use of the cautery in treating wounds. Chauliac, the author of Chirugia Magna (Textbook of Surgery) was a priest and surgeon, who made many advances in orthopaedics. He led by example, staying at his post to investigate the plague and treat its victims when many of his colleagues fled.

In the Middle Ages there emerged a clash between those who relied dogmatically on ideas and theories passed on from Classical sources, and the new attitudes to research fostered by the growing influence of what is now called modern science. Christians such as Grosseteste, Bacon and Boyle encouraged



Thomas Barnardo Care for Street Children

While training at the London Hospital, Thomas Barnardo (1845-1905) volunteered to work at a nearby ragged school where he met Jim Jarvis. The meeting changed his life. Through Jarvis, Barnardo discovered the terrible problems of child homelessness. At the time there were about 30,000 children under 16 living on London streets.
Barnardo had originally planned to be a missionary to China. Instead he gave his life to the Barnardo Homes for destitute children, and as well as offering care he innovated with use of photography to draw attention to their plight.
He helped tackle the problems of alcoholism. Another project was a hospital for sick children and setting up medical missions offering free clinics to the poor.
His biographer Darkin Williams wrote of him, 'His Christianity... not merely influenced his life, it was the propulsive power that dominated his career from start to finish.'

experiment instead of simply relying on old traditions. The Royal Society was founded to encourage research, and the majority of its early members were Puritan or Anglican in origin.

Many very important discoveries in many medical fields were made by people who held a Christian commitment and there is not room to mention them all here: William Harvey (circulation), Jan Swammerdam (lymph vessels and red cells) and Niels Stensen (fibrils in muscle contraction) were all people of faith, while Albrecht von Haller, widely regarded as the founder of modern physiology and author of the first physiology textbook, was a devout believer; Abbe Spallanzani (digestion, reproductive physiology), Stephen Hales (haemostatics, urinary calculi and artificial ventilation), Marshall Hall (reflex nerve action) and Michael Foster (heart muscle contraction and founder of Journal of Physiology) were just some among many others.

The same can be said of the advance of surgical techniques and practice. Ambroise Pare abandoned the horrific use of the cautery to treat wounds and made many significant surgical discoveries and improvements. The Catholic Louis Pasteur's discovery of germs was a turning point in the understanding of infection. Lister (a Quaker) was the first to apply his discoveries to surgery, changing surgical practice forever. Davy and Faraday, who discovered and pioneered the use of anaesthesia in surgery, were well known for their Christian faith, and the obstetrician James Simpson, a very humble believer, was the first to use ether and chloroform in midwifery. James Syme, an excellent pioneer Episcopalian surgeon, was among the first to use anaesthesia and aseptic techniques together. William Halsted of Johns Hopkins pioneered many new operations and introduced many more aseptic practices (eg rubber gloves), while William Keen, a Baptist, was the first to successfully operate on a brain tumour.

'GOD CALLED ME INTO HIS SERVICE FEBRUARY 7, 1837.'
FLORENCE NIGHTINGALE

Clinical Medicine and Patient Care

Thomas Sydenham is sometimes hailed as the 'English Hippocrates'. He stressed the importance of personal, scientific observation and holistic care for patients, and he was one of the brave 'plague doctors' who did not desert the sick and dying during the Great Plague of London. Herman Boerhaave followed in Sydenham's footsteps, and was very influential in pioneering modern clinical medicine, while William Osler taught all medical students to base their attitudes and care for their patients on the standards laid down in the Bible.

Medical Ethics

The Hippocratic ideal was expanded by doctors such as Thomas Browne (seventeenth-century), a godly physician who was one of the first to write on medical ethics and whole-person care. Thomas Percival, a zealous social reformer as well as a physician of integrity, drew up the first professional code of ethics in the eighteenth-century. Many early GPs were religious men, and non-believers often unconsciously continued to follow the prevailing general principles of Christian ethics.

Specialities

The Christian contribution to the many specialist branches of medicine is huge. There is only room to mention a few, such as Laennec, a Catholic, who invented the stethoscope. The emerging practice of orthopaedics was much enhanced by the Lutheran Rosenstein's textbook on the subject, while the devout Underwood's Treatise on the Diseases of Children became a classic. Still's disease was named after George Still of King's College Hospital and Great Ormond Street Hospital, who was a Lutheran and a vigorous supporter of Barnardo's homes. In the field of dermatology, Willan (who wrote a history of Christ) was the first to classify skin diseases, while many Christian clergymen-physicians such as Blackmore, Willis and Fox were pioneers in the of advance of psychiatry. In the USA Daniel Drake, an Episcopalian, was among the first to study geographical pathology, and WH Welch of the Johns Hopkins, was an outstanding Christian

pathologist who discovered the bacillus of gas gangrene. JY Simpson, Howard Kelly and Ephraim McDowell, all devout believers, were towering figures in obstetrics and gynaecology. Whilst most medical advances and discoveries have taken place in hospitals, numerous general practitioners such as Sydenham, James Mackenzie and Clement Gunn worked tirelessly in day-to-day practice, striving to embody the ideals of Christianity in their ethics and care of their patients.

Public Health, Preventative Medicine and Epidemiology

Early on Christians realised the connection between health and hygiene. Girolamo Fracastoro, a very versatile student in the sixteenth-century, began to investigate the spread of contagious diseases. In the next century his work was continued by Thomas Sydenham. Ministers advocated personal hygiene. It was John Wesley who said 'Cleanliness is, indeed, next to Godliness.' The social activism of the Quakers is well-known, among them John Fothergill who campaigned to eliminate social wrongs on grounds that they undermined the health of the people. Another Quaker, John Howard, had a great concern for prisons, where overcrowding and typhus were rife, and successfully promoted two prison reform Acts of Parliament. Edward Jenner, a devout man, was responsible for the beginnings of immunology and for ridding the world of the scourge of smallpox.

Social Need

In the nineteenth-century, the Industrial Revolution had led a drift to the inner cities and intense social needs among the poor. It was the Quakers, Evangelicals and Methodists who in particular applied themselves vigorously to meeting these needs. A nation wide movement of Christian missions to help the poor was founded. Huge sums of money were raised by voluntary subscriptions and armies of volunteers went to slum areas to offer practical help. Attention was paid to the misfits of society, such as drunkards, criminals and prostitutes, as well as homeless teenagers.

The Salvation Army, founded in 1865 by William Booth, provided much-needed medical care in impoverished inner city areas and homes for women who had been induced into prostitution. Unmarried mothers were cared for, and these projects have spread all over the world. Great Ormond Street Hospital was founded by Charles West, a Baptist, to meet the needs of sick children who were inadequately cared for by 'habitually drunk (nurses) with easy-going, selfish indifference to their patients, and no knowledge or skill of nursing'.

Dr Thomas Barnardo set up his children's homes after seeing the terrible plight of thousands of hungry and homeless children in the East End. Inner city missions bringing a combination of medical care and the gospel were set up. Christians were at the forefront of temperance movements. Care for the blind and deaf were areas drawing direct inspiration from Jesus. Use of Braille worldwide and schools for the deaf were pioneered by evangelical Christians.

AS WELL AS TAKING A LEADING ROLE IN CARING FOR THE SICK, CHRISTIANS PLAYED A VERY IMPORTANT PART IN THE FURTHERMENT OF MEDICAL KNOWLEDGE, TOO.

Developing World Missions

Jesus commanded his followers to go and make disciples of all nations (Matthew 28:19), as well as exhorting them to love their neighbours as themselves. There have been several waves of missionary work during two millennia, and in each case medical work has played a key part.

Dr John Scudder was among the first Western missionaries of the modern era and in 1819 went to Ceylon. Among the best-known pioneer medical missionaries were David Livingstone (Central Africa), Albert Schweitzer, a talented doctor, theologian and musician, who devoted his life to people living in the remote forests of Gabon, and Albert Cook, who founded Mengo Hospital in Uganda. William Wanless founded the Christian Miraj Hospital in India, and Ida Scudder founded the world-famous Vellore Medical College in the same country. Hudson Taylor spread the gospel and western medicine to China and founded the China Inland Mission. Paul Brand pioneered missions to lepers. Henry Holland and his team, working in the north-west frontier of

Sir James Paget New surgical techniques

James Paget (1814-1899) was one of the leading surgeons of his time, working at St Bartholomew's Hospital in London. He was influential in encouraging the transition to newer surgical techniques. He is best remembered for his discovery of the generalised bone disease osteoitis deformans (Paget's disease of the bone) and a skin condition of the nipple that is always associated with breast carcinoma (Paget's disease of the nipple). Paget was known as a man of 'deep religious convictions who never told a story or joke making jest of sacred words' and was a faithful worshipper at St Paul's Cathedral.

IN THE SECOND CENTURY WHEN PLAGUE HIT THE CITY OF CARTHAGE, PAGAN HOUSEHOLDS THREW SUFFERERS ONTO THE STREETS. THE ENTIRE CHRISTIAN COMMUNITY, PERSONALLY LED BY THEIR BISHOP, RESPONDED.

Herman Boerhaave Empirical Approach to Disease

Herman Boerhaave (1668-1738) was the son of a Reformed minister in Leyden who switched from theology studies to medicine. By 1718 he was the Professor of Medicine, Botany and also Chemistry. He was much influenced by the writings of Thomas Sydenham, especially his empirical attitude to disease. Boerhaave re-introduced bedside teaching and laid down clinical attitudes to patient care that came to be widely followed by his disciples throughout Europe. Several of them became highly influential, including: von Haller and Linnaeus (founders of modern physiology and natural history), as well as van Swieten and de Haen (whose open-minded scientific empiricism, based on Boerhaave's teaching, transformed the outlook and approach of the Viennese School of Medicine, which in turn became the pattern of the new Western Medicine). One account of his life said that Boerhaave 'experienced a secret intercourse with God. However heavy were his tasks for the day, each morning he spent an hour in prayer and meditation.'

the Indian sub-continent, operated on hundreds of cataracts every day. Others have been influential in the prevention of such diseases as malaria and tuberculosis.

Women Doctors

There was a strong Christian element in the motivation of the pioneers of medical education for women. Elizabeth Blackwell, the first woman doctor, was a Quaker, while Elizabeth Garrett came from a very devout family. Ann Clark, another Quaker, was the first woman surgeon and worked at the Women's Hospital and the Children's Hospital in Birmingham. Sophia Jex-Blake, another devout Christian, founded the London School of Medicine for Women, while Clara Swain was the first woman doctor to go overseas (to Asia) as a medical missionary.

Nursing

Modern nursing owes much to Christian influences. Most nursing, like most medicine, was carried out by monastic orders within their own hospitals for centuries. In AD 650, a group of devout nuns volunteered to take care of the sick at the Hotel Dieu in Paris, and most other nursing followed this pattern. In the seventeenth-century, a parish priest shocked by the conditions in the poor quarters of Paris, set up a nursing order under the name of Dames de Charite. Civic and secular authorities were somewhat slow to recognise the need for paid, rather than voluntary nurses. In the nineteenth-century, 'modern nursing' was born, in no small measure due to the work of Elizabeth Fry and Florence Nightingale. Their revolution in the practice of nursing included making it a more socially acceptable pursuit for women. Florence Nightingale was deeply influenced by a small Christian hospital at Kaiserswerth in Germany, run by 'deaconesses', a group of Protestant women. Their response to biblical commands to care for the sick and educate neglected children, provided the templates for modern daily hospital nursing. Florence Nightingale encouraged better hygiene, improved standards and night-nursing, as well as founding the first nursing school. Nurses gained professional status at the end of the century, largely thanks to the work of Ethel Bedford Fenwick, with the majority of nurses being inspired to serve by Christian ethics. Many missionary nurses such as Mother Teresa and Emma Cushman have worked tirelessly, bringing hygiene and Western medicine to the four corners of the globe.

A New Allegiance

This essay has aimed to present some of the enormous contribution the followers of Christ have made to the science and practice of medicine. Christians have consistently raised the social status of the weak, sick and handicapped and sought to love and care for them to the utmost of their abilities. Christians have been pioneers among hospital building and staffing, in research and ethics, in promoting increased standards of care, and in immunology, public health and preventative medicine. They have carried Western Medicine across the globe and improved the quality of life for countless millions of people.

In many ways, Christianity and medicine are natural allies; medicine gives men and women unique opportunities to express their faith in daily practical caring for others, embodying the commands of Christ; 'whatever you did for one of the least of these brothers of mine, you did for me.' (Matthew 25:40)

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The challenge of the next decade is to reduce child mortality in poor countries, writes **Andrew Tomkins**

Better Health for the World's Children

Childhood illness was common and healing and compassion were an important part of the ministry of Jesus Christ 2000 years ago. Just two hundred years ago, under five mortality rates were over 300 per 1000 live births in the UK and probably even higher among children in poor countries. In the last 50 years child survival has improved considerably. Dedicated work by doctors, nurses, nutritionists and other health professionals, using professional skills and new technologies, improved nutrition, water and sanitation, hygiene, education, living standards and childcare have all been crucial.

However, there are still many millions of children throughout the world who do not have these provisions and over ten million children die every year, the vast majority in poor countries. Many of the survivors do not reach their potential because of illness, malnutrition or adverse social environments. The challenge for the next decade is to reduce child mortality rates even further, especially in the poorest countries, and to improve the health, nutrition and development of those, increasingly the majority, who survive. It is definitely possible.

Medical services.

In many of the world's poorest countries, medical services overseas were initially established by doctors working for the UK government service and by medical missionaries who set up services in more remote areas with considerable personal danger. Seven out of 10 missionaries called by God to serve in the Methodist church in the Gambia died there.

The remarkable biographies of the many hundreds of Christian doctors serving in Africa since the seventeenth century described in Heroes of Health Care in Africa (Schram) are a testimony to their response to God's call and his enabling in very challenging circumstances. Nearly all of them, whether they were trained in paediatrics or not, had to look after many children with malaria, pneumonia, diarrhoea, measles, tetanus, protein energy deficiency, vitamin A deficiency and meningitis. Christian doctors worked in government, university and church related hospitals or tropical medicine research organisations.

Some built their own hospitals, others set up training schools for medical assistants and nurses. High standards of care have continued in many of these hospitals because of the maintenance of the Christian ethos and witness with which the medical work was conducted.

Initial Advances

There have been major medical advances in the last 50 years. Descriptions of kwashiorkor in Ghana (Williams) were followed by the development, in Jamaica, of effective regimes for treatment of severely malnourished children (Waterlow). The devastating effects of measles on child mortality and nutrition were highlighted in Nigeria (Morley) and the importance of immune factors in the development of meningitis, malaria and leishmaniasis were described in Nigeria and the Gambia (Bryceson, Greenwood and Whittle) and leprosy worldwide (Brown). The development of effective oral rehydration regimes in India and Bangladesh (Cutting) saved many thousands of lives. These new technologies were taught in the new medical schools, many of them being set up by Christians with energetic, visionary leadership such as those in Nigeria and Ghana (Parry).

THE CHALLENGE FOR THE NEXT DECADE IS TO REDUCE CHILD MORTALITY RATES EVEN FURTHER, ESPECIALLY IN THE POOREST COUNTRIES

Overseas service

Many Christian paediatricians worked for short or long periods in government, university and church hospitals. While funding was never in excess there were many schemes - UK government, research councils, and UK based Missionary societies - for UK doctors to serve overseas. They made many contributions to the health services in poor countries but success depended on the immense hard work of dedicated paediatric nurses, physiotherapists, occupational therapists and nutritionists. Particularly impressive was the work among children with disability from polio, contractures following burns and many orthopaedic conditions where skill, patience and compassion are crucial in helping a child get through a series of painful procedures. Much of the work was done in partnership with the local church whose visitors and prayers enhanced the medical care.

Recent Advances

The last few decades have seen considerably improved treatment of sick children using better regimes of antibiotics, antimalarials, oral rehydration and micronutrient supplements. The Integrated Management of Childhood Illness(IMCI) programme of WHO and UNICEF, supported by research groups in the UK and elsewhere (Tulloch), trains health workers in the recognition of basic clinical signs without dependence on microbiology, biochemistry or radiology. These regimes have improved the management of pneumonia, malaria, diarrhoea, meningitis and convulsions but an important proportion of children do not respond to first line drugs and there is now an urgent need for surveillance of antibiotic resistance and development of realistic second line regimes.

A high proportion of infant mortality is due to death in the neonatal period. Hypoglycaemia, hypothermia, birth asphyxia, septicaemia and pneumonia can be managed by encouragement of early and exclusive breast-feeding, maintaining body heat, clearing the airways and recognising and treating infection. Low birthweight and premature infants are vulnerable but can be managed using the kangaroo method where incubators are unavailable. Many perinatal illnesses are due to poor health and malnutrition in the mother; much greater attention is now paid to Safer Motherhood initiatives - seeking to reduce maternal mortality rates (sometimes over 1000 deaths per 100,000 deliveries) and pregnancy complications.

Malnutrition contributes to over 50% of child deaths globally. New management regimes including early treatment of infections and micronutrient supplements have reduced mortality considerably. Tragically food shortage from civil unrest and climatic stress still leads to epidemics of severe malnutrition but many lives have been saved as a result of health professionals, many of them Christians, who leave their relatively secure jobs in the UK to serve in relief teams often in dangerous situations. UK based organisations working with local national churches, such as Tearfund, have been particularly effective in recent years.

Micronutrient malnutrition is dangerous. Vitamin A deficiency reduces immunity seriously and regular administration of oral supplements - just 3 times per year - reduces mortality among Under 5s by nearly 30%. Iodine deficiency causes reduced IQ; iodisation of salt or administration of capsules of iodised poppy seed oil to pregnant women can eliminate this tragedy. Cheap short course supplements of Zinc reduce the severity of diarrhoea and, when given prophylactically, reduce the prevalence of several childhood infections. Intestinal helminths cause deficiency of iron leading to decreased cognition and poor educational achievement; a single dose anthelminthic given to school age children at the beginning of each term has nutritional and cognitive benefits. While the health of the citizens of many countries is jeopardised by the enormous population pressure and overcrowding, there is at present, just about enough food being produced for the 6 billion world citizens of planet Earth. There are enormous challenges to researchers and some exciting technical possibilities, such as high vitamin A containing strains of rice. Health programmes will need to support the combination of improved diet, food fortification and micronutrient supplements if children are to develop to their potential.

Malaria can be prevented by sleeping under mosquito nets, especially if they are impregnated with permethrin (ITNs). Primigravidae may be protected against malaria in pregnancy if they are given single doses of sulphamethoxazole/ pyrimethamine in the second and third trimesters. Trachoma can be reduced by combination of personal hygiene, fly control, primary eye care, antibiotics and health education. Diarrhoeal morbidity has been reduced through improved water supplies, sanitation, better disease management at home, including oral rehydration therapy, and improved nutrition especially promotion of breast feeding and micronutrient supplements. However none of these approaches is enough and the development and application of new knowledge is urgently needed.

Child mortality has declined during the last decade from diarrhoea (now < 2 million deaths per year) and respiratory infection (now < 2.5 million deaths annually). Deaths from measles, tetanus, pertussis and diphtheria are much less common. These impressive results have only been achieved because of major commitment by immunisation programmes, better treatment regimes and improved knowledge and practice by child carers at the household level. A look at the 'State of the Worlds Children' published by UNICEF each year shows many exciting achievements. Unfortunately the rates of improvement have slowed and even relapsed in some countries over the last five years. There are several reasons; HIV, civil disruption and deterioration in the quality of health services. In some sub Saharan countries, over 30% of pregnant women are HIV +ve and a third of them transmit the virus to their infants with devastating effects on their susceptibility to infection and mortality. While there are new approaches using short courses of anti-retrovirals and there is new data suggesting that exclusive breast feeding is more protective against post - partum transmission of HIV than mixed feeding, there are enormous challenges to produce and apply new knowledge if health workers are to prevent HIV undoing all the benefits of child health programmes in the last few decades.

Health Care services

Hitherto, health services for children and mothers were largely given free or at least at very subsidised costs. With the recent health sector reforms in many poor countries, sometimes imposed on governments by international agencies and sometimes chosen by themselves, there is a move towards 'cost sharing'. In practice this means that parents have to pay more for the treatment than they used to. The lack of resources for health professionals and, in certain cases, poor management of staff and programmes has resulted in a marked lowering of staff morale. A key challenge for doctors and health managers is to restore a sense of enjoyment, pride in a 'job well done' and enjoyment to the work of health care. This needs, more than ever, a sensitive, sometimes incisive but always caring and compassionate spirit by leaders of health programmes. Many staff now prefer to work in the Christian hospitals than government or private sectors. The challenge is for Christan doctors to have a greater impact in all sectors. Parents worldwide desire a high quality of interaction with health professionals as much as effective therapy and health workers, inspired and strengthened by their Christian faith can make a major impact. Organisations will need to provide a basic, affordable service to poor people, using innovative 'insurance' and 'hardship' schemes combined with higher quality private patient care for those who can afford are desperately needed.

'INTERNATIONAL HEALTH' DOES NOT RESPECT CLIMATIC, POLITICAL OR GEOGRAPHICAL BOUNDARIES.

Community services

'Outreach' clinics of vaccinators and other nurses who screen and treat at community sites have been very effective. The use of the 'Road to Health Charts', developed by the Methodist Church In Nigeria for growth monitoring (Morley), immunisation and early treatment of illness are al important. Sadly outreach has become more difficult recently in many countries as a result of government cutbacks and immunisation coverage rates are dropping. High levels of poverty and international debt repayment 'strangle' health services as they wish to expand. Ironically, there is now more opportunity for UK doctors to serve in Christian hospitals than ever before. They require staff at all levels of seniority; their clinical and administrative skills and experience enhance the reputation and capability of the hospital and its services. More patients come, income increases and essential outreach services can be paid for.

Community Based Health Promotion

The importance of better diet, environment , personal lifestyle and childcare cannot be over-emphasised.. The most effective programmes involve an integrated approach in which committed individuals and groups within a community agree to work together on a programme of activities that they have agreed on themselves rather than had imposed on them from government or external agency. These groups develop a clear understanding of what they can achieve by themselves and become effective advocates in their interaction with different government and NGO groups. This approach - the 'social development approach' - takes a long term view, relying on what can be developed and sustained using local, national and external resources. Successful programmes enthuse a wide range of people with different skills, such as agriculture, water supplies, small business enterprises, farmers, mothers groups, Child to Child groups and schoolchildren. The most effective programmes occur where there is personal and spiritual transformation in the lives of the staff; the potential for inputs from the local Church is enormous. Such partnerships of health professionals and local groups play a major role in health promotion including improved diet for children, heightened awareness and health care seeking behaviour for sick children among parents and the promotion of sexual behaviour which prevents the spread of HIV or the support of families affected by HIV/AIDS. UK health professionals can play key roles in these new church-based multi-disciplinary teams.

Children at Risk

Many children are exposed to a variety of risks which maim them physically or emotionally. The problems facing children on the streets or those who are abused, exposed to violence and even taking part in it themselves, addicted to drugs or solvents, or growing up without parents are enormous. Again Christian health professionals can work effectively with child development workers, social workers, church outreach workers and others who seek to ensure that children, who are the greatest gift and asset that any society has, grow up to experience a life full of meaning and purpose - one in which they are at peace with themselves, their environment and their Creator.

Opportunities

Poor countries now have more hospitals, clinics and training institutions than they had even 20 years ago. They have staff with skills, motivation, vision and experience but millions of children get sick each year and millions more never reach their developmental potential. The challenge is to recognise that 'international health' does not respect climatic, political or geographical boundaries. Christian doctors can contribute to the health of children globally. This can be within their present discipline - whether as a clinician, in public health or as a researcher – and Calman requirements now allow for overseas work. Doctors may also become active in new areas such as advocacy and social development. Whatever the route, the fact that there are far more jobs than applicants suggests that the doors are still wide open.

Andrew Tomkins is Professor of Paediatrics, Centre for International Child Health, University College London

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Beyond our comfort zones is a 4/2 divide that won't easily go away, writes **Ted Lankester.**

At the turn of the millennium most of us have been eating, drinking, spending and celebrating. Some financial traders have received multi-million pound bonuses. For two thirds of the world, about four billion out of six, most stomachs have been full and there is money in the bank or under the bed.

Global health priorities

Community Health worker

IF YOU'RE ON THE WRONG SIDE OF THE 4/2 DIVIDE YOU WILL HAVE NO EFFECTIVE ACCESS TO HEALTH CARE OR ESSENTIAL MEDICINES.'

There is another world out there that refuses to go away: the one inhabited by two billion people - the same as the total world population in 1930. If you're on the wrong side of the 4/2 divide you will have no effective access to health care or essential medicines. There may be a hospital or health centre near you, but you will be too poor, too sick or too frightened to go there. If you do, there will probably be few drugs on the shelf, too little equipment in OPD or theatre, and too few staff with too little morale to meet your need.

You will probably be feeling hungry. Collecting a full bucket of reasonably clean water will indicate a successful day. You are likely to be languishing in the foetid squalor of an illegal slum, or working as a bonded labourer on a rich person's farm. You will snatch time to arrange family weddings, but you may have to mortgage your house or life to do it. A chronic cough may mean ruin for you and your family, unless your particular TB programme is fully funded and well managed. That would be a rare bonus.

During the first seven days of the year 2000, while we were stockpiling presents, surfing the net, making love and worshipping God, others lived and died in another world.

- 21,000 children died from malaria.
- 11,000 mothers died from pregnancy related causes: 99% of those in developing countries.
- 77,000 people died from tobacco, a deliberately crafted, addictive poison in whose manufacture or financial investment some of our friends, relatives, sponsors or pension funds are probably involved.
- 110,000 adults and children became newly infected with HIV. It will be tens of thousands more in one year's time.

While we trumpet about the wonders of global communication and e-commerce, let's remember that 25 countries in Sub Saharan Africa have less than one telephone per 200 people and fewer still have internet access. There are still villages in two continents where there is zero female literacy; forget computer literacy.

So what are the priorities? Here is a personal selection:

The elderly

Today there are 580 million people over 60, of whom more than half live in the developing world. By 2020, the number will have grown to one billion. Tackling this will require the best strategic managerial and medical minds. Because virtually all of those involved will never know what it feels like to be old, it will also require imagination and compassion.

Healthcare workers will need to develop new strategies for the priority which Dr Gro Harlem Brundtland of WHO has identified: increasing the quality of old age. One way to do this will be preventing and treating non-communicable disease, so that middle aged people can continue to work and earn. It will involve fighting the blight of ageism in a youth-dominated global culture. It will follow as much an empowerment model as a provision model.

The Mentally ill

Surveys from a wide variety of settings show that about one patient in three has a mental health component to their illness. We can argue about definitions and proportions but the ocean of unrecognised, untreated and dismissed mental suffering worldwide is a scandal. Some countries have virtually no

psychiatric services. For others, asylums resemble mediaeval prisons.

Few community health programmes have a mental health component. There needs to be an explosion of care, intelligent response, logistics, training and delivery in this area before the sheer numbers of those suffering from depression, dementia, anxiety and substance abuse paralyse us by the brutality of their size. This is an area requiring visionary and lateral thinkers, twinning with movers and implementers. It's as much a pioneer field in the developing world as surgery was 100 years ago.

Strengthening existing health facilities

In areas of greatest need a few heroic health care workers keep some essential services just functioning as resources and morale ebb away. Many hospitals are not just understaffed, but unstaffed. Many shelves are not simply lacking essential medicines, but are starkly bare. In many countries, existing hospitals and health centres are dying through a thousand cuts.

They can be resurrected by a thousand lifelines. Committed groups of health care workers, income generators and managers, can draw alongside in supportive partnerships to construct development plans, encourage, empower, monitor and pray. Compassionate, non-patronising and long term linkages can transform hospitals dying on their feet to become renewed trailblazers in the midst of despair. We are not just looking at firefighting - sending out a surgeon because the existing medical officer has collapsed after three months permanently on call. We are looking at building capacity and empowering hospitals to manage and deliver health care efficiently and effectively. We are searching for ways, old and new, of mobilising and generating income; using models, from running safari lodges and fuel stations to forging partnerships with philanthropists and private businesses.

Setting up new community health programmes

Scattered in the poorest communities - rural and urban - are motivated individuals or groups of local people isolated from the knowledge and resources to put their ideas into action. We need to identify these groups and then train, encourage, empower and support them. This will involve hundreds of small-scale partnerships, linked by a common commitment to Health for All and to best practice. At present we have vast areas of need, and scattered but disempowered groups of potential change-makers, born and bred in their own communities. We also have equivalent numbers of skilled and compassionate people distributed worldwide, willing to help but unable to find the bridge to the opportunities on their doorstep and often mesmerised when they do.

There is no need for this to be a lost cause. Just a fraction of the entrepreneurial energy that goes into starting a new airline or mobile phone company could come up with a menu of options to empower locally born shakers and movers. They in turn could transform thousands of communities within a generation. The ASHA urban health programme working with nearly 200,000 slum residents in New Delhi is just one programme showing that empowerment of local enthusiasts is a winning formula. So is the inspirational rural health programme at Jamkhed in the state of Maharashtra.

Fighting tobacco

...And coming up with alternative employment schemes so that those innocently making their living growing and processing tobacco are not themselves plunged into poverty.

'THE PARADIGM FOR THE NEW MILLENNIUM WAS INVENTED BY GOD AND DEMONSTRATED IN JESUS CHRIST. IT IS BASED ON KNOWING, FEELING AND UNDERSTANDING THE WAY OTHERS STRIVE, SWEAT AND WEEP, BY DRAWING ON OUR OWN EXPERIENCE OF HUMANNESS AND FRAILTY...

David Livingstone A Heart for Africa

David Livingstone (1813-1873), the well-known explorer, was a medical missionary to the African continent. His famous appeal at Cambridge University (1857) prompted hundreds of students to volunteer to serve in Africa. He was an active campaigner against the inland slave trade. Through his influence many hospitals were built, African nurses and midwives were trained and the practices of good hygiene and nutrition were taught widely. He died in what today is Tanzania having left instructions that his heart should be buried in Africa.

'COMMITTED GROUPS OF HEALTH CARE WORKERS, INCOME GENERATORS AND MANAGERS, CAN DRAW ALONGSIDE IN SUPPORTIVE PARTNERSHIPS TO CONSTRUCT DEVELOPMENT PLANS, ENCOURAGE, EMPOWER, MONITOR AND PRAY.

Ida Scudder Woman with a Mission

Ida Scudder (1870-1959) came from a long line of missionary doctors. While visiting her parents in India she was struck by the need for female doctors there. Thousands of women were choosing to die rather than to accept medical treatment from a man.
After completing her training in America, she went to Vellore in India. After overcoming the initial mistrust, she founded a one-bed women's hospital. Ida Scudder visited many villages to treat those who could not come to the hospital. By 1918, she had succeeded in opening a Medical College at the hospital, aimed at training Indian women to become doctors. She was its first principal. The Vellore Medical College remains one of the finest institutions of its kind, with an international reputation.

The opium trade of the last century was deeply shameful. It is a fraction of the scandal that lies behind the manufacture and promotion of another ancient poison.

Tobacco robs families, communities and countries of wealth and health for one purpose alone - the generation of money for directors and shareholders. We need to fight this as health care professionals, via aggressive lobbying, tactful diplomacy, unyielding persistence and innovative local initiatives.

Anyone - you - can start by writing to an investment company or pension fund you are linked to, enquiring about their policy on tobacco investment and withdrawing your funds if they continue to support the industry. We should give maximum and informed support to WHO's Tobacco Free Initiative.

Accelerating the fight against HIV, TB and malaria.

We can opt for one or both of two streams. We can become involved at the frontline; helping to develop effective local programmes and training others to do the same. Being thoughtful, cultural and intelligent in our response and advice. Not opting out when problems appear to be insoluble. Thinking of new ways, with our African colleagues for example, for the social marketing of bed nets: giving effective management support to struggling TB programmes: sharing ideas about how to make DOTS* strategies work more effectively in politically destabilised areas, or in regions with the devastating emergence of MDR TB.

Or we can become involved at a global and strategic level. Designing programmes, researching new drugs, lobbying in the corridors of power and influencing philanthropists. We need an endless stream of new ideas, new money, new drugs and new techniques which field workers can adopt, adapt and use.

So what is the answer to this catalogue of need?

A newly packaged dose of kindness, compassion and aid from the swimmingly wealthy to the drowning poor? Not exactly. We can keep the compassion and kindness but throwing rescue ropes down pits or chucking aid at those we pity is yesterday's paradigm, except at times of crisis or disaster.

The paradigm for the new millennium will not be exactly new. It was invented by God and demonstrated in the incarnation of God in Jesus Christ. It is based on knowing, feeling and understanding the way others strive, sweat and weep, by drawing on our own experience of humanness and frailty. It is founded on an intelligent and accurate assessment, not just of needs but also of underlying causes which tyrannise the lives of the poor. It is grounded by working in partnership with those born on the wrong side of the 4/2 line: on helping to empower them by sharing experience, training and competencies until they can do it themselves.

It is having the impetus to apply the most appropriate ideas, medicine and technology already invented to those who without it will die.

Christian health care workers have a commitment together with humanitarians of all faiths or none to do this effectively. Commissioned by a mandate from Christ, inspired by a living experience of God's love, and empowered with God-given intelligence, we can work together with the disinherited, to empower and transform them from the blight of poverty to lives enriched economically and spiritually.

This will require a global traffic of health and development workers going from any country to any country, guided by emerging best-practice principles in the area of international health care. It will be a worldwide movement and not just a western/northern dominated response. We can all play a role by bidding into some point of this global process. We can give our best in terms of time, skills and resources, in whatever way God through our personal circumstances inspires us.

God is incarnate in the year 2000. What are we waiting for?

Ted Lankester is director of InterHealth, and is on the Board of Tearfund.

* DOTS stands for Directly Observed Treatment Short course and is the preferred way of maximising TB compliance through personal observation

Christian Medical Fellowship

Christian Medical Fellowship was formed in 1949 and has grown to a membership of around 4,500 doctors and 1,000 medical students throughout the UK and Ireland. CMF aims to unite Christian doctors in pursuing the highest standards in Christian and professional life and has six spheres of activity - fellowship, ethics, evangelism, student support, mission and literature. To this end we run conferences, support local groups and members abroad, make submissions to government bodies on ethical matters and produce a wide variety of publications on issues at the interface of Christianity and medicine, including quarterly journals for both graduates and students. Membership is open to all doctors who have personal faith in Jesus Christ and who accept the authority of the Bible. CMF has members in all branches of medicine and is linked with over 60 similar interdenominational bodies worldwide through the International Christian Medical and Dental Association (ICMDA).

157 Waterloo Road, London SE1 8XN
Tel: 020 7928 4694
Fax: 020 7620 2453
Email: info@cmf.org.uk
Website: www.cmf.org.uk

HealthServe

HealthServe is a new initiative set up by the Medical Missionary Association (MMA) with the key objective of mobilising Christian healthcare professionals to serve in the developing world

HealthServe aims to provide a high quality information service to Christian churches, organisations and healthcare professionals, to inform and inspire them to be involved in healthcare mission and to connect them with organisations and churches to help match gifts with needs. Healthserve also resources and equips Christian health professionals in the UK to respond appropriately to requests from overseas mission institutions for assistance.

106/110 Watney Street, London E1 2QE
Tel: 020 7790 1336
Email: health157@aol.com
Website: www.healthserve.org

ACET

ACET (AIDS Care Education & Training) was established in 1988 as a Christian response to the challenge of AIDS. In London, Brighton and Northampton, the charity provides practical care at home for individuals and families infected and affected individuals.

ACET is also a leading provider of sex education for secondary schools in several regions of England and Wales and offers training in HIV/AIDS and related issues for parents, teachers and other professionals.

Around the world ACET provides practical education and training about HIV/AIDS and its prevention, and unconditional patient care, working with national and international agencies to promote policies to reduce the spread of HIV.

PO Box 3693, London SW15 2BS
Tel: 020 8780 0400
Fax: 020 8780 0450
Website: www.acetuk.org

ICTHES

International Community Trust for Health and Educational Services

ICTHES was founded in 1999 to provide a resource of teaching material in medicine and education - for all health workers. The Trust will publish journals based on 10 years experience producing the Journal of Community Eye Health which has a circulation of 16,000 in 171 countries. Teaching slide sets, videos and CD Roms will be produced following examples in opthalmology. A centre will house these teaching materials.

Our first new journal for worldwide distribution has just been published. Repair and Reconstruction: A Journal for Injury, Deformity & Disease has been produced in conjunction with UK plastic surgeons.

ICTHES is commissioning and sponsoring these activities in the spirit of Christian concern and service. Is God calling you to be involved in your own field of interest - editing, writing, proof-reading, distributing, giving...?

71 Brickhill Drive, Bedford MK41 7QE
Tel: 01234 356109
Fax: 01234 341 256

ICMDA

International Christian Medical and Dental Association

National organisations of Christian doctors, dentists and students have existed in some countries for over one hundred years. A meeting of representatives of seven such organisations in 1963 agreed to organise a triennial World Congress of Christian physicians and rapid changes in medicine later prompted the birth of the International Association which numbers 90 national organisations either as full or affiliated members.

ICMDA aims to promote Christian faith and practice in the medical and dental professions worldwide by means of world and regional conferences, publications, and a regular newsletter. As a conduit for discussion in the field of medical ethics, it encourages Christian doctors and dentists not only to integrate their faith and daily practice of medicine, but also to deepen their spiritual lives and be witnesses within their respective national medical professions.

82/88 Hills Road, Cambridge CB2 1LQ
Tel: 01223 321715
Website: www.icmda.org

Teaching-Aids at Low Cost

TALC is a small charity dedicated to improving health knowledge and practice in developing countries. Professor David Morley founded the charity in 1965, after five years as a missionary doctor in Nigeria, where he noted a shortage of medical books and teaching materials.

TALC has now distributed over 10 million low cost books and medical teaching-aids. Doctors use these materials to support their clinical work, thus saving many lives and alleviating pain and suffering. Visual images are very important for people with low literacy skills, so TALC materials are well-illustrated and written in appropriate English, allowing easy adaptation and translation. The popular Clinical Tuberculosis has been used to train 21,000 medics worldwide and has been translated into 16 different languages.

TALC regularly stocks new books and presents new ways of using our visual images. For a free 2000-2001 catalogue, please contact:

PO Box 49, St. Albans, Herts, AL1 5TX, UK.
Tel: 01727 853869
Fax: 01727 846852
Email: talcuk@btinternet.com
Website: www.talcuk.org

InterHealth

InterHealth is a London-based national charity, staffed by Christians and providing comprehensive health services and supplies to any who work or serve overseas.

It provides: pre-employment medical and psychological screening, pre-travel health briefing, a travel and vaccination clinic, tropical health checks on return from overseas, medicals on members of HQ staff, an advisory service by phone and email, debriefing and counselling, a travel health shop, seminars and a range of publications.

InterHealth also provides medical and lifestyle reviews to those in Christian ministry, largely in association with St Luke's Hospital for the Clergy and the Evangelical Alliance.

Anyone travelling or working overseas, or in any other category mentioned above, is welcome to make use of our services or supplies, for which fees are charged.

157 Waterloo Road,
London SE1 8US.
Tel: 020 7902 9000,
Email: Info@interhealth.org.uk

Centre for Bioethics and Public Policy

The Centre for Bioethics and Public Policy (CBPP) was established from the 'Ethics and Medicine' initiative as doctors, ethicists and lawyers became convinced that a clear ethical framework in the Judeo-Christian/Hippocratic tradition was needed to assess new technological developments in medicine.

Associated with the international journal 'Ethics and Medicine', CBPP has developed links in Europe and the USA, held major international conferences, and published books and proceedings. 2000 sees a major programme of development.

58 Hanover Gardens, London SE11 5TN
Tel: 020 7587 0595
Email: 100524.1567@compuserve.com

Murray McGavin on the global scale of preventable blindness and its cure

Restoring sight to the blind

William Osler Master Clinician

William Osler (1849-1919) was one of the 'Big Four' (Welch, Halstead, Kelly and Osler) who established the fame of the Johns Hopkins Hospital in the USA. All four were influenced by the impact of active Christianity, and the hospital itself was founded on Christian principles.
He was described as 'a master clinician, an inspiring teacher, a forceful speaker and a fascinating orator....' He occupied the Chair of Medicine at the Johns Hopkins and later became Regius Professor of Medicine at Oxford, founding the Quarterly Journal of Medicine. In an address to students he said, 'Begin the day with Christ and His prayer - you need no other. Learn to know your Bible... In forming character and shaping conduct, it still has its ancient power.'

It was the summer of 1968, high in the mountains of Afghanistan, in the valley of Bamiyan. Mongol horsemen led by Genghis Khan had swept into this valley 800 years earlier, killing everyone, 'even the rats and the flies'. Jock Anderson FRCS had organised an eye camp and our tents were pitched near to a 175 foot high Buddha carved out of the rock face. Muslim militia had subdued the region around AD700 and had hewn off the eyes and nose of the huge statue. Our camp site was situated at the feet of the 'sightless' Buddha.

A small Christian team of eye doctors and nurses, with our Afghan colleagues, saw many patients, operated in one of the tents and cared for post-operative patients in other tents. What an absolute delight it was to stand back from a newly operated cataract patient, having given him his temporary spectacles, and ask him to count fingers at a distance of nearly six metres. He was right. The 'ward' cheered. This man had been blind for about 12 years.

Soon afterwards one of the patients stopped me outside the tents. 'You gave sight back to that Afghan, why will you not operate on me? I'll give you more money'. This man, sadly, had bilateral absolute glaucoma and his optic nerves had been severely damaged. But how do you explain this to a patient? For many, an eye operation is simply an eye operation - to restore sight.

In later years I looked at the figures for those presenting at the NOOR Eye Institute in Kabul in one year. Of those in whom the diagnosis proved to be glaucoma, 47% had no light perception in one eye and, in the vast majority, vision was reduced to counting fingers or worse in the second eye. The needs are very great. But how widespread is blindness and visual impairment in the world?

Visual Impairment and Blindness

What does it mean to be blind? In the early 1970s the World Health Organisation realised that there were more than 70 definitions of blindness in UN member states. After much deliberation the WHO definition of blindness was agreed: visual acuity of less than 3/60 (or less than counting fingers at 3 metres) using best corrected vision in each eye - or a central visual field of less than 10o in the better eye.

Using this definition, together with the definition of visual impairment as less than 6/18 in the better eye, estimates of blindness and visual impairment can be made in countries and regions.

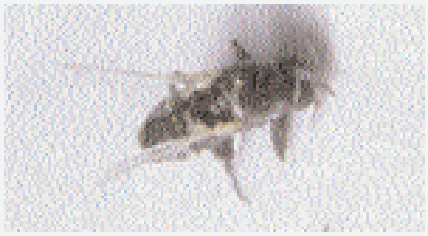
Treatable Blindness

So much could be said about these different causes of blindness. Cataract requires skilled surgeons to provide operative care, now with intraocular lens implants. Glaucoma is often difficult to diagnose in the early stages. Trachoma, the most important infective cause, has decreasing prevalence worldwide, as hygiene and public awareness improves. Vitamin A deficiency in children may lead to corneal scarring in those who survive. Over 60% of these children will die within months or years. There is an epidemic of diabetes around the world and the sight-saving laser involves considerable costs. Merck and Co have given Mectizan (ivermectin) free for the treatment of Onchocerciasis and only one or two doses a year are required.

The Challenge of World Blindness

It is estimated that around 45 million people are blind in the world by WHO definition and a further 135 million are visually impaired. Around 80% of the world's blindness is in developing countries and over 80% of this blindness could be avoided, that is, either prevented or cured.

It is no surprise that there is an imbalance of eye care personnel comparing industrialised and developing countries. For example, in the United Kingdom and North America there is approximately one ophthalmologist for 20-30,000 people. In sub-Saharan Africa



'AROUND 80% OF THE WORLD'S BLINDNESS IS IN DEVELOPING COUNTRIES AND OVER 80% OF THIS BLINDNESS COULD BE AVOIDED....'

there is one ophthalmologist for one million people. In many situations, particularly rural areas, eye care provision is much poorer as the majority of ophthalmologists work in the big cities. You cannot ignore these cold statistics.

Co-operation in the Prevention of Blindness Worldwide

There has been excellent co-operation in the field of eye care services amongst organisations with similar concerns for the prevention of world blindness. The World Health Organisation's Programme for the Prevention of Blindness and Deafness has 19 Collaborating Centres including our own International Centre for Eye Health (ICEH) in London. Our Director, Professor Gordon Johnson, previously served in Newfoundland with The Grenfell Mission.

ICEH carries out research into eye disease in developing countries, conducts courses for students from countries as far apart as Colombia and Mongolia (MSc, Diploma, Certificate) and has established an International Resource Centre which sends out the Journal of Community Eye Health, now reaching 171 countries. Come and visit us and discover our teaching and educational resources for the prevention of blindness!
The Partnership Committee of

The Causes of Blindness Worldwide

What are the common causes of blindness worldwide? The following figures are estimates.

Cataract (age - related)	19.3 million
Glaucomas	6.4 million
Trachoma	5.6 million
Macular degeneration (age - related)	2.7 million
Vitamin A deficiency (xerophthalmia)	2.7 million
Diabetes (retinopathy)	2.5 million
Eye injuries	1.5 million
Onchocerciasis (river blindness)	300,000
Leprosy	100,000
Others	3.5 million

'...IN THE UNITED KINGDOM AND NORTH AMERICA THERE IS APPROXIMATELY ONE OPHTHALMOLOGIST FOR 20-30,000 PEOPLE. IN SUB-SAHARAN AFRICA THERE IS ONE OPHTHALMOLOGIST FOR ONE MILLION PEOPLE...'

International Non-Governmental Organisations (INGOs) meets yearly, usually in Geneva, to discuss co-operation in prevention of blindness programmes and rehabilitation of the blind and visually impaired. Amongst the 35 full member organisations and 36 'observers' now represented at this two-day meeting are Christian organisations and representatives including CBM International (Christian Blind Mission International) whose Medical Director is Allen Foster OBE gave eleven years of service in Tanzania.

The International Agency for Prevention of Blindness (IAPB) organises assemblies of individuals and organisations dedicated to the elimination of 'avoidable blindness'. The first meeting of the IAPB was in Oxford, in 1978 and since then meetings have been held in the USA, India, Kenya, Germany and most recently, in 1999, in Beijing, China.

Vision 2020 : The Right to Sight

On 18 February 1999, The Global Initiative for the Elimination of Avoidable Blindness - Vision 2020: The Right to Sight - was officially launched by Dr Gro Harlem Brundtland, Director General of the World Health Organisation. Vision 2020 will be led by WHO and the Task Force of IAPB (Collaborating INGOs).

Priorities focus on three broad categories :

- Disease Control : particularly Cataract, Trachoma, Onchocerciasis, Childhood Blindness, Refractive Errors and Low Vision.
- Human Resource Development : emphasising the primary health care approach and the training of all groups of eye care workers.
- Infrastructure and Appropriate Technology Development : modern technology and the provision of eye beds, locally produced eye medicines, refraction and spectacle provision, low vision devices and surgical instruments.

The Journal of Community Eye Health, with its unique circulation, will promote the development of Vision 2020 in the years ahead.

Heal the Sick

Afghan Persian has two similar words, 'dawa' which means medicine and 'dwa' which means prayer. Sadly, in the United Kingdom, the suggestion of prayer for the sick patient may be met with astonishment or, even fear. Yet, the Christian doctor has surely a responsibility to pray for his or her patients, either quietly or openly, if possible. It was so good in early days in Central Asia to pray aloud for patients before surgery. It is good for the patient, for the surgical team and for the eye surgeon. One of our Afghan ophthalmologists was overheard saying to a colleague, 'It's very good when they pray!'.

One Saturday morning I was in the middle of a surgical list in an Afghan hospital when a nurse came breathlessly into the operating room. 'That girl with hysterical blindness - she's tried to strangle herself with a chain!' The girl's father and brother had had a fight and she had developed apparently functional visual loss. 'Is she all right, meantime?', I asked. 'She's settled', was the reply. 'Let's finish the list, then we'll go and see her .....'

Our British nurse Rosemary Weston and I walked into the girl's room later that morning. Members of the family were there, including the girl's mother. Have you experienced a patient's family looking at you with questioning faces - 'What are you going to do, doctor?'

I found myself asking them if they would like me to pray? Yes, that would be appreciated. Rosemary and I laid hands on the girl and, as we prayed in the name of Jesus, the sense of God's presence was wonderful. My faith soared. We finished praying and looked at the girl. Nothing had changed. Very disappointed, I went home for lunch. An hour or so later, the Afghan resident phoned. 'Dr McGavin, that girl, she can see perfectly and I've sent her home. Oh - and - er... Dr McGavin ... all the other patients want you to come and pray for them!'

Of course, it was 'good psychology', but I believe God intervened. Although her problems were not over, the next time I saw this young girl her expression was simply radiant!

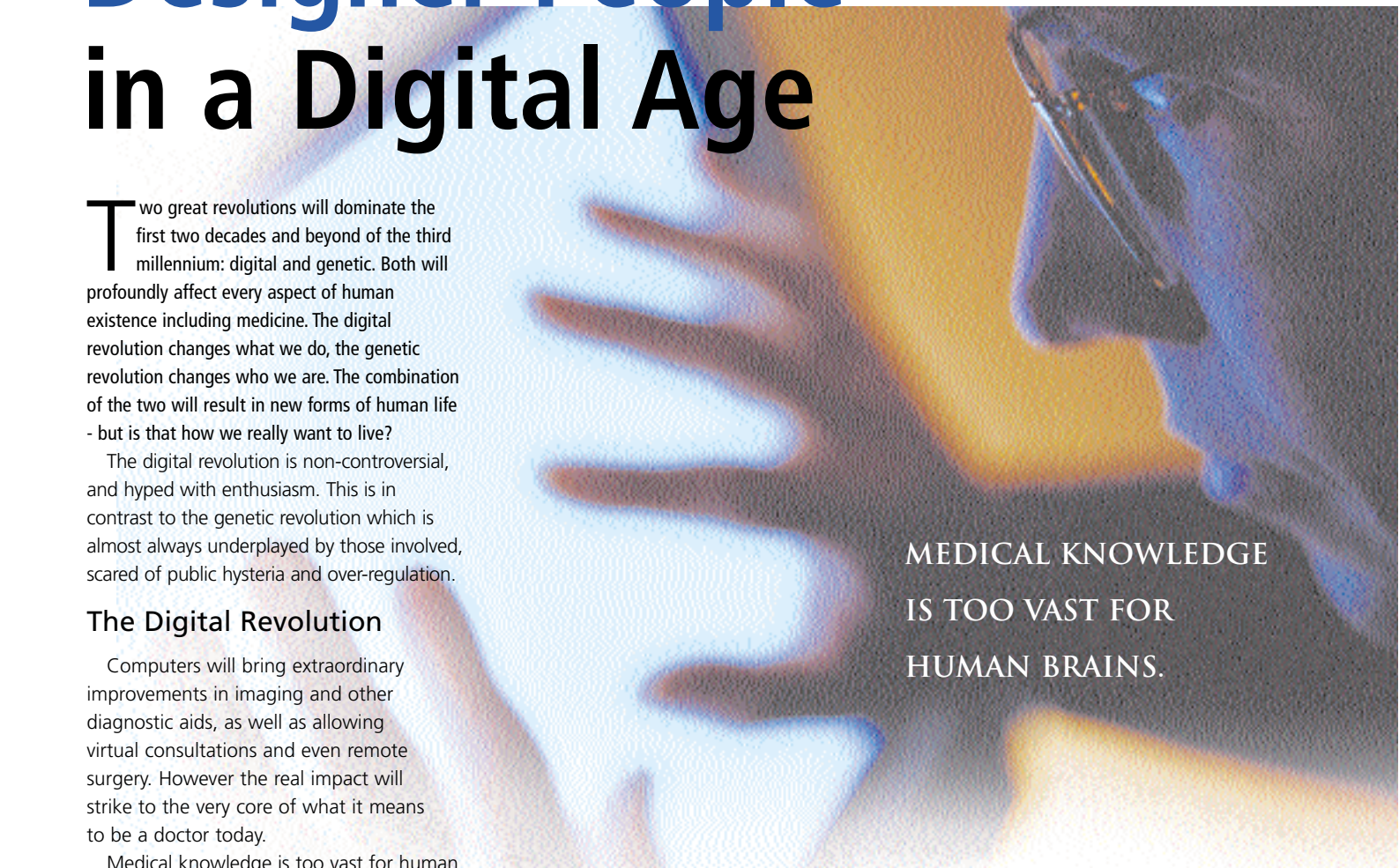
Reflection

Each individual patient looks to us expressing the heartfelt hope, like the blind man in the Gospel story - 'I want to see' (Luke 18:41). As Christians concerned with health care, we may offer a dimension in service which can potentially meet both the physical and spiritual needs of those in our care. What a privilege and an opportunity! What a challenge!

Murray McGavin is Medical Director, International Resource Centre and Editor, Journal of Community Eye Health at the International Centre for Eye Health Institute of Ophthalmology, University College, London.

Designer People in a Digital Age

The digital and genetic revolutions signal enormous changes to the way we live. But will they bring happiness and fulfilment? asks **Patrick Dixon**



MEDICAL KNOWLEDGE IS TOO VAST FOR HUMAN BRAINS.

Two great revolutions will dominate the first two decades and beyond of the third millennium: digital and genetic. Both will profoundly affect every aspect of human existence including medicine. The digital revolution changes what we do, the genetic revolution changes who we are. The combination of the two will result in new forms of human life - but is that how we really want to live?

The digital revolution is non-controversial, and hyped with enthusiasm. This is in contrast to the genetic revolution which is almost always underplayed by those involved, scared of public hysteria and over-regulation.

The Digital Revolution

Computers will bring extraordinary improvements in imaging and other diagnostic aids, as well as allowing virtual consultations and even remote surgery. However the real impact will strike to the very core of what it means to be a doctor today.

Medical knowledge is too vast for human brains. The days of doctors being allowed to make decisions without consulting robots are coming to an end. It is already the case that computers are better at making some diagnoses than most physicians.

In future any doctor failing to consult the digital expert will risk being sued for negligence. The digital expert (robot) will have total knowledge of every research paper, every drug trial, and every previous outcome of particular treatment decisions in similar presenting circumstances. And every day the digital expert will improve.

Current medical training is caught in a late twentieth century timewarp, based on the notion that every doctor can carry in his or her head on the day of qualifying enough information to practise safely for many years. In practice, medical knowledge is now dangerously dated. In a couple of years and with the speed of progress, this is likely to get worse.

Future doctors will be trained to be world-class experts on eliciting symptoms and signs, on taking a thorough history - albeit prompted by the machine. They will also have highly developed personal skills: empathy, trust-building, high-touch. They will have enough general understanding to pick up major machine errors, but not enough to challenge. It will be a brave doctor in 2020 who insists on going against the cumulative wisdom of the entire profession or dismissing the machine's instructions. Will they be doctors at all? Perhaps not, since in the majority of cases a well-trained nurse will do it all just as well.

The surgeon as a highly skilled technician will survive largely unchanged, although relying ever more heavily on micro-technology. And some of the implants will be digital, including chips onto which nerve cells have been grown, allowing brain to digital and digital to brain transfers of commands, visual information or perhaps in the future even thought and emotion. Rats are already controlling equipment in their cages by thinking alone.

The Genetic Revolution

Few have considered the extraordinary results of the fact that the code of life is universal, allowing an infinite range of gene swops between plants and animals as well as between individuals. Gene technology will allow doctors to target and destroy an ever wider range of fetuses which fall short of parental hopes in predicted intelligence, height, athletic capability and other factors.

Viruses will be widely used to infect and reprogramme human tissues and organs as required, not only to cure disease but also to enhance lifestyle. For example, viral hairsprays will create permanent colour changes.

Replacement tissues will be widely used, following the discovery that you don't need to create entire cloned embryos of existing people as a source of stem cells. New techniques will persuade many different cell types in adult bodies to revert to a more primitive form, before re-activation to make new specialised cells. Brain repair will become routine, not only after localised damage, but also to strengthen mental powers in old age. Spinal repair will also be successful.

Those wanting entire organs or new bodies will continue to borrow from the living or the dead. Hand and arm swops will become common, together with legs and feet. The demand for head transplants will grow

IT WILL BE A BRAVE DOCTOR IN 2020 WHO INSISTS ON GOING AGAINST THE CUMULATIVE WISDOM OF THE ENTIRE PROFESSION OR DISMISSING THE MACHINE'S INSTRUCTIONS.

rapidly, as hope grows that quadraplegic patients could regain good motor and sensory function so long as they live long enough. In a world where tens of millions still starve or die from lack of simple medication, such use or abuse of resources will be regarded by many as wrong.

Genetics will be used to build drug molecules inside living cells - bacteria, fungi or mammals - providing a new range of hyper-medicines, compounds so complex that they cannot be created any other way. A factory the size of a nuclear power station can be compressed into a single bacterium, which will go on self-replicating forever.

Many of the new generation of medicines will be 'smart drugs' designed as life-enhancers rather than health promoters: drugs to improve memory in students, sexual performance in middle aged men, skin elasticity in older women. Life-enhancement will become an important sub-specialty in life-sciences.

Human cloning will be a standard infertility clinic option in some countries by 2020, despite widespread public unease and outright disapproval in many nations.

Over the last three years more than a million transgenic animals were born in British laboratories alone, perhaps 250,000 of them containing human genes. By 2020, perhaps a hundred million such animals will be made each year globally, each a laboratory mutant unlike any creature ever seen before in the history of the earth.

Some of these variants will blur the distinction between vet and doctor. How many human genes will a monkey have to have to gain human rights and a place in a hospital bed? The answer is less than 1.6% since we only differ from monkeys by less than 3% of our genetic code. For the Christian there is another question: how many genes does an animal need to have to need salvation?

Designer people in a digital age

What happens when we combine the digital and genetic revolutions and what will be the effect on human happiness - indeed survival? Imagine a human being with transplanted limbs, many tissues enhanced or reprogrammed altogether, with brain-embedded digital technology. This is hardly science fiction since all the individual components are already here or almost within our grasp.

But human happiness will continue to remain elusive. History shows that the more technological a society becomes, the higher the demand for psychotherapists or antidepressants, and the higher the suicide rate.

Happiness clearly does not reside in longevity alone, nor even in physical health. Quality of life is the prime driver in the quest for new treatments and cures, indeed for all medical progress, but the reality is disappointing. Human nature is unchanged and so are personal needs: for love, understanding and a sense of significance or destiny. Relationships have always been for most people the central key to personal fulfilment and wellbeing. Spirituality - or a relationship with the Ultimate Being - is part of this.

Expect therefore a growing reaction against 'soul-less' science with its grand promises of building a better world, but obvious failures to deliver. Expect a boom industry in happiness specialists, dispensing not happy pills, but personal, practical advice on every aspect of human existence, based on rigorous research. These modern day priests to progress will be the new value leaders, shaping opinion and expectations.

Patrick Dixon is Director of Global Change (www.globalchange.com/)

Dame Cicely Saunders Care for the Dying

Dame Cicely Saunders (born 1918) is acclaimed for her pioneering work with the hospice movement and her contribution to greater public understanding of the care of the dying. Inspired by a dying agnostic Jew in 1948 who left her the first gift for a 'home', she had seven years experience as a volunteer nurse at St Luke's Hospital in Bayswater founded by Methodists in 1893. A surgeon impelled her to read medicine to develop the pain control she had seen there. This she did at St Joseph's Hospital, Hackney, which was founded by the Irish Sisters of Charity in 1905. Working together with them she developed the modern hospice movement of which the first example is St Christopher's Hospice in Sydenham, opened in 1967 as a Christian and medical foundation.

RevieWWWs with Cyberdoc

Countdown of the Top Ten Christian Healthcare websites

For the Millennium Triple Helix Cyberdoc we take a bird's eye view of Christian healthcare sites on the internet. Here is Cyberdoc's top ten of what remain a select breed of Christian internet sites by, or very relevant for, Christian health professionals. There remains much room for improvement and even the best site could get better, but it is certainly true that there is a lot of useful information out there if you know where to look.

10. CHRISTIAN IN CARING PROFESSIONS
www.cicp.org.uk

Aside from providing minimal information about this group, this site is mainly interesting for its links page. Even this is not extensive. The internet is treated by too many as a flyer advertising a group. Most surfers are looking for a little more than this site can give.

9. HEALING THE NATIONS
www.healnation.org

This site, although minimal in its own content, is worth a mention for a nice design and some very useful links to other medical missions pages.

8. NCFA NSW
members.tripod.com/~ncfa_nsw/

The best of the Nursing Christian Fellowship pages, this Australian site has a few nursing articles and some useful links to other branches of the NCF in various countries.

7. CMDS/EMAS
www.cmdsemas.ca

Nicely designed and some good material (although a little sparse), this Canadian site does have a good list of other links, a few position papers and some extracts from the current issue of the magazine.

6. CMDS
www.cmds.org

Well designed but at times the layout is confusing - to me online resources should not mean an online bookshop. This is a useful site, including position statements and some articles on ethical issues. The number of articles and their depth seem significantly greater on the Christian Medical Fellowship site; this may well be because the American sister organisation do not put their journal online. There is a members-only section to the site which may have more content at a cost but when there is a free CMF site available why bother with this one!

5. AMERICAN LEPROSY MISSION
www.leprosy.org

This site is simple, limited, but effective in its design and message. It is a hard hitting exposure of the horrors of leprosy and an appeal to support the work of the Christian American Leprosy mission. There are no links, and relatively little information, but it hits hard enough to risk seriously a dent in any visitor's wallet. There is an option to subscribe to an e-mail prayer letter.

4. CENTRE FOR BIOETHICS AND HUMAN DIGNITY
www.bioethix.org

A reasonable number of brief comments on bioethical issues from a Christian perspective. This site also has a 'members only' section. It rather neatly lists news headlines that are relevant on its homepage.

3. GLOBAL CHANGE
www.globalchange.com

Although brightly designed and heavily self promoted, this site is still well worth a visit. One wonders how Dr Dixon manages to do or write even half of what he does. There seem too few links to other sites.

2. CARE
www.care.org.uk

This site is excellent in its summary of up-to-date medical ethical issues under consideration by parliament. There are briefing papers, articles and information about the work of CARE.

Unfortunately the site exists in a vacuum with no links out of it and none of the other sites linking into it (perhaps this is no coincidence!)

1. CHRISTIAN MEDICAL FELLOWSHIP
www.cmf.org.uk

This site is the clear winner. With its vast array of articles, you can usually be sure of not just one but several well argued, biblically based Christian views on any subject of interest to Christian healthcare professionals. Linking as it does the Medical Missionary Alliance and International Christian and Medical and Dental Association web pages and with links to most of the other sites reviewed in this issue, it is a great resource. If one was looking for improvement, it would be to have links to some of the other sites' offerings on each subject. Then the CMF site really would be the only web address needed to access Christian healthcare information.

Of course these don't include Cyberdoc's own website: xtn.org/cyberdoc/

Cyberdoc is Dr Adrian Warnock
SHO in Psychiatry

New Dictionary of Christian Ethics and Pastoral Theology

Edited by David Atkinson and David Field
IVP 1995
£32.00 Pb 918 pp
ISBN 0 8308 1408 6

The trouble with ethics is that it has acquired a spurious shell of academic protection and an associated scholastic mystique. It is a subject supported by specialist journals, statutory committees, and an obligatory slot in the medical curriculum. We now have professional ethicists to advise us and teach our students. At one level this is right: we need every help we can in making decisions which affect the quality and even the existence of life for other people. But at another level, we are at risk of becoming mere body technicians, concerned with fabric maintenance or repair and passing on as many bucks as we can to other professionals.

In his 1994 Oxford Reader on Ethics, Peter Singer defines ethics as being 'about how we ought to live: what makes an action the right, rather than wrong, thing to do?' This immediately places ethics at the centre of all professional practice - indeed, of all life. When we shunt ethics into a speciality of its own, we are in danger of dehumanising medicine, of down-grading our role as healers and carers and making our 'ethical' decision-making a formalised procedure comparable to dealing with a biochemistry report. As doctors we divorce our ethics from who we are at our peril; we may be able to take appropriate decisions in terms of pathology and prognosis, but it endangers our role as the kind of doctors who treat patients as real people.

There are many good books on medical ethics in general, and on specific problems such as at the beginning and end of life, the difficulties of allocating resources, balancing the interests of the patient with those of his or her family and so on. Far be it from me to denigrate any of these books, but it was very good to welcome a book which firmly placed ethics (including most of the common problems which face doctors) in an explicit Christian rationale, so that, decision-making can develop within a coherent context.

The New Dictionary of Christian Ethics and Pastoral Theology has earned an important place on the shelves of Christian doctors over the last few years - and not only of Christian doctors - since the issues raised in the Dictionary and their possible solutions are common to everyone, regardless of their beliefs. Put another way, the contents of the book are especially relevant to all those who acknowledge that we are more than mere naked apes. It is particularly helpful in extending its coverage to society, to relationships as well as those matters concerning the individual.

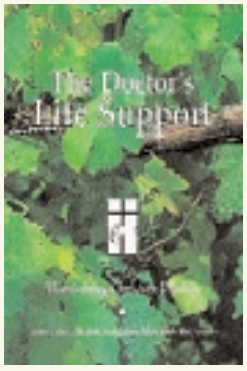
There is a vast amount of material in the 900 plus pages of this Dictionary. I was delighted when I first received a copy; I am no less delighted five years and many usages later.

Sam Berry is Professor of Genetics, University College London, a former member of the Human Fertilisation and Embryology Authority (1990-6); former President of Christians in Science, of the Linnean Society, and of the British Ecological Society

The Doctor's Life Support

Maintaining Christian vitality, daily devotional readings through the year

Edited by Muriel Crouch and Ronald Winton
CMF/ ICMDA 1986
£8.00 Pb 378pp
ISBN 0 906747 30 9



This book is written with the aim of maintaining Christian vitality in the newly qualified doctor. It is well recognised that the early days after qualification are very busy and the young doctor often lacks sleep and gets exhausted. This may also be a time of separation from friends, family and normal sources of spiritual refreshment. The book is written mainly by doctors who have themselves been in this position.

The readings are set out one per day with some additional readings for Easter. There are a number of themes which run through the book: ambition, beatitudes, the cost of discipleship, friendship, sex, morality, the good shepherd, guidance, hopeless patients, money and possessions, physical stress and spiritual resources. Once a month there is a section on spiritual discipline.

On 17 January the exhortation to pray continuously giving thanks in all circumstances is explored. The busy doctor is focused on the practicality prayer when working, travelling, eating and socialising. One sound bit of advice is that one's car can be a sanctuary and it is possible to snatch a few minutes to lift your heart to the Lord while travelling, as long as your eyes are kept on the road.

On 20 January the writer explores the frustration of the 'day off that never was'. Plans for an evening out, spoilt by a medical crisis, a situation so well known to all of us and we are reminded how often Jesus was pressurised by the crowds and how he dealt with this.

On 23 March we are reminded that whatever our task, we should work heartily serving the Lord and not man. There is a reminder that secular work is an avenue to serve the Lord, and not just our fellow humans. Many young doctors know what it is to feel exhausted beyond their endurance and this is addressed in 30 June's reading. Perhaps one of the biggest challenges the newly qualified doctor faces is dealing with a patient's death and their relatives. So in 28 August's reading we are reminded of the good news which we have to share that 'Our Redeemer liveth'.

This book, although aimed at the newly qualified doctor, may also be helpful to others including those reaching retirement. In the 23 December's reading we are reminded that the Lord will teach us to number our days 'so that in all stages of our life we should apply our heart to wisdom'.

In this brief review, I suspect I have only managed to whet your appetite about this remarkable little book. The preface states wisely that these readings are not designed to replace more comprehensive Bible study, but to give one thought from the Word of God, relevant to the reader's situation, and short enough to be maintained in the mind all day. It succeeds in this and I warmly recommend it to doctors working under pressure.

Margaret Hodson is Professor of Respiratory Medicine and Head of the Department of Cystic Fibrosis at the National Heart & Lung Institute, Imperial College School of Medicine, London, and Honorary Consultant Physician to the Royal Brompton Hospital.

Cure for Life

Bernard Palmer
Summit Publishing Ltd 1996
£4.99 Pb 145pp
ISBN 1 901074 07 2

Bernard Palmer has produced a most compact and readable account of the essentials of the Christian faith - even a slow reader will not take more than four or five hours.

The content is derived from a Christian basics course that the author and others have run over many years. There are three main parts: an excellent defence of the biblical account of Jesus Christ in history; why and how to become a Christian; and, some indications on how to live a Christian life. Such comprehensive cover is a tall order for such a slim pocket book, but it succeeds surprisingly well!

The section on the historical Jesus: his birth, life, death on the cross and resurrection is closely written and well argued. His medical background, comes through both in his tidy marshalling of facts, and in his detailed physiological knowledge. Having recently suffered from an acute pericardial effusion, I was interested in and convinced by his clinical argument that Jesus died from cardiac tamponade. This is based upon the account in John's gospel of the piercing spear bringing a sudden flow of blood and water; the possible medical explanation of which could be the presence of fibrinolysins in Jesus' blood ante-mortem following suffering on the cross, resulting in separation into unclotted red cells and serum post-mortem.

The middle section explains the need for accepting Jesus Christ personally and how this can be done. It starts with the big question: 'What was the purpose of Jesus' coming?', and assumes the level of knowledge of the current person in the street - more or less pagan with some atavistic Christian memories. Big and contentious concepts such as sin and redemption are dealt with honestly, clearly and in straightforward language.

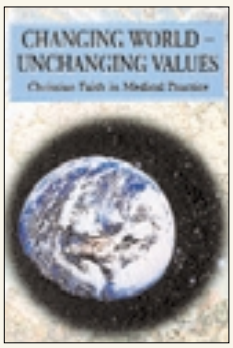
The final section on the Christian life is perhaps somewhat limited by the context in which the book came to be written - developed out of a discussion course on the basics of Christianity. It was slightly too constrained into one type and shape of Christian experience for my liking, but others may well disagree.

This is not a medical book or specifically related to the work of health professionals. However, their needs for secure and living faith in Jesus Christ and committed Christian practice are just as great as those of others. The test for this little book is how useful your friends will find it when you give it to them. In the three years since its publication there have certainly been many letters of appreciation, and I believe that it will have a valuable place in speaking to contemporary British society.

Andrew Sims is Professor of Psychiatry, University of Leeds

Changing World - Unchanging Values Christian Faith in Medical Practice

Edited by Janet Goodall & Keith Sanders
ICMDA 1998
£7.50 Pb 397pp
ISBN 0 9532690 0 0



'Change is the only certainty' is a popular but erroneous catch phrase. The changes in medicine over the last century have indeed been dramatic, but what has actually changed? We frequently change the organisation of the UK National Health Service (and sometimes appear to be going round in circles) and we can treat far more conditions more effectively than ever before. However, we hardly ever cure anybody's disease and the maximum length of life has not increased since the days of Noah: physical death always wins in the end, as it has done since the beginning of time.

Our ethical dilemmas, although more complex and pressing, are still about the same issues as they have always been - the value of the human person, fairness in allocation of resources, patients' autonomy and confidentiality. The challenge to all in the medical world is to distinguish temporary changes and cultural differences from eternal unchanging values and to apply these values in the very varying situations around the world.

That is why this book is so important at this time. The International Christian Medical and Dental Association (ICMDA) links groups of Christian doctors and dentists in many countries throughout the world and this volume is a selection of addresses given at the ten world conferences and fifty regional conferences which have been held over the last thirty five years. The editors have done a magnificent job in selecting from a huge amount of material and then grouping and correlating the different contributions.

There are 61 authors from more than 20 countries and they range from those in western academic practice, to pioneer missionaries and rural practice in developing counties, to theologians and experts in palliative care.

The contributions are grouped under five sections: The Firm Foundation, Relationships, Ethical Principles, Christian Practice, Responsibilities. Where there has not been room to print a whole talk, a short summary has been included and this whets the appetite for more!

The Firm Foundation contains a most lucid, succinct and comprehensive account of the unchanging Christ, given by Arnold Aldis - a surgeon - in 1978. Many household names of the Christian world appear in the other sections: Denis Burkitt, John Stott, Paul Brand, Stanley Browne, Martyn Lloyd-Jones and Paul Tournier. But some of the most challenging contributions are by less well-known people, with special experiences.

It is always difficult to pick out one or two from such a fine collection but the pair entitled 'Medical excellence in poverty' and 'Medical excellence in affluence' from rural Uganda and urban Germany respectively are particularly relevant to our own 'excellence culture'. How can there be excellence in poverty? one might ask. Here it is defined as 'God-centred commitment to service'.

There is a wide range of topics including families, sexuality, lifestyle, suffering and the drug problem. The subject index enables one theme to be traced through different chapters and studied from different angles. Throughout, the book shows how Christian values, aims and motivation can be applied to every aspect of medical and dental practice. The final chapter entitled 'The sickness of man - the solution' by Martyn Lloyd-Jones leaves the reader in no doubt that the

fundamental human need is spiritual renewal, not just physical health.

This collection is a gold mine of wisdom, advice, challenge, reassurance and encouragement and can be dipped into again and again. One is profoundly grateful that these talks are no longer hidden in conference reports but are now available in such an attractive and readable form.

Alan Johnson is Professor of Surgery, University of Sheffield and Chairman of the International Christian Medical and Dental Association (ICMDA)

Christian Choices in Healthcare

Edited by Dominic Beer
CMF/IVP 1995
£9.99 Pb 320pp
ISBN 0 85111 144 0

Christian Choices in Healthcare is an outstanding collection of essays by senior Christian doctors, that has been widely distributed. Divided into two parts, Christian Vocation in Healthcare and Medical Ethics, the essays are solidly written and most are deeply grounded in Scripture.

Surgeon Alan Johnson writes an open letter from a professor to a medical student. What am I doing at medical school? Where do I get extra stamina from? I'm scared of making contact with patients. What of the future? All these issues are addressed very well. John Wyatt, a pediatrician, tackles the issue of maintaining priorities as a Christian medical student and asks, 'Are you a spiritual schizophrenic?' Michael Jones writes about being a stressed doctor in a stressed society. I found his observation that even the Apostle Paul suffered from stress (2 Corinthians 11: 28-29) very amusing.

Medical students need career advice but few medical schools are good at providing it. In medical careers, Michael Webb-Pebloe, cardiologist, discusses how the role of doctor within society is changing. He also proposes some useful criteria for choosing a specialty. It is vital to seek God's guidance through prayer and reading the Bible.

He concludes: 'Neglect of time spent in the presence of God (either alone or in the company of other Christians) lies at the root of many a spiritual shipwreck in early professional life.' Susan Clarke, nuclear medicine consultant, writes about women in medicine: a Christian perspective. She looks at the immense value of women in medicine and gives advice about the training years in women's careers.

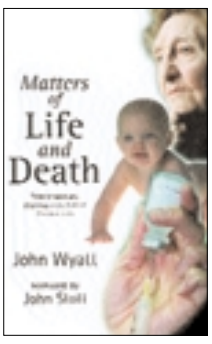
Peter Saunders, now General Secretary of the Christian Medical Fellowship, opens up the second part of the book with a valuable discussion on making ethical decisions in medicine. What are medical ethics? Where do they come from? There are different bases for making such decisions and these are examined: gut feeling, reason, conscience, consensus, consequences, relativism and authority. How do you know God's will? What should you do when Christians disagree?

There then follows comprehensive discussions on issues of early life, abortion, human genetics and sexuality. Peter Lewis, pastor of Cornerstone Evangelical Church, Nottingham, writes a very clear essay on hope, healing and the charismatic movement. Andrew Fergusson, former CMF General Secretary, grapples with euthanasia and alternative medicine (subjects on which he is a considerable authority). Roger Moss, a psychiatrist, writes on demons. Finally, other issues at the end of life such as growing old and bereavement are discussed by George Chalmers who, very appropriately, is a geriatrician.

Rachael Pickering is a SHO in Orthopaedics, London, and a past member of the Nucleus editorial committee.

Matters of Life and Death

John Wyatt
CMF/IVP 1998
£9.99 Pb 256pp
ISBN 0 85111 588 8



Fetal screening, abortion, reproductive technology, genetics, infanticide, euthanasia and physician-assisted suicide. Today's healthcare dilemmas raise fundamental questions about what it is to be human. This thoroughly researched book comes at a crucial time in the fast -changing climate of contemporary medicine. John Wyatt presents a credible and challenging Christian response to the ethical minefields that face us.

He begins with an exposition of the most important current influences on bioethical thinking, including scientific reductionism, biotechnology and ethical diversity These are contrasted with the biblical worldview of humanity and health. Profound insights combine with personal anecdotes as Professor Wyatt looks to the Bible for a way forward. The strength of the books lies in the author's experiences as a neonatal paediatrician, daily engaged in matters of life and death. He writes:

'suffering in another human being is a call to the rest of us to stand in community. It is a call to be there. Suffering is not a question that demands an answer, it is not a problem which requires a solution, it is a mystery which demands a presence.'

John Wyatt excels in the art of clearly expounding complex theological and scientific concepts. He also writes imaginatively, describing God as an artist and human beings as his 'flawed masterpieces'. This unique analogy is developed through the book. Here is a taster:

'The original masterpiece, created with such love and embodying such artistry, has become flawed, defaced, contaminated and is decaying from age. The reflection of God's character is distorted and partially obscured. But through the imperfections, we can still see the outlines of the original masterpiece. It still inspires a sense of wonder at the underlying design... Our duties (as healthcare professionals) are to protect masterpieces from further harm, and attempt to restore them in line with the artist's original intentions.'

Based on the 1997 London Lectures in Contemporary Christianity of the same title, it also contains a large amount of new material. This book is not a short read, but your time will be well spent.

'At the heart of Christian caring is Christ. We are called to see Christ in those for whom we care. We are called to be Christ to those for whom we care.'

Caroline Ashby is a medical student at University College London, Editor of Nucleus and CMF Editorial Scholar

God is an Artist

Most people who know London know about Cleopatra's Needle. It's an ancient Egyptian obelisk that stands proud on Westminster embankment, a massive but carefully fashioned shaft of granite, on which an ancient potentate proclaims great deeds of valour.

Now if you visit historic Luxor in Egypt, you may stumble on a weathered, half-finished obelisk, lying on its side - in complete contrast to Cleopatra's Needle. There came a moment when the ancient sculptors working on the stone suddenly downed tools. One of them had found a flaw. Only a perfect piece of granite would do in the making of an obelisk. So they abandoned it and instead of standing proud in the Valley of the Kings, or even in present day London or Paris, millennia later this stone lies on its side, forgotten and useless.

God is an artist, but there's an important difference between what he has done and the obelisk sculptors of ancient Luxor. God made human beings in his image. God put on them the stamp of his likeness. We all bear that image but it is flawed because generation on generation we have chosen our own way rather than live according to God's blueprint. No part of us or human society is unspoiled by the folly of choosing our own way rather than living as God intended. This folly is the root cause of the breakdown of family and community, of environmental devastation, and of all that is the shadow side of being human - ignorance, suffering, pain and death itself.

But there is Good News. Unlike the ancient stonemasons of Luxor, the Divine Artist has never once given up on humanity. He sent a succession of prophets to make known his ways. And - Christians believe - God finally took human form in the person of Jesus of Nazareth. In Jesus we see humanity with the image of its Maker unspoiled and unmarred. In dying and rising from death three days later, Jesus declared God's unselfish love and opened the way for humanity to be reconciled to their Maker and enjoy his presence for all eternity.

In the Book of Revelation (chapter 21) there is breathtaking vision of a new social order, a 'new heaven and a new earth' that God is preparing. In this new order, ignorance, tears, suffering, pain and death have been abolished. All of us are invited to be citizens of that new order. We begin by giving our allegiance to Jesus. 'For to as many as received him', wrote one of the eyewitnesses to Jesus' life and death, 'to them he gave the power to become the sons of God' (John 1:12).

John Martin is associate editor of Triple Helix

THE DIVINE ARTIST HAS NEVER ONCE GIVEN UP ON HUMANITY.

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