Stewart Cameron's talk to end his Festscrift, October 18th 1996, Guy's Hospital

ON BEING A BUTTERFLY: MANY QUESTIONS, FEW ANSWERS

Like many of you, I flew on one of my many visits to London yesterday evening for today's meeting, but with I guess even greater anticipation- but also with trepidation.

To be asked to talk at one's own Festschrift is akin to being asked to address one's own funeral; fortunately it is only my clinical rather than my corporeal burial that is in question today.

Thus it falls to me to finish off this programme, and no task I have had to undertake in recent years, as many here can testify, has given me such worry. To follow the firepower of the fleet already launched today is an awesome task. You will see that I have been driven by fear from a lifelong practice of delivering talks *ex tempore*, to the use of notes- and to the wearing of a necktie.

By now also I see that your attention must be down to minutes- perhaps even seconds; I see my role as a sort of soufflé to end the magnificent repast you have already enjoyed, and to extend this metaphor, I hope that I may *rise* to the occasion. I will therefore try and entertain as well as instruct you, with a mix of reflections over a longish career, and the loud sound of the hooves of some hobby horses I wish to ride.

Henry Miller, a neurologist and lately Dean of Newcastle University, divided lectures into two: those with slides, and those that conveyed original thought. Although you will have to suffer me again this evening at the Royal College after dinner without slides, I have to confess that right now I am going to show a good number- mainly so that I can remember what I am going to say.

Naturally on an occasion such as this one thought's turn to the past, and to what has passed during my clinical career- for that is all that is down for burial this year- I propose to continue to pester you, my friends and colleagues, as well as the editors of the world, with various bits of output from accumulated but never analysed data, and on some new topics which I may play with.

Perhaps now I will be allowed also to be a little philosophical: What is life after all ? The most cynical and reductionist definition that I have come across is that

life is a sexually transmitted disease with 100% mortality

Whilst there is of course grain of truth in this, I remain a *little* more hopeful and positive about both the past and the future. The seven stages of life outlined by Shakespeare's life have also been reduced by Art Linkletter to four:

infancy, childhood, adolescence
....and obsolescence.

Fortunately most of us remain permanently adolescent, and thus escape.

Now on a personal note, you must all have come across the aphorism of that founder of English medicine, Thomas Sydenham, that *a man is as old as his arteries*. Most of you also know, I think, that during the past year I have had some personal cause to ponder this aphorism, and it is with a sense of relief despite my trepidation that I am here to speak to you, because exactly one year it looked as though it might not be so: as many of you know, after some mild angina I had an angiogram- which I will not show you because it might frighten the apparently fit and healthy amongst you- I had a very successful, almost complete set of new coronary arteries- five in all.

I was about to go home after only a few days when disaster struck; for someone who has studied immunology almost all my life it was ironic to be betrayed by my immune system, which gleefully attacked every surface in my traumatised thorax. The pain was terrible, but worse was the pulmonary collapse and the huge serous effusions which you see here in a radiograph taken exactly a year ago yesterday.

But enough of my personal woes. Others in this audience, I know, have suffered more than I...

Perhaps some of you are wondering if I am going to explain the title of my talk this afternoon. It has been said that there are two sorts of people in the world: those that say there are two types of people in the world, and those that don't:

I belong to the former dispensation: my two sorts are *butterflies* and *worms*.

Clinical and research *butterflies* flit from flower to flower in their studies, enjoying the excitement of new ideas, perhaps if they are lucky pointing out new directions of study (often without subsequent acknowledgement), then flit off to another area when a paper or two has been published.

Worms, on the other hand, burrow and bore deeper and deeper into a narrow range of subjects publishing paper after paper which progressively illuminates this narrow field and may end up with a truly significant advance.

It won't surprise you if I confess to being 90% butterfly. Why ? Because butterflies have more fun. However today they are a threatened species and few of the yunger nephrologists here today will be allowed the freedom to roam that I have been.

I am guilty of having played with a ridiculously wide range of subjects in my time. Today few have this privilege of following their fancy today. This afternoon I am going to continue this theme flit from topic to topic, to suit your reduced attention span.

In the presence of our Principal and Clinical Dean, I must say it is only too clear which of butterflies and worms get brownie points from the establishment, all the way to Government level. Yet what are we losing ?

An occasional butterfly achieves fantastic success in several fields: Frances Crick and Linus Pauling are two examples. Other double nobelists, like Fred Sanger in contrast,

essentially tackled two parallel problems.

But what would happen to them today ? Francis Crick must have been the PhD student from hell. He failed to deliver or publish year after year, played with models, and spent much of his time philosophising in the pub- the best postgraduate centre in the world incidentally. Any sensible dean or head of department would have fired him years before Watson arrived in Cambridge; fortunately for them this was the 1950s, and a civilised University.

Again in Cambridge, when Sanger was working on how to sequence DNA, he published *nothing* for a period of nearly six years; fortunately he was not in a University but in an MRC unit and already a Nobelist, otherwise he would have been out on his ear for sure.

We all know the phrase, publish (in of course, peer-reviewed journals) or perish. We won't go into the problems of peer review which Drummond Rennie, alas not able to be with us today, and others have struggled with. What *is* "research output" ? The usual obvious answer is to count the number of papers published, to weigh the clinician or investigator against their published work, rather as the Aga Khan, head of the Ismaili muslims, used to be weighed against gold or even platinum if my memory serves.

Well. Just have a close look at this list, from Nature in 1992- the article was called "writer's cramp". If I am guilty- as Chisholm pointed out to me a year or two ago- of having published a paper every three weeks for 35 years, this pales into insignificance besides these superheroes, these *Stahanovites* of publication; at the top of the table is a Russian chemist who was publishing a paper every three *days* for the whole ten years of the 1980s ! Some of the names- Najarian, Starzl, Polak, Besser who published down to merely every week for the ten years are familiar to many in this audience, so these people are not remote from us.

We could spend a long time discussing this topic; one investigator here, interviewed by Nature, had 35-40 people in his lab and his name went on to everything that emerged from it- a familiar pattern. This was of course before David Baltimore was taken to the cleaners, scrubbed, rinsed and then at last declared clean but careless, and a lot of people have changed their habits since then, including (for example) Julia Polak, as the article points out. Motives for publication of course, have not changed for centuries.

As Thomas Sprat put it to the Royal Society in the sventeenth century:

"...yet we see ostatation alone to be every day powerful enough to do it. The desire for glory and to be counted Authors prevails upon all".

Scientific idealism rates low in the ranking of reasons for wishing to be published !

What about the other side of the publication coin ? Here is a portrait of the second most famous Guy's man of all time: he published only two papers in his lifetime, and another two articles were published posthumously. However a recent biography listed nearly 6000 papers about his two publications. Who is he ? He is of course Ludwig Wittgenstein, who worked at Guy's from 1942 to 1945 in the dispensary; his zinc oxide paste was declared by the Chief pharmacist to be the best that they had ever had. Next he worked with Robert Grant's MRC shock team here at Guy's, and then with Eric Bywaters, cutting frozen lung sections with amazing skill. Actually Wittgenstein's dexterity should not surprise us- his brother, Paul Wittgenstein was the pianist who lost his right arm in the first world war, and for whom Ravel wrote his concerto for left hand.

Wittenstein is not the low publication/high citation record holder, however. This privilege is held of course by Jesus Christ, who published nothing- but has been very, very well cited subsequently, with a citation factor of infinity !

For those of you with longer attention spans, perhaps you are wondering who *the* most famous Guy's man is ? No, it is *not* Richard Bright, but this man: as Bob Knight will know, this moving pen and wash of John Keats was done by his faithful friend and companion Joseph Severn, only hours before Keats died, in their lodgings next to the Spanish Steps in Rome. Keats qualified in medicine at Guy's, but although he was a dresser on the surgical wards, he never took his surgical qualification since he had no stomach for the surgery of the day and its consequences.

These two individuals were of course unorthodox products of a medical institution. However to maintain output especially productive staff must be provided with space, some free time and (heresy!) some support. Again with my eye on the Principal and the Dean, I must read from a sad letter, written to the Dean by a young lecturer in physiology:

..the consequence is that at Guy's I do not make enough to live on, have no assurance that even my present inadequate income will be continued beyond next year, and am so burdened with the drudgery of revision classes that I have little time or energy left for original work. Some recent events have made it extremely important for me to know, as soon as possible, whether or not I am to look on my position at Guy's mainly as a stepping stone to better posts elsewhere, or whether the staff and school will make such changes as would provide me with a modest but adequate income..."

No, I have not been raiding the Principal's desk secretly; this letter is dated 16th March 1895, and is signed

Ernest Henry Starling

As most of you know, Starling left for UCL a couple of years later to complete his classic work on the circulation. The only thing that saves Guy's reputation in this affair is that they appointed as an assistant an embryo Nobel prizewinner, Frederick Gowland Hopkins- but still Starling left.

Statue of liberty holding aloft urine jar calling

"bring me your tired, your poor, - and your urine !"

Naturally, being a member of the infant specialty of Nephrology, I have lived most of my life with an interest in urine. This picture of uroscopy has in fact a long lineage going back 1600 years, about some of which Leon Fine and others have written. Here the lady is holding a round-bottomed urine inspection flask, or *matula*, which became a symbol of the physician and his work, and has been used since Byzantine and mediaeval times to diagnose diseases from the appearance of the urine and its sediment.

This other picture, from a manuscript in Canterbury cathedral, shows the now litttle practiced skill of testing the urine on horseback; the quotation comes of course from the contemporary, Chaucer- note the pirnical qualifictaion for mediicne is not anatomy, but astronomy.

Matula being dropped by careless physician

As today, some specimens never reached the lab, as in the picture for a manuscript in the Bodlein library !

Uroscopy only fell out of use in the seventeenth century when (for example) Thomas Bryan, in his famous *Pisse-Pot lectures* of 1679 derided its value:

".....your honour hath doubtless heard that the urine is an Harlot and a Lyer, and that there is no certain knowledge of any Disease to be gathered from the urine alone..... it were far better for the physician to see his patients once, than to examine his urine twenty times"

This was of course before the scientific chemical testing of urine began, together with urine microscopy as you see here in this beautiful picture of urinary casts, which began in Paris in the 1830s, as Tita Fogazzi and I have described recently in KI.

So urine examination and composition remains of vital interest to us all. A diminishing number of you may know the quotation made famous by Homer Smith from the work of Karen Blixen, who wrote under the name of Isak Dinesen, now better known from her re-incarnation as Meryl Streep in the film *"Out of Africa"*.

In one of her stories in this collection, entitled *"Dreamers"* a boatman is rowing off Mombasa and speculating under the stars on the nature of man:

"What is man, when you think of him, but a minutely set, ingenious machine for turning the red wine of Shiraz into urine. You may even ask which is the more intense craving and pleasure: to drink, or to make urine?"

most poetic; which could well be described as the Nephrologists' credo. I have however heard it described more pithily- if those from across the water will forgive

me- in the racist joke that

an Irishman is a machine for turning Guinness into piss

All this reflects my lifelong interest in the history of Nephrology, and of Medicine: I only returned from the island of Kos yesterday evening, as I told you earlier. The reason I was there was the first meeting of the International Society for the History of Nephrology.

Here we see an eighteenth century French engraving (*Voyages Pittoresques en Grèce*) Hippocrates' plane tree near the harbour in the town of Kos- which looks just the same today, propped up all over the place- under which he taught his pupils. This must have been difficult, because the tree although venerable, is only 700 years old ! A little further of is the Asklepeion, a must for all visiting doctors.

In fact only the third or fourth paper that I published with my mentor in New York, "Stretch" Becker, an old buddy of John Butterfield's, now alas no longer with us, was on work Bright did in the late 1830s with Joseph Toynbee on microdissection and examination under the microscope of normal ad diseased kidneys, several years before William Bowman published his revolutionary paper: here are two illustrations from Toynbee's paper of 1846.

More recently, some of you will remember I have been engaged on re-emphasising the role of another Guy's man, Akbar Mahomed, dead tragially early at the same age as Mozart, 35, and who first described essential hypertension in apparently normal individuals using this crazy apparatus, a sphygmograph. If you want to learn more about this, the paper was in KI in May this year, I think. The most notable contribution of Mahomed, to my mind, was that amongst many other ideas he introduced for the first time I think the idea that clinical measurement could detect disease in apparently healthy individuals; he was also one of the founders of clinical epidemiology.

However also during the past couple of years I have become involved in another project in the history of nephrology. Listen

(audio recording of aria from La boheme)

yes of course- Mimi: but *who* is singing; and why am I playing it to you now ? The reason is that it was made by this lady, born in 1860, and recorded almost 100 years ago: Dame Nellie Melba, the great rival of Luisa Tetrazzini who was ten years younger. There are even recordings of Adelina Patti, who amazingly was born in 1843 !

Listening to recordings such as these I realised how precious they were, and how much we lose because we know nothing of those who sung during the nineteenth and earlier centuries. But what about Nephrology ? Kim Solez and I realized that not only could we capture great Nephrologists on audiotape, but also on videotape. Are you sitting comfortably ? Then we'll begin...

(two minute videotape of Claus Brun, aged 86, describing his frirst renal biopsy in 1949 and demonstrating his aspiration needle)

This is Claus Brun talking only last year about his work done almost 50 years ago on renal biopsy. Some of you in the audience have already made tapes in this series, and others (I trust) will be recording them soon !

One unexpected turn that my life took was that when Richard White left Guy's for Birmingham in 1965, we thought on a temporary basis, I and Chisholm became involved in the day to day care of sick children with renal disease. This painting of *the sick child* by Gabriel Metsu will be familiar to many from the Rijksmuseum in Amsterdam.

To the benefit of Birmingham and the loss of Guy's Richard never returned, and over the next few years Chisholm and I looked after the sick children with renal disease alongside the paediatricians, some of whom are here today, I had the chance to help start and shape the new specialty of paediatric Nephrology.

During that time came into contact with many paediatric nephrologists. This photo was taken during an early meeting in Puerto Vallarta in 1967 or 1968 I think, when it was still a fishing village rather than a clone of Acapulco. Here you can see many of the founders of paediatric nephrology, Richard White, Renée Habib looking as any respectable French lady looks when confronted with something she does not approve of. Gavin Arneil is here, Ira Greifer, Chet Edelmann and Henry Barnett, and so forth. Oh, and this one here in the front row. Me. Those legs !

Here at another early meeting in Finland is Martin Barratt, alas not with us today, disguised with his towel and beer bottle as a young Bacchus, who should have vineleaves in his hair.... together with a more technological Richard White wielding his camera.

One topic of major interest and discussion was then, and has been ever since, the nephrotic syndrome in childhood. Although management of children with this puzzling syndrome is now fairly clearly mapped out, sadly after fifty years of study we still do not know the nature of the factor or factors which so dramatically increase glomerular permeability to protein- although now that an assay has been proposed by Virginia Savin in the United States, we may be closing in on it at last.

Another was the treatment of chronic renal failure in children. This picture of father and child with its sensational headline was published in a local newspaper just on 30 years ago, in 1967. We had just taken on to dialysis a young girl of ten years ago with what later came to be called reflux nephropathy complicated by accelerated hypertension: here is a picture of her optic fundus, which I still use as a standard teaching slide.

We asked ourselves: what we should do ? Children had not been treated with long term dialysis and hardly with transplantation at that time. If she survived, would she end up a retarded, perhaps dwarfed sociopath by the time he was 21 ? We went ahead very

much afraid of what we were doing. Our fears were of course unfounded, and I am glad to say that she is now almost forty years of age, with a family of her own and on her third, very good cadaver transplant- her father's lasted alas only about five years, having survived these, dialysis and our sometimes misdirected care for three decades.

This of course brings up the topic of transplantation which has been an abiding interest and has played an increasing part in my clinical career as the decades rolled by. You all know that as you see here in the slide- a nice Portuguese painting one of amny of this miracle- St Cosmas, a physician, and St Damian, a surgeon, did the first cadaver transplant around 1600 years ago. The sacristan's gangreous leg was replaced by, incidentally, an inter-racial transplant of the leg from a newly dead moor.

Although we do not enjoy the direct divine aid that the saints did, we do however enjoy as close a relationship between physicians and surgeons in the acre of our transplanted patients. It has been a privilege to work with our surgical colleagues, who have all been physicians at heart- just as many nephrologists are surgeons manqué !

Results still improve year by year as in the UK data shown here- but it must be admitted as a result of enlightened empiricism rather than the application of immunological science.

But an intractable shortage of cadaver donors remains. This has led, in the world as whole, to huge ethical problems from use of paid living donors, as here in this lady in India who has donated her kidney to raise money to allow her to give her duaghter a dowry and buy a cow, or executed prisoners, as in China. There are no easy answers to the many questions raised by these practices but maybe- just maybe- the solution may be just around the corner with xenotransplantation which is now the subject of intense scientific and equally commercial interest.

Picture of two pigs, looking at a drunk man. One says "I wouldn't want a transplant of his liver!"

and I chose this picture of another potential donor

picture of rather ginger pig with blond eyelashes

because of his resemblance to Boris Becker. I look on pigs with particular affection and regard because with Anne Simmonds, I spent 10 years working with pigs and indeed some of the data illustrating and establishing the resemblances with the human kidney came from our work. I also pioneered an unlikely skill- renal biopsy in the conscious pig- no easy task !

Many problems some still only barely perceived remain before xenotransplantation can become a reality. What lies behind the now partially soluble problem of so called "natural" anticarbohydrate and anti glycolipid antibodies we are all born with and which mediate immediate xenograft destruction is still barely known. Will the swine-LA antigen system be a strong one ? Will NK cells and macorphages attack without specific priming ?

Now we must worry about transmission of animal retroviruses into immunosuppressed humans. On a more minor scale, Anne would want me to remind you that a pig kidney transplanted into a uraemic individual with a raised plasma urate would result in a massive outpouring of urate from the pig organ, which secretes, but lacks a brush border transporter responsible for urate reabsorption, which could result in immediate shutdown from urate nephropathy. Also will pig EPO bind to and activate human EPO receptors ? And so on.

I want now to make some brief comments on health care and its delivery, which has changed hugely during the past 35 years. There are two aspects to this: the first is a global one, and the second local.

Global health care still revolves around the elimination of common infectious diseases, such as malaria here which is endemic in almost the whole tropical world, and the provision of adequate nutrition, clean water and decent housing. Medicine *per se* has little to offer except in the short-term care of individual cases. I scarcely have to remind you of the bad news- which no-on could have predicted 30 years ago- that malaria and tuberculosis are both *increasing* in the 1990s as causes of death worldwide, and that resistant organisms are spreading rapidly in both cases. The bulk of the impact of AIDS is in the developing world, least equipped to cope with it.

The differences in standards remain stark. In the third world, maternal and infant mortalities equal those at the height of the Industrial revolution: one in five children die before the age of five years, and one mother in twenty does not survive childbirth when maternal mortality in the developed North is negligible.

Meantime, what is the developed North doing to help ? The appalling, obscene fact is that it is taking more cash from these poorest countries each year than it gives in aid from all sources. *To them that hath, it shall be given....* Thus the poorer become poorer and therefore less healthy. This is a matter of politics, not medicine, but it is politics in which all physicians can and should be involved.

Turning to our own, relatively small problems in the developed world, what of the British provision of health care ? Today our thoughts are dominated by the emerging effects of the 1990 reforms of the NHS initiated by Margaret Thatcher after the NHS financial crisis of 1989. I am now going to show you material that some of you may find distressing; if so I apologise in advance

30 second clip of VIDEO of Margaret Thatcher:

"*The health service is safe with us*"
(applause by party faithful)

That's enough of that ! Now John Major, faced by an election that (fortunately) it seems he cannot win, has reiterated this mantra.

We are going through the *third* major reorganisation of the NHS, since 1974 and 1982-

4, but represents a much more fundamental change in structure. Its general outline was sketched by a Health economist of repute, Bill Laing of Laing Buisson, which I think you will agree resembles the creation of a demented spider- indeed producing toitally disordered webs like this this is exactly what a spider does when dosed with psychotropic drugs such as these: benzedrine, LSD etc. However the most worrying picture in this slide is here, the result of *caffeine* in the spider's drinking water.

The Clinical director of the Guy's and St Thomas' Renal Unit- who shall of course remain nameless- is well know to run almost entirely on a slow infusion of coffee; do his business plans look like this ?? It is interesting to reflect that given the current regulatory structures in the USA and the UK, coffee would probably not be released as a drug, far less a food, were it introduced now. This is not news. Voltaire is aid to have replied, when told that coffee was thought to be a slow poison

Yes, that must be so, because I have been drinking it for 65 years and I's still alive"

But to be serious, then 1990 refrorms were applid to a £ 40 billion p..a. industry without any pilot studies against advice from every quarter: business advisers, the profession and- most interesting of all- the Americal economics guru who promoted the "internal marker", Alan Entohoven. The effects of the 1990 reorganisation are insidiously destructive to all our health service stands for. It replaces an integrated, lean machine for a complex under-evaluated experiment. True, we did not know where all the money was going in the past, *but we did not need to pay to find out*. Because of the criminal neglect in evaluation of the outcome of the 1990 reforms, we will never know whether we gained or lost- a political move of unparalleled cynicism.

Furhermore we have lost the trust and unpaid extra effort of thousands of health emloyees who will never again give as they did when they trusted their employers- perhaps wrongly- in the past. A two teier srevice for have and have nots is already a feature of the landscape.

Finally, how are we to prevent purchasing the cheapest treatments, or trusts providing only those treatments which they wish to pay for ? I have spent many hundred hours this Summer working on behalf of the Renal Association of the UK on practice standards for the whole of nephrology: not a small task ! It is the overriding need for such standards if costs are not to drive out quality that has driven me to a task of monumental boredom.

However it is not so much the reforms of the NHS that makes me hate with a deep and enduring hatred the current government. It is their deliberate creation of poverty, and especially of child poverty. We are now a more unequal society than countries such as Nigeria. The government has of course abolished poverty as they said they would. How ? By abolishing the definition of poverty ! Therefore, poverty does not exist. Even George Orwell never went as far in his imagination as this.

However by international criteria, now one third of children in the UK are born into poverty. For years the government denied overwhelming evidence that unemployment and inequality determined morbidity and mortality, and have only now ben forced to

admit the truth of this. Worse, for the first time national data for 1995 show that the intellectual performance and physical status of our children has deteriorated for the first time in forty years. The consequences of this criminal folly will be with us for a generation, long after all of us here are gone, and if David Barker's hypotheses about the influences of fetal and neonatal deprivation have on "degenerative" diseases later in adult life are correct, then the picture is even more bleak.

Thus the major health risk in the UK today is not AIDS, not mad cow disease, not misuse of antibiotics, but *government health and social policy.*

This I cannot forgive. At the other end of life, the elderly in need of long-term care have been all but abandoned by the government; as I returned, I read that one NHS Trust, Hillingdon, had taken the even more drastic step of denying all those over 75 acute care ! I ask you ! What would Hippocrates have had to say about that...

Are we alone in the United Kingdom in these problems ? No ! What is Presdient Clinton up to ?

Clinton, in 18th century costume, presents a paper:

"Declaration of independence- from the poor" which begins,

"We the rich, hold to these truths: that all men are created unequal, etc."

In the United States, 40 million people are cut off from care, and are set to do even worse in the next few years as social support is withdrawn. Again it is children will suffer most, mostly in city centres and born to single parents.

A proud and resourceful nation can no longer ask its older people to live in constant fear of a serious illness fr whcih adequate funds are not avaialable. We owe them the right of dignity in sickness as well as in health

- all NOT exactly in accordance with these ideals, expressed by President John F Kennedy in February 1963

An intrinsic problem however is that of *rationing*. An agenda has been proposed recently by Bill New in the BMJ. There is no avoiding the fact that however much of a country's GNP is put into health- and I happen to believe that a modest increase in the UK from 6 to maybe 8% is in order- that one cannot do everything. Perhaps I can remind you of the words of the founder of the British NHS, Nye Bevan

the language of priorities is the religion of Socialism

What social upheavals thee changes will generate can only be imagined but we must all participate actively and constructively in the debate.

We have, of course, already gone though social and medical upheavals; already during

my career many things have changed in society as well as in medicine. Attitudes to sex have changed since this couple from the 1920s read, astounded, from *"The art of making love*, by *Gosh*. I was reminded recently of this change when I went a restaurant, and was offered a dozen different flavours: toffee, fudge, mint, etcetera through to exotica such as scotch whisky and beer. This however was *not* the menu, but only the condom machine in the mens' toilet !

Another major change has been the information revolution, which has had an impact of all of us.

Man in library: I'm looking for the database that explains all the other databases
Librarian: get in the queue

I still find it eerie that from home, I can access the library at midnight, whilst listening to Mozart with a glass of wine to hand. Thus from our new home in Cumbria I can continue to interact readily with any of you; however in additon you, and all those unable to come today, are cordially invited to visit us in the flesh as well as by e-mail or fax- we are deliberately buying a house with plenty of extra room for family and frends.
Communication, of course, is important both between staff members

Saucy seaside postcard of naked man disappearing into distance clutching himself

Casualty officer: Nurse !! I distinctly told you to prick his boil ...!

and betwen medical satff and patients

Hillbilly patient to nurse: what the hell does "micturate" mean ?

I put that one in especially for Dick Glassock, beacuse many of his patients from the mountains in Kentucky must look- and maybe sound- like this.

Today no talk would be complete without a Gary Larsen slide from the Far Side:

Pupil with hand up: "Teacher- please can I leave the classroom now- my brain is full"

I can see you are tired- although I hope not bored, and I will end now. I have touched on the question of what life might be several times during the past forty minutes. I have chosen to finish with a short poem written by a former poet laureate, John Masefield, for which I must thank Bob Schrier, another who sadly cannot be with us today. It is an almost uncanny nephrological insight from a poet on this subject

What am I, life ? A thing of watery salt
Held in cohesion by unresting cells
Which work they know not why, which never halt
Myself unwitting where their master dwells

Thank you for coming, and for listening.