More Notes

FROM A BACKBLOCK HOSPITAL

G. M. SMITH

EPUB ISBN: 978-0-908328-75-8

PDF ISBN: 978-0-908331-71-0

The original publication details are as follows:

Title: More notes from a backblock hospital

Author: Smith, G. M. (George McCall)

Published: Caxton Press, Christchurch, N.Z., 1941

MORE NOTES FROM A BACKBLOCK HOSPITAL

BY THE SAME AUTHOR:

NOTES FROM A BACKBLOCK HOSPITAL 7/6

More Notes

FROM A BACKBLOCK HOSPITAL

BY G. M. SMITH

THE CAXTON PRESS CHRISTCHURCH
1941

To Janet

A medical student who I hope will one day
write a better book on the same subject.
She typed most of the manuscript
and criticized all of it.

My thanks are due to:

The staff of Rawene Hospital, without whose co-operation this work would have been impossible.

The Hokianga Hospital Board, who have assisted in many ways but hindered in others.

Those District Nurses who have co-operated so well with our Hospital.

Mr. Higgins of the W.E.A., who corrected some of our manuscript.

Mr Berry, of Kaikohe, for his advice and assistance.

Mr. O. W. Williams, of *The Mirror*, who has given valuable assistance about publishing.

CHAPTERS

INTRODUCTION

My second book is written because our supreme purpose still exists; it demands vigilance, and permits of no holiday. Critics of my first attempt were indeed kind, but some said the book was peculiar, different from other books. Let me explain. Both are simply reports of what we see, what we do, what we know, what we read, and what we write, with a spot of ' the dream in our hearts,' which grafts eagerness for change to an honourable recognition, I hope, of what was good in the past. When we assert, we try to bring forward evidence in support. I can but try to describe reality as I see it, and if my vision is good then I tell the truth. That is sufficient for reason, but not always for custom, which is so often ruled by unalterable dogma. We are not satisfied with our own work; we are profoundly dissatisfied with much of it. We are discontented still, thank God.

The explanation—apology if you like—for the style and content of this book, I offer, not in a spirit of mock humility, but in fear lest some, annoyed by what might be called errors in taste, may be blinded to the good in our work. I write the only way I can write. I want to hurl bricks, and plenty of them, at obstructionists to my purpose. I am in a hurry, and anxious—and have I not reason for anger? I am not reconciled to death and failure, and I sense frustration. To hell with complacency and its bed-mate, timidity. The mild breath of sense cannot blow down the hurricane of folly; fire and brimstone are required. ' Indignation against successful vice,' Butler told us, is a necessary element in the good life.

One critic of *Notes From a Backblock Hospital* expressed disappointment that I had not written a different kind of book altogether; I had such splendid opportunities, he said—a book of reminiscences, ' Medical Pioneering in the Backblocks of New Zealand ' sort of book, telling stories of swimming flooded rivers and such-like deeds of daring, like Doctor Courageous, and I suppose describing old Hokianga identities, whatever that means. To him I say that I can only write about facts. Fiction is beyond me, and I defy any man to write that style of book without telling lies, because it can't be done. However fair the lily, it will always be painted. Besides, the world is littered with Reminiscences. They are useless in most cases, and unless supremely well done they are boring. Let the professional writer write about nothing; he alone can make a pleasing job of it.

Besides, would I not be poaching on the preserves of old fools in their dotage who, partly from idleness, and partly in an endeavour to recover their youth, bore others by describing it. ' What a devil of a chap I was ' is their generic title.

Another critic suggested that my book was too technical for laymen, and not technical enough for the professional. To him I say, it sold very well indeed. What I write concerns all. Not being a high-brow, I write ' low-brow.' Though my subject may be high-brow, I use ' public ' language so that all can understand, not a private language which only highbrows use (and can—but not always—understand). Medical journalism, which heretofore had to be written in a journalese peculiar to medicine, is now becoming just journalism, headlines included. ' Pride and Prejudice in the Treatment of Cancer,' an authoritative front page article in the most conservative of all medical journals, is a recent example, and, for the layman who ponders, a sinister one, I think.

If I write in different moods, it is because I write at different times, sometimes on my summit, maybe too high; and sometimes on my bottom, maybe too low. (Sometimes I use the poets to convey ' that something '—I can't do in my clumsy prose—Eric Gill once said—' All art is propaganda.')

' when thou didst not
Know thine own meaning—but wouldst gabble like
a thing most brutish—I informed thy purposes
With words—' (Prospero in The Tempest.)

Having spoken thus, the priestess took a huge book covered in silver, plunged it into the fountain and said:

'The philosophers, preachers and doctors of your world feed you up with fine words and cant at the ears: now, here we incorporate our precepts at the mouth. Therefore, I'll not say to you, read this chapter, see this gloss; no, I say to you, taste me this fine chapter, swallow me this rare gloss. Formerly an ancient prophet of the Jewish nation eat a book, and became a clerk even to the teeth; now I will have you drink one, that you may be a clerk to your very liver. Here, open your mandibles.'

Rabelais.

MEN THAT THINK

Be damned, you cheeks, be damned and sink;
Body, bend double, sag and shrink;
Go dry, poor Skin, go thin and dry;
Sweet Light, collect in neither eye;
Body, be damned—shall I not find
Your faults redeemed by my unfailing Mind?
A Mind that's strong enough to bear
A Dream-child every day of the year;
A Spirit full of young desire,
With growing-pains, to reach up higher—
Is there no joy for men that think?
Body, be damned, bend double, sag, and shrink!
Fools have their second childhood, but the Great
Still keep their first, and have no second state.

W. H. Davies.

"Long have you timidly waded holding a plank at the shore,
Now I will you to be a bold swimmer . . . . "

Walt Whitman.

NEW MEDICINE FOR NEW ZEALAND

by Lucy Margaret Smith

New Zealand should abolish the present chaos and institute an efficient medical service. The old way, according to which the longer the patient is ill the more operations he is subjected to, the richer the doctor, is bad.

The panel system or bottle system of England is no better; in some ways, in fact, it is even worse. There is still competition for patients. The doctor who docilely signs insurance certificates is sure of a large panel. Team work, which should be the basis of modern medicine, is impossible; in either system non-co-operative is the word. We must have an efficient co-operative system. This is only possible with a full and comprehensive preventive and curative state service—something similar to that of the enlightened Scandinavian countries. The hospitals would all be staffed by full-time men, and the general practitioner service linked up with polyclinics which would be instituted in every large town. In smaller towns or country districts similar clinics on a smaller scale would be necessary, and would be visited periodically by specialists from the towns. These clinics would be closely connected with the hospitals. All specialists and some general practitioners would have rooms in the clinic, while other general practitioners would be selected to attend the people in their own homes.

People could always ask for the doctor they wanted and if possible he would be sent; but there would be no more waste of time and petrol by two or three different doctors motoring miles to see patients living next door to one another.

Inside the clinic all cases could be discussed and passed from one department to another with great benefit, not only to the patient himself, but to the doctors also.

At present the poor unfortunate patient who has any money, is passed round from physician to surgeon, radiologist, eye specialist, ear, nose and throat specialist, dentist, etc., till he is plucked of his last pin-feather.

One advantage of this scheme would be that the doctors would be attending the equivalent of a medical school all their professional lives. Comparison and discussion would prevent them from getting out of date. There would be great opportunities for the keen man and none of that stag-

nation so often found in the general practitioner of to-day.

This complete service would cost less than the incomplete panel service so devastatingly described in *The Citadel*. 'The man in the street' can, and should, smash the Citadel.

MEANS OF A SURGICAL CLINIC

Finding good surgical technique practically impossible through lack of suitable accommodation, equipment, and assistance, I have—after years of work, reading and thinking—evolved a surgical technique which satisfies approximately the surgical principles of simplicity and safety, and at the same time has satisfied, or at least appeased, the Gods who control our financial destinies. The usual accommodation and equipment was not available; it cost too much, and it was not good enough; it did not even approximately satisfy my surgical soul.

Our financial technique was far from simple, it was complicated, and often exceedingly involved. One method, and it worked well, was the striking and collecting a sort of 'hut tax' (£1 a house), an ingenious, pleasing, and effective method of brigandage, much favoured by the Chinese war lords for collecting money to pay for their private armies; to them I give thanks for the idea. Evasion, in our case as in China's, was dangerous. I was the only doctor, ours the only hospital; no trains, no roads, only an angry sea. We had another method. On certain suitable nights we opened a private casino, with cafe, concert room, beer garden and dance hall, all under one management, and suitable for all tastes and all ages. This necessitated the temporary suspension of all restrictions on the manufacture and sale of alcoholic beverages, gambling, and dancing, in fact on general behaviour for the time being. It needed delicate handling, above all tact. The casino equipment we actually imported from Paris; it was, I believe—and hope—unique in New Zealand. It worked well and smoothly and was exceedingly profitable. It did what we hoped it would do. It was very much appreciated. This method was distinctly more popular than the hut tax, and people from far and wide, even from Auckland, came to participate. That was actually its undoing, for it was too good to last. Personally I preferred the hut tax; I found it less nerve-wracking. Only on one occasion did I find myself in court—I mean in the dock—which I think speaks volumes for our tact. I had raffled a new motor-car, which I had indented myself from England, and a person, who had failed to purchase the winning ticket was so annoyed that he reported me to the police. I don't think for a moment that the policeman wanted to prosecute me—he had held quite a lot of tickets; neither did

the magistrate, who had held even more tickets. But, as they explained, ' they had to act according to the laws of the country.' So the magistrate was very sympathetic, and the policeman very courteous. I was fined a fiver, and warned. The magistrate and the policeman, I might mention, had attended all our casino entertainments, and I know they enjoyed them very much, without approving of them, of course.

We got what we wanted. That was, enough money to furnish and equip a forty-bed hospital. We had adopted for the time being the ethic, or rather the law, of the totalitarian states, that the ends justify the means. By these various (not vicious) methods we solved the means problem.

Contrary to popular opinion, sometimes the blind can best lead the blind because they have so much in common, and in the same way I believe that the poor (I mean those that lack not only material things, but things of the spirit) can best lead the poor, because they also have so much (or is it so little?) in common. I have in this book—and I think it is worth while—described our clinic, its ways and means, because there must be others who want what we wanted, and are poor as we were. Those who command riches and can get what they want—not always having a very active surgical soul—by employing an architect and consulting an instrument maker's agents, will not be interested, so just to annoy them I want to say that they will get in return for their money an architect's theatre, and an instrument maker's idea of equipment—just that and no more, and both planned to a certain extent with a financial rather than a scientific objective. I know far more about it than these men do. I have seen that style of hospital and that style of equipment, and I say without hesitation that mine is simpler, cheaper, and better. Besides, what about the pride in your own creative art, even though it blinds you to the faults that others see? Well, I risked it, and I would do it again, and I advise you to do likewise.

My Board raised by loan enough money to build a hospital. Elsewhere in this book I mention that ' He who pays the piper calls the tune,' and comment on its significance. We collected the money, so had the right, according to the accepted rule, to call the tune; which we did. I designed the hospital, and I made mistakes, but I am reasonably satisfied. Our equipment, made fifteen years ago, is still in accordance with the best surgical practice of 1941 in most respects. Our operating theatre is still up-to-date in arrangement. It is quite different from the ordinary standardised

small hospital. ' Man will more and more regret a degrading standardisation ' in his evolution.

I want to repeat what I have said so often for twenty-five years. It is still, unfortunately, well worth while:

All hospitals should be of a semi-permanent nature. They get out of date so quickly. They should be built in the cheapest possible way, and knocked down in twenty years. Many of the palatial hospitals built by architects to last a lifetime are out of date when built, and should be knocked down next day. In hospitals it is not the bricks and mortar that matter, but the brains that run them. What's the good of spending millions of money on new base hospitals in Auckland and Wellington to-day if the method of staffing them is that of thirty years ago?

I have just realised that I have written ' for twenty-five years ' so often in this book that I must go carefully through the manuscript striking it out, fearful of the enemy's flank attack, when they cry ' in his dotage,' and ' conceit of old age '—observations that I acknowledge are often true and apt; but not to me, of course. Or should I be brave, defy them, go the whole hog and call the book ' For Twenty-five Years '? I'll think about it. By the way I am fifty-eight years of age. The expert on the British panel system whose advise was accepted by the government was nearly eighty, but old for his years.

All craftsmen share a knowledge. They have held
Reality down fluttering to a bench;
Cut wood to their own purposes; compelled
The growth of pattern with the patient shuttle;
Drained acres to a trench.
Control is theirs. They have ignored the subtle
Release of spirit from the jail of shape.
They have been concerned with prison, not escape;
Pinioned the fact, and let the rest go free,
And out of need made inadvertent art.

There's no retreat his spirit cannot fill,
No distant leagues, no present, and no past,
No essence that his need may not distil,
All pressed into his service, but he knows
Only the immediate care, if that be good;
The little focus that his words enclose;
As the poor joiner, working at his wood,
Knew not the tree from which the planks were taken,
Knew not the glade from which the trunk was brought,
Knew not the soil in which the roots were fast,
Nor by what centuries of gales the boughs were shaken,
But holds them all beneath his hands at last.

Much goes to little making,—law and skill,
Tradition's usage, each man's separate gift;
Till the slow worker sees that he is wrought
More than he knew of builded truth,
As one who slips through years of youth,
Leaving his young indignant rage,
And finds the years' insensible drift
Brings achievement with the truce of age.

—Victoria Sackville-West.

SURGICAL TECHNIQUE

I have always found a complicated technique in surgery very difficult, so I have spent my life trying to simplify surgery to bring it more within my scope. I have discovered no new facts—that is impossible—but I claim that by 'lifting' a collection of ideas from a number of sources, some usual and some unusual, rearranging them and putting them in order, I have formed a new pattern which suits me, and I believe the whole is greater than the sum of its parts. (By the way, Einstein employed the same method; he discovered no new facts, so apparently that is not necessary.) I therefore present my pattern, hoping that some may 'lift' from it some-

thing to improve their technique.

But I have a still better excuse for my effrontery; it is this: Auditing of surgical results shows that, in the fields of asepsis and antisepsis, they are not nearly as good as they were thought and ought to be. A large conference of American master surgeons recently acknowledged fault, and a report was published in their current surgical literature. English surgeons have followed suit, corroborating the considered opinion of American surgeons. A study of these confessions reveals the most extraordinary differences in current practice.

For example, consider 'face masks.' One would have thought that by this time an almost standard mask of proved efficiency would have been evolved. Instead, to my amazement I find that the majority of clinics do not even recognise that *all* persons in 'room' contact with wounds should wear masks; and that the masks which are used by these master surgeons in their clinics are inadequate, uncomfortable, and inconvenient. Now, we do wear efficient masks, and have done so for many years, so it is just possible that there may be some other small but important facts in general surgical technique which we know and practise, and which many don't. I might mention that I refrained from a detailed description in my first book, as it all seemed rather obvious—just common sense.

Our framework is a forty-bed general hospital with the emphasis on surgery, built fifteen years ago, designed by and in charge of one who is by training and from choice a surgeon, turned occasional midwife by force of circumstances. The hospital is situated in a rather isolated country district, two hundred miles from a base hospital. It, and it alone, caters for about ten thousand people.

The theatre block is a wooden building lined with brick, with heavily reinforced concrete floor and lathe and plaster walls, painted with heat-resisting enamel. A short corridor opens off the main connecting corridor of the two pavilions. The X-ray room is on the left, and the instrument room on the right, with instrument cupboards with tight-fitting doors sunk in the wall and fitted with glass shelves on ordinary shop fittings. All theatre linen and requisites are stored in cupboards over and under a wide working bench. There is also a wash-hand basin. In the small corridor we have a cupboard for anaesthetic materials, certain theatre stores, and theatre shoes, and another cupboard fitted with a steam coil arrangement for heating blankets.

THE STERILISING ROOM

A wide door, with a sandbag at the bottom for dust protection, opens into the sterilising room. No person is ever allowed into this room with outdoor shoes on. It is only entered to prepare for an operation. Minor surgery of a septic nature is never done in the theatre, and only very occasionally a minor clean case; they are all done in the ward dressing rooms.

The sterilising room has a concrete floor, heavily reinforced, with a fall to a gutter (like a public urinal) which runs the whole length of the window wall. The walls are painted with a steam-proof blue paint. The ceiling is domed and the corners are rounded. In the nearest corner on the left is a let-in concrete slab for a drum of sterile gowns (with masks attached) for the septic staff, and head covers for the complete staff; also glove powder and gloves for the septic staff and anaesthetist. Next on the left wall is a ' current steam steriliser,' described fully in our first book, *Notes from a Backblock Hospital.* It is simply a monel metal box with a lid, with two steam jets with eighty-pound pressure direct from the main boiler. The two drums are also of monel metal; they sit on the steam jets. They have a ' billy ' handle and a tight fitting lid; they have no excrescences of any kind. In the bottom is the opening for the steam jet, which forms a steam-tight connection and closes automatically when the drum is lifted off. They are indestructible (and nurse-proof). The drum on the left contains gowns for surgeon, assistant, and instrument nurse, plus table coverings and waterproofs for theatre. The other drum contains swabs and packings and drapes for the patient. Next on the same wall is a large direct steam steriliser for all bowls, trays, and non-cutting instruments. The water used is condensed water coming from the main hospital calorifier and stored in a covered copper tank outside.

On the next wall (I am describing from left to right around the room) is a concrete slab bench with a cutting-instrument and glove steriliser; also a monel metal container of 1-40 carbolic, and another of similar size for sterile saline. They each have two taps, one opening in the sterilising room, and the other in the theatre.

On the right of the door, a concrete slab four feet from the floor carries two pressure cylinders, each of thirty-gallon capacity and holding water sterilised by direct steam, which blows off at eighteen pounds pressure. One is used hot, the other cold; they are connected by a mixing-temperature tap

which controls the water supply to the scrubbing-up equipment. This consists of a half-inch pipe running along the whole window wall of the room. It has three short projecting pipes which allow of three streams of water, about seven-eighths inch diameter, to run right over the gutter. The two cylinders also have taps in the theatre. On this wall is a large plate glass window, and also a ceiling light. Sterilised bowls for scrubbing-up equipment for surgeon, assistant, and instrument nurse are supported on rings inserted into the wall or hung on the pipe. There are three sets of bowls, placed adjacent to each tap; each set consists of one bowl containing two pairs of gloves in bags, a nail brush, and two Turkish towelling swabs also in a bag; another containing 1-40 carbolic; and a small bowl containing ethereal soap. In addition there are two other small bowls, one containing spirit, and the other Dettol (pure). These are used in common by the sterile team.

On the wall space next the sterilising room door is a slop sink with draining slab for washing up.

THE THEATRE

The theatre is fifteen feet by eighteen feet; walls and floor are the same as in the sterilising room, with a fall in the floor to the right wall gutter; it has a domed roof with rooflight, and overhead ordinary theatre lighting equipment (not very good), and also four overhead lamps, one above each corner of the table. One of these lights is fitted with a handle four feet long which can be held by a nurse for any special illumination. The long handle keeps the nurse out of the way and also makes holding easy.

On the wall to the left of the door as you enter are the carbolic and saline taps already mentioned. These are fitted with double removable handles, right-angled affairs, made of monel metal and sterilised, one handle marked STERILE and the other SEPTIC. Underneath is a heating coil.

To the right of the door are the hot and cold sterile taps from the sterilised water cylinders, which are fitted with similar removable sterile handles. Underneath is a heating coil. In the right-hand corner is a sterile water tap with sterilised handle, and adjacent is a ring holding a bowl of pure Dettol; this is used if the surgeon or assistant badly contaminates his hands.

On the right wall is the suction apparatus tap. On each wall are ventilators with filter screens which can be closed. On the left wall is an electric fan.

The furniture consists of a curved table with an under-

shelf, about ten feet long and two feet six inches wide; it has an enamelled top and legs of galvanised piping. (It was made on the premises.) There are two bowl stands, each with two rings, for hand lotions; an anaesthetic table with a small oxygen cylinder; two surgeons' stools (I always sit while operating). One stool (actually a piano stool) is adjustable for height; the other, a wooden-topped milk bar stool made of iron pipe, has a heavy cast metal base so that it won't tip. There are also two wooden stools for the septic nurses to sit on when tired (it is cruelty to keep a nurse standing when doing nothing); an anaesthetist's adjustable stool; and two low stools of different heights for short assistants to stand on.

All the bowls and trays used are of monel metal, with a highly polished surface. We used to have enamel ware, but enamel chips easily, and enamel chips are not desirable in wounds and abdomens. All our containers, sterilisers, and drums are of monel metal; we designed them and made them. All the furniture, with the exception of the tables, we designed and made.

We have two operating tables; one is a large table, not adjustable for height (extra high for private comfort). It allows of a Trandelenburg position, and the head end can be elevated and lowered. It is also fitted with leg crutches. This table has an air mattress (as all operating tables should have), and is exceedingly comfortable for patient, surgeon. and anaesthetist. Our other table is a very elaborate Japanese one which can do everything. It is rather small and narrow, and is fitted with a sponge rubber mattress in sections. It is not nearly so comfortable for the patient or anaesthetist, and I find difficulty in stowing my legs while operating. For certain operations it has great advantages, however; it is especially suitable for cystoscopic work.

Our cases are always anaesthetised in the theatre, on the operating table. They are put on the table in the small corridor, and wheeled right through the sterilising room, a straight run, into the theatre. It is necessary to have a table that wheels well; the heavy hydraulic Japanese one must have a straight run, otherwise the table is very awkward to handle.

The sterilising room and theatre are always hosed just before they are used, and also between cases, to prevent dust contamination. This I consider important, and an easy way of removing a source of danger. (I notice that some of the newest theatres have very elaborate dust-extractors.) Nobody is allowed into the theatre, when ready, without a

sterile gown and mask, special shoes (which never leave the block), and gloves.

THE THEATRE NURSE

(A medical student in charge has written the procedure. It may interest nurses—and also give laymen some idea of the amount of work entailed in a surgical operation.)

A special nurse is in charge of the theatre. The following is a description of her routine. She starts at 7 a.m., to be ready for a 9.30 a.m. operation.

7 a.m.—Puts drums on to sterilise—a drum with gowns for septic nurses and caps for whole staff, and an extra patient's drum.
All bowls and non-cutting instruments are put into the big steriliser to boil.
Gloves, towelling swabs, and brushes for scrubbing-up are put into the top tray of the little steriliser; they have usually been tested and put in bags the night before. Needles, cutting instruments, sutures, and a bundle of tubing in a dressing towel are sterilised in the bottom tray.
All lamps, shades, ventilators, etc., in the theatre, are dusted, and the walls and floor hosed.

7.30 a.m.—Wet steam is turned off in drum steriliser, and the dry steam left on.
Carbolic and saline lotions are prepared in their respective drums.

8 a.m.—Dry steam is turned off in drum steriliser and the second patient's drum; and drum with gowns for surgeon and assistants, and table sheets, are put on to sterilise.
Breakfast.
After breakfast, theatre tables are set: SMALL TABLE. *Top-shelf*: Ether bag; ether; bottle for used ether; measuring glass and funnel; anaesthetic book; tongue forceps; and mouth gag. *Bottom-shelf*: Kidney bowl with towels; small bottle of meths, Brilliant Green, Lysol, etc.; small hypodermic syringe, sterilised; Coramine; Ergometrine, etc.
BIG TABLE: Cylinder of oxygen; jar of C.L.O. and vaseline; clock.

8.30 a.m.—Wet steam is turned off in drum steriliser.

9 a.m.—Steam is turned off in drum steriliser, but drums are left in.

Water is let out of bowl steriliser, and used to fill hot water bottles. Steam is turned off in little steriliser. Operating table is prepared, with sheet, arm sling, and blankets covered with sheets and pillows (one with jaconette slip). Bowls for scrubbing up, and lotions, gloves, etc., are put out. During this time, one of the big water cylinders has been heated (not boiled); gloves and powder for the septic staff have been put out next to the gown drum; clothes for the surgeon put out in the instrument room; and shoes for the rest of the staff in the corridor.

Any extra time is spent in putting things out ready to pack the drums to be sterilised after the operation is over. Much time could be saved if we had a steriliser for doing four drums at a time instead of two. If there is an emergency operation, two drums are done in the ward dressing-room.

OPERATION PRELIMINARIES

The surgeon changes all his clothes, shoes and socks, and puts on a shirt with short elbow sleeves, white duck pants, buttoning tightly round the waist, and white rubber shoes, without socks. These shoes are worn only in the theatre, and are removed if the surgeon enters the main corridor. Nurse assistants and septic nurses remove their shoes and stockings before entering the sterilising room. The septic nurses don their sterile gowns, masks, and gloves (dry); the aseptic staff their head covers. The scrubbing-up apparatus is started from the master temperature-mixing valve from the sterilised water cylinders. (These are refilled, and the water sterilised, by the theatre nurse after each operation.) The surgeon and two assistants start washing at their respective stances; soft nail-brush for ten minutes, No. 1 sponge swab for five minutes, No. 2 sponge swab for five minutes. The hands are scrubbed systematically, finger by finger, under the direct surveillance of the surgeon. Between each step the hands and arms are held under the tap, to remove all soap and loose cuticle. (I notice that some doctors and some nurses wash up in an aimless way; to prevent this, in one famous American clinic each unit is made to immerse their arms in a cylinder of black oil, and to scrub till the oil is removed.) The time signal is given by the surgeon dropping his nail-brush or swabs in the gutter.

Time is taken by a clock. Next, we immerse our hands and bathe our arms up to the elbow in 1-40 carbolic lotion. ('Tender-skins' use the running tap.)

Then we open the glove bags (two pairs each for the assistants, and three pairs for the surgeon, are provided in separate bags, in case of accident, dropping, tearing, or leak detected). The gloves, with folded back cuffs, are removed from the bags, a 'handful' of spirit is taken from the small basin, and the gloves are put on in the usual aseptic method. If difficulty is experienced in getting the fingers home, the glove bag is used to stroke them on. We used to use ethereal soap for this—the gloves slide on much easier—but it leaves too much glove soup. True, with the soapy glove a puncture is detected quickly, but on balance I think spirit is preferable; it is also cheaper. All possible glove soup is then removed by stroking and moving the fingers. Putting on gloves in this way requires instruction and practice—drill, in fact. (Not only nurses, but some doctors, are clumsy beggars at it.) The gloves on, we rub on pure Dettol, but not on the turned back cuff, pause for a bit, and then wash it off in carbolic.

The assistant now takes priority, and, the septic nurse having opened the steriliser lid, removes the left-hand drum cover and takes out her gown; then the instrument nurse takes hers; and then the surgeon his. (The gowns have identifying marks.) The assistants, having most to do, are gowned first. The gowns are put on and the sleeves tucked into glove cuffs. Then the wearer, holding the ties at their ends, lifts the attached mask to his or her face; the septic nurse catches the tapes, avoiding sterile gloved hands, and ties them, top one tight, bottom one slack. If glasses are worn, the masks must be carefully adjusted, and securely fitted to avoid 'smoking.' Next, each member again rubs Dettol on gloves, paying special attention to cuffs (they have been contaminated by the skin), pauses for a bit, and washes off in carbolic.

Note that the theatre, just before the operation, has the floor, walls, and equipment hosed in order to settle all dust. This seems to me a simple and easy way of getting over the dust danger. The elaborate ultra-violet equipment recommended and used for this purpose of sterilising dust seems to me beginning at the wrong end. It is supposed to be deadly to bugs, but it occurs to me that it may not be good for nurses and doctors (quite apart from the patient's innards), if they are exposed to it for long periods.

PREPARING THE THEATRE

From the moment the team enters the theatre, no one is allowed to talk. We find no difficulty in communicating what we want, by signs, and sometimes by scowling. Experimental exposure of culture-plates in a silent, compared with a talking (sometimes racing and football) theatre, proves conclusively the importance of this step.

After the aseptic staff is gowned, masked, and gloved, the bowl and cutting-instrument sterilisers are opened by the septic nurse. The first assistant takes a sheet from the gown drum and drapes the edge of the steriliser, to protect the trays from contamination while being removed. Then the two assistants take the two large waterproof sheets from the drum, go into the theatre, and cover the curved instrument table. Then they return for two sheets to cover this table, and two sheets for covering the lotion stands. Then the surgeon carries in the drum of swabs and towels, places it at the end of the table, and removes the lid in case they are too hot.

Then all instruments, bowls, and trays are carried in. The surgeon places the sterilised double tap handles on their respective taps. The assistants arrange the instruments, and the instrument nurse gets the cutting instruments from the special steriliser, arranges her trays, and gets her ligatures and needles threaded. The septic nurse fills her jugs (which have been removed by her from the steriliser with the scrubbing-up bowls) from the theatre taps of 1-40 carbolic and saline. All the instruments are immediately covered with carbolic, and the hand bowls filled with carbolic and saline.

This covering of the instruments with carbolic is a safeguard I think worthy of imitation. It is as old as Lord Lister, and has been forgotten in the craze for dry surgery. The amount of carbolic getting into a wound is, I think, immaterial. The conference of American master surgeons, recently held, suggested all sorts of elaborate methods for preventing aerial contamination, for example, keeping instrument trays under a canopy a foot or so high, because nose and throat spray was emitted from mouth height, and then fell down. Some surgeons suggested going back to Lister carbolic spray. The elaborations and great variety of methods suggested, and adopted, proved that the ordinary technique employed by them has failed rather badly to secure 100% results. I noticed that no one mentioned the wet theatre, or the covering of instruments with antiseptic

lotion—both simple, obvious, and, I am certain, efficient devices.

The septic nurse, having covered the instruments and filled the bowls with carbolic and saline, now rings for the patient. Everything is ready four minutes after the theatre door is opened. The patient, who has been put on the table from bed in the small entrance corridor, is wheeled straight through the sterilising room into the theatre. The theatre door is now shut, and kept shut until the end of the operation, so that the theatre is isolated from the outside world. This is made possible by having hot and cold sterile water and lotions on tap through the wall.

The patient is now anaesthetised, and everything and everybody is ready. The average time for induction, using semi-closed vinyl-ether ether sequence, varies from two to five minutes. Ether alone takes just about the same time.

The only personal assistance the sterile staff require from the septic staff is the tying of the masks and gowns, the lifting of the steriliser lids, and the pouring out of the lotions. Actually, the sterile staff can operate the lotion taps because of the handles already described, and the two jugs are sterile, or rather, were sterile, before the septic nurse used them.

OPERATION TECHNIQUE

I will now describe the operation technique in a clean appendectomy, not in complete surgical detail, but simply mentioning certain points which we are interested in and consider of some importance.

The patient is now ready, and the two septic nurses, one on each side, undo the ' many-tailed ' bandage, and lift the covering straight up and off. They then place the patient's arms in the calico arm sling, which is approximately a yard square, and has hems ten inches wide on two sides, with open ends, to take the patient's arms. It is arranged on the table, over the bottom sheet, before the patient lies down. This we think to be the safest and most convenient way of dealing with the arms. The septic nurses then fix the anaesthetist's screen, which is made of NO. 8 fencing wire and fixed into holes on the table.

The surgeon is now handed, on a sponge holder, first one swab, dripping Brilliant Green, and then another, by his assistant, and the previously swabbed skin is again done over a large area. Then the instrument nurse hands out the anaesthetist's screen cover, which is just a calico bag, and is put on like a nightcap. Then the two waterproof sheets,

which are pieces of boiling rubber eighteen inches wide and thirty inches long, sandwiched between two slightly larger pieces of calico, and spread, one from the umbilicus up, and one from the pubis down, to prevent penetration of sweat, blood, or moisture from instruments. Then two long sheets, about forty inches by eighty inches, are spread, one on each side, over the screen and down to the foot of the table. Next, two shorter cross sheets, forty inches by sixty inches, covering everything down to and up to operation site. These sheets are now clipped to the skin round the site of the operation, with four parrot-beaked long-handled clips.

The instrument nurse now lays out one knife, a pair of scissors, and a few forceps (on the waterproof sheet area, note); also some swabs in a bowl. After each stage in the preparation, and frequently during the operation, the surgeon and assistant rinse their hands in carbolic, and when the wound is made they rinse it off in the saline bowl. The instrument nurse also does her hands frequently in her 1-40 carbolic basin.

The first incision is now made, and it is long; a small incision is too difficult for me. The site is further out than the ordinary McBurney incision. My reason for this is that, if I want to mobilise the caecum, I can do it more easily with the incision so placed, by cutting the avascular ligament which usually fixes it externally. The first knife is now discarded and the incision waterproof protectors are put on. These are made of a piece of boiling rubber, six inches by fourteen inches, stitched between two layers of calico. The surgeon puts on one, the assistant the other. They are fixed to the wound edge by rake-toothed forcep clamps, two on each side of the incision, and two hook forceps, one at each end, and including the skin and the two waterproofs. These toothed skin towel clamps are very secure, and can be used to retract the skin. They have one disadvantage, however; they are apt to bruise the skin. On no account do we allow the skin to be visible during the operation.

The ordinary muscle-splitting method is used with the second knife. The peritoneum is incised between two long curved forceps, and the opening enlarged with scissors and two similar pairs of forceps applied.

The appendix having been found, and its mesentery completely freed, I hold it up so that the light gets through its mesentery and shows up the vessels. Then the assistant puts a pair of clips on the mesentery edge. I next push through a pair of sharp-pointed forceps. If it is thickened I expose

the vessels at a bloodless point, and close up to the caecum, making quite certain that I am outside all the small blood vessels. Next, I open the forceps and my assistant slips in a NO. 2 catgut and ties the whole mesentery off, and puts a clip on the ends of the ligature, which are left long. Next, the assistant holds the appendix up with the clips, and I cut the appendix free with scissors, keeping as close to the mesentery ligature as is safe. I then crush the appendix with an ordinary strong pair of forceps, and tie it off with a silk ligature in the crushed bed. The ligature is left long. Then with the assistant holding the appendix straight up with the clip, near the tip, I arrange swabs around its base, as a protection against possible leakage, and then I cut it off with scissors, the nurse meantime controlling the stump with the stump ligature. With a swab on forceps I wipe away any discharge. Then with a pair of forceps which have been dipped into a bottle of pure carbolic, with a wide mouth, which is held by the septic nurse, I touch the stump, wipe the surplus off with the wet corner of a swab dipped in 1-40 carbolic, remove the protecting swab, cut the silk ligature, take one look at the mesentery ligature, and then let go. We don't bury the stump. I then do a rather more elaborate rinsing of hands, and the assistant does the same. If any caecum has been out, we return it. We try, however, to have just the minimum of caecal exposure.

Our method of ligaturing the mesentery has these advantages; it is easy, quick, and efficient. Only one ligature is required, and if care is taken to include all the small vessels, as described, you have no bother with bleeding, which can cause quite a lot of delay. Also it may sometimes quickly produce a haemotoma in the mesentery layers, troublesome to deal with, and if left a source of danger. It is worth taking trouble over the ligaturing of the mesentery, so I have taken trouble to describe the method which works best in my hands.

I stitch up the peritoneum with fine NO. 0 catgut, and finish by knotting the two ends of the stitch together; this bunches up the whole incision line, and I think it makes it very secure. This procedure is, I think, worth while, as sometimes the peritoneum is very thin and tears easily. Accurate closing of the peritoneum is important in the prevention of hernia.

The transverse muscle I stitch loosely with two fine catguts. I am doubtful if they are required, but they do bury any torn muscle fibres. The external oblique I stitch with a continuous fine catgut.

We then remove the skin protectors, re-sterilise the skin with Brilliant Green, and insert two or three tension silkworm-guts, picking up the external muscle on the way, and the ends are clipped.

A continuous plain stitch of Dermal is used for the skin edges, using a long straight skin needle, with the suture secured in it by a half knot to prevent slipping. The assistant holds the suture tightly and vertically, and with the assistance of toothed forceps you get the edges to lie neatly. I used to use a lock stitch, but, though it gives good apposition and haemostasis, I don't consider that the wound heals so quickly or leaves such a good scar. The tension stitches are tied over a folder swab dripping Brilliant Green. I am not certain about the advisability of tension sutures; you are apt to get a haemotoma from the needle cut, which you can't avoid or very well remedy at the time, and which you may have trouble with later. On the other hand, they and the swab splint the wound, as well as holding the dressing on in a comfortable and convenient way. I also think that they give you a narrower scar, which is a stronger scar. I have several times decided to give them up, but have lately compromised by using fewer of them, two instead of three or four.

By the time the patient is bandaged he should be out of the anaesthetic, should open his eyes when spoken to, and often be able to talk. The anaesthetist can vary the depth of the anaesthetic at different stages of the operation, using the closed ether method, as the patient can be got deep again very rapidly when required.

The operation, done in the way I have described, can be finished without undue haste or roughness in about fifteen to twenty minutes, even although a long incision is made and takes some time to stitch—always provided, of course, that the case is an easy one, with no adhesions, and that the appendix is quickly and easily found. That an appendix operation can be very difficult indeed it is unnecessary for me to emphasise. The most important time-saving factors are: an assistant who knows the technique of the surgeon thoroughly; an instrument nurse who always anticipates wants and always gives the right thing; and, of course, a good smooth anaesthetic with sufficient relaxation.

The duration of the operation is a very important factor, and the rather fashionable tendency to ignore it is wrong. I noticed recently that the incidence of sepsis in a large hernia clinic in the U.S.A. was in direct ratio to the duration of the operation. The explanation is that the longer

a wound is open, the more spray infection there is, the more the 'insults' to the tissues—exposure, cooling, and damage from swabbing. The longer the operation, the longer the anaesthetic, and the greater the post-operative complications and discomfort. I think all operations should be done with an eye on the clock. This does not mean attempting to break records by roughness, faulty haemostasis, and inaccurate saturing, but it does mean that every effort will be made to prevent unnecessary waste of time from failure to have sutures ready, and from general faulty team-work. It also cures the surgeon of that rather common disease, 'fiddling about.' There should be no question of the quick surgeon versus the slow one. Each surgeon has his own pace, and he should stick to that pace; it should be as quick as he can operate, and operate well.

AFTER TREATMENT

Due to the method of anaesthesia used, the patient can be quickly sat up after getting back to bed, usually in about an hour. We see very little vomiting, and never prolonged vomiting as is so common after drenching with open ether. At night, if uncomfortable, he is given $\frac{1}{4}$ gr. of morphia. Till the third morning he is allowed nothing, no fluids of any kind, and he is encouraged to chew gum. On the third day he is given castor oil and a cup of tea at 5 a.m. and a breakfast of tea and toast at 7 a.m., and usually the bowels move in the fore-noon; if not, an enema is given in the afternoon, but this is seldom required. Then he is fed, and gets what he wants, and the quantity he wants. Good anaesthesia, post-operative starvation, gentleness in handling, and small exposure, are in my opinion the essentials for preventing post-operative discomfort and a smooth convalescence. Flatulence, in a simple case as described, we never see. The craze of some surgeons for what they call ample fluids, given by all possible routes, and as routine, seems to me wrong. Very few cases require them; it upsets most of them. The saline drip by the bowel, as routine, is simply disturbing and useless. Orange drinks are an abomination; nothing upsets patients more. The saline drip also has the disadvantage of making the patient thirsty. (If used, leave out the salt; it may not be absorbed so well, but at least it does not make the patient thirsty.)

I believe that good surgery occurs in inverse ratio to what nurses call 'treatments.' Also the saving of nurse-hours made possible by good technique, which I think spells simple technique, must be considerable in post-operative treatment.

Keeping a patient in the so-called Fowler position, except for some special reason, is absurd—bad, in fact. He should be allowed to roll about in bed, how he likes and when he likes. Sleeping all propped up is to some impossible. Continually bent knees, in cases with varicose veins, are dangerous; all cases with varicose veins should be encouraged to keep moving their legs. Breathing exercises should be encouraged.

In more complicated abdominal surgery, where fluids may be required, the best fluids to administer by the mouth are lager beer, tea, or glucose solution. The last makes them thirsty and should be avoided if the quantity that is safe must be small.

The stitches are removed on the twelfth day. We leave them longer than most surgeons, because I want the wound cicatrix to be strong, and it is. There is experimental evidence to show that the longer period helps to attain this. I have accepted this evidence, but I can't supply proof from my own experience. I believe, however, that the longer the stitches are left, the severer the test of asepsis. I have tried getting them out of bed on the third day; the patients liked it, and they did all right, but we got some wide scars. None of them developed a hernia, as far as I know, but I decided to stop it.

WARD DRESSINGS

You shouldn't do them. Each ward should have a dressing-room conveniently adjacent, and all cases should have their wounds dressed there. All beds should be on wheels that really do wheel.

Let me describe our dressing-room and its equipment. It was built and equipped fifteen years ago. It is next to the ward, measures twelve by fourteen feet, and has on each side a large plate glass window with ventilating shafts, similar to those in our theatre. The floor is concrete, and slopes to an open gutter which runs down the outside wall. A washing-up arrangement similar to that in the theatre sterilising room, and connected to the domestic supply by a mixing tap control, runs along the window wall. A monel metal bench runs along the whole of one wall; on it are containers for carbolic and sterile water, and an instrument steriliser. Suspended by their billy handles on hooks inserted into the under surface of the bench, are the monel metal sheet, gown, and dressing drums, a row of them. On a shelf over the bench lives a row of Winchesters with lotions.

On the next wall is a bowl steriliser. Next to it is a slop

sink. On the next wall is the current steam dressing steriliser, with three steam jets.

An old-fashioned operation table lives in one corner; a surgeon's stool, a small table, and a chair, complete the furniture. The floor is kept wet.

Now the whole idea behind the dressing-room, and our insistence on not permitting ward dressings, is to prevent infection of wounds. If dressings are all done in the dressing-room, everyone wears masks and gowns. Running taps, lotion bowls, dressings, and instruments are all convenient; this saves many nurse-hours ordinarily wasted in transporting them to the wards. The dust danger is largely avoided by having a wet floor. The risk of infection is very much less than in the ward, where accumulated throat spray from patients, staff and visitors, and dust from outdoor shoes, septic dressings, and clothes and blankets, are tremendous. The floor can't be hosed as in a properly designed dressing-room. That this is correct has been proved by a comparison of exposed culture plates. It has been shown recently that the atmosphere of surgical wards in London Hospitals is heavily laden with pathogenic organisms, and definite proof of wound infection has been secured. An authoritative article by London surgeons, entitled *'Hospital Infection of War Wounds'*, is sad but instructive reading. It is a confession of faulty technique. It is especially gratifying to us that our technique satisfies most of their recommendations, recommendations which they are now adopting. The dust problems in the wards they attempt to solve with vacuum cleaners and oil mopping of floors. Their final conclusion, however, is that there should be no ward dressing of wounds; they should all be done in a specially equipped dressing-room. This, in their opinion, is the ideal to be aimed at.

Our adoption of the closed wound treatment for many years has of course cut down dressings to a mere fraction of what they used to be, and still are, in many clinics. We believe that this technique is a tremendous advance. Our patients are not subjected to painful dressings. The mass total of fear and pain, from what patients call 'stuck' dressings, must have been very considerable, and detrimental to recovery. We think that the general condition of the 'dirty' surgical case seems much better nowadays. We see far fewer septic temperatures.

I believe that the recently suggested coagulating properties of cod liver oil have something to do with the absence of toxaemia in our surgically septic wounds. This, I think, is especially important in burns, where there may be a very

extensive area for absorption. The absence of abnormal temperatures does not necessarily mean that there is no absorption of toxin. Every surgeon must see cases that he can't account for with normal temperatures, but which are still not looking or feeling well. The days of four-hourly foments are, I think, gone for ever. The sodden whitlow in a saline or Eusol bath is gone too. They did not do well; there was too much movement, too much re-infection, too much oedemia. The dependent position in the bath was bad. The new closed, infrequent dressing with C.L.O. and vaseline, with adequate splintage, gives much better results and leaves less subsequent stiffness. The saving in nurse-hours is tremendous. Many of the cases that previously occupied hospital beds can be sent home, to return for their infrequent dressings.

On consideration of our technique as a whole, one point haunts me. We have practised it for twenty-five years, with so very few alterations, that its very age makes me suspicious of obsolescence and conservatism—a nasty thought. Will a china doll be broken?

METHOD OF PREPARATION OF COD LIVER OIL AND VASELINE DRESSINGS

Take quarter of an enamel container of vaseline and put the lid on. Sterilise this by standing the container in boiling water for two hours. Fill the container with cod liver oil, and stir well until the cod liver oil and vaseline are well mixed. Take the container out of the water and allow the contents to cool. This makes a soft ointment.

To make wide bandages, take some gauze that is usually bought folded double. This double thickness is about 16 inches wide. Take four or five feet lengths of this and double it twice, so making bandages four inches wide of eight thicknesses of gauze. Roll these bandages loosely so that the ointment is able to penetrate to the middle of the roll. Dry sterilise these rolls, and put in sterile containers. Then have cod liver oil and vaseline melted and pour over them. It is best to stand the containers in boiling water for a short time so that the ointment stays melted long enough to penetrate to the centre of the rolls. Then pour off any surplus ointment into sterile jars, and this can be used for dressings for which bandages are unsuitable.

To make smaller and narrower bandages, ordinary surgical gauze bandages two or two and a half inches wide can be loosely rolled and treated in the same way. Also one inch gauze packing may be used.

We have found that the large mesh of the gauze rolls is sometimes a disadvantage. Old linen is cut into bandages, rolled loosely and prepared in the same way as the gauze, and squares of old linen of different sizes are prepared in the same way. They are sometimes more suitable than the rolls. As many layers as is thought necessary can be applied, covered with a thick sterile dressing and bandaged firmly. The bandage must be fixed. Otherwise the dressing will slip.

We tried silk in the same way thinking that it would make a smoother dressing to apply to a delicate surface, but it did not retain enough of the ointment, and the discharge if plentiful did not get through the fine mesh silk and could only get out at the edges of the dressings. We have used silk for skin grafting also, and found it efficacious if the surface had been properly prepared with first of all Eusol, and then saline dressings. It keeps the grafts well pressed down, and it does not stick.

Clothes or linen which have been stained with cod liver oil and vaseline are cleaned by soaking them in an emulsion of kerosene, soap, and hot water.

Chapter 5

A CURRENT STEAM STERILISER

Now, the principle of the apparatus to which I want to draw attention is that of current steam, and a large volume of steam is used; but in order to kill all spores rapidly a few pounds of pressure are required, and to make the machine work very quickly it is better to use 15 lbs. pressure, which will give a temperature of 250 deg. F. when the air is exhausted. This temperature will kill all spores in five minutes.

The utilisation of the physical fact that air is heavier than steam can materially assist in the exhaustion of the air. In the current steam steriliser I have described before the steam was let into the bottom and had to push the air uphill. With this new apparatus the steam enters at the top and escapes at the bottom, so that the air is pushed out by gravity.

Its construction is simplicity itself. It is a rectangular chamber 4 ft. by 3 ft. 6in. by 2ft., with a door the full size of the receptacle. The steam at 100 lbs. pressure is allowed in at the top and escapes at the bottom through a valve-controlled opening. The amount of pressure in the chamber depends on the respective sizes of the inlet and exit. The air is carried out with the rushing steam, and when all the air is exhausted the temperature everywhere, even in the midst of the tightly packed dressings, is 250 deg. F. Maintain this for fifteen minutes, and absolute safety is assured. A thermometer in the exhaust valve will show when all the air is exhausted from the chamber, and the sterilisation period begins.

From experiment it is found that when this thermometer on the exhaust reaches 212 deg. the temperature inside the drums has reached 250 deg. It is desirable to test separately each machine. An alternative way of knowing when the chamber is exhausted of air is to submerge the exhaust pipe attached to the exit valves in water, when the presence or

absence of air in the exhaust valve can be detected. It has also been suggested to me that the air could be detected in a U-tube on the exhaust.

The machine having been tested, the two valves, inlet and exit, can be connected so that only one valve need be opened. It will then be impossible for the nurse to forget to open the exit valve. The instrument is now nurse-proof. The whole apparatus should be lagged with asbestos and covered with a light metal sheet and painted. A safety valve to open at 16 lbs. pressure should be inserted in the top of the chamber, also a pressure gauge. At the bottom of the chamber should be a tap to let out condensed water. The apparatus is made of boiler plate. Rivetting is not required, electric welding being sufficient. Angle iron externally is used to stay the chamber. The door, which has to withstand many tons of pressure, must be of heavy plate and ribbed. It is hung on loose hinges and tightened down by levers operated by one large wheel. The door is the only difficult part of the design. The whole inside is tinned with a spray-gun to prevent rusting.

The internal fittings of the chamber can be made to suit the ideas of individual surgeons. In my opinion the following arrangement is suitable for theatre use. Four trays are used:

(1) *Top tray.* This holds the swabs, towels, etc. all classified and arranged. The tray and its contents are placed in a shaped linen bag, with an opening tied up with tapes or a zip fastener. When the steriliser is opened up the whole tray is lifted out in its covered bag and is placed on the swab table.

(2) *Second tray.* All ligatures, instruments, certain lotions, tubes, etc. are placed and enclosed in a bag that is easily opened.

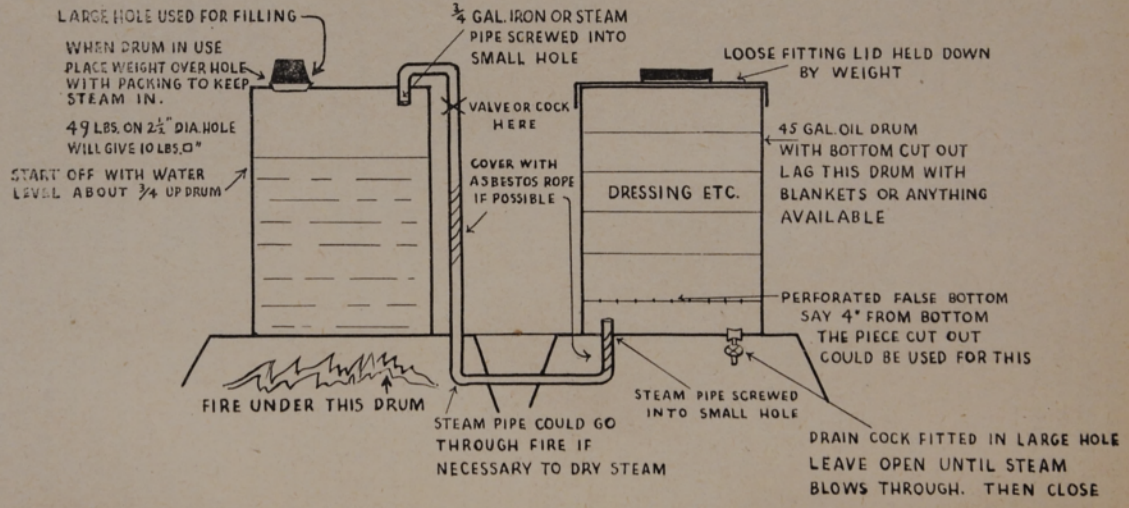
(3) *Third tray.* Bowls.

(4) *Bottom tray.* Gowns and gloves and masks.

This steriliser does away with the necessity for separate instrument and linen sterilisers. There is ample room in the chamber for all the probable equipment needed. Owing to the rapidity of working, it can be replenished if necessary, and a fresh set of equipment is ready for the next operation or series of operations.

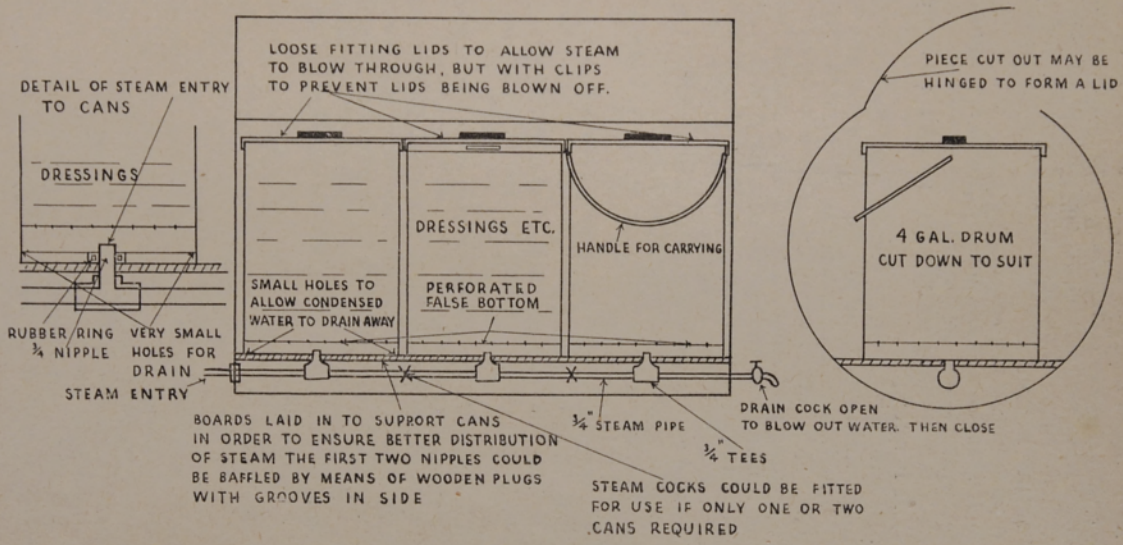
It will be noticed that this steriliser is not double-walled. Experiments have shown that a steam jacket around the cylinder has no advantages. What it is supposed to do, experiment shows that it does not do.

Suggested form of Steam Sterilizer using two 45 gal. oil drums



NOTE: Benzine drums are heavier and stronger and should be used if available

Suggested form of Steam Sterilizer using one benzine drum cut away to form a trough, and three 4 gal. drums cut down to hold dressings etc. Steam supply from boiler if available.



The drying of materials is hardly assisted at all by the use of a steam ejector. The amount of condensation in the chamber is determined by the efficiency of the external lagging. The single wall construction shows a very considerable saving in cost.

To recapitulate the advantages:

(1) It is fool-proof and nurse-proof in operation.

(2) It cannot get out of order.

(3) It is absolutely efficient and will kill all spores.

(4) It is quick.

(5) Its capacity is much greater than that of a cylindrical steriliser, and there is no need to pack it tightly.

(6) Instruments and bowls can be sterilised in the same chamber at a temperature that will kill spores. (It is a curious thing that surgeons are quite prepared to accept as sterile instruments and basins that have been boiled only, i.e. they have not been subjected to 250 deg. The instruments are often severely infected.)

(7) The tray system suggested will permit of quick and easy handling and transport into the theatre.

(8) The trays can be removed, and drums of the ordinary pattern can be sterilised.

(9) The cost of the machine is very much less than the ordinary dressing steriliser.

(10) The steriliser can be located in the theatre if desired. When opened up, everything necessary is ready for the operation.

(11) Materials are not destroyed, since the temperature is never above 250 deg. F.

(12) Another suggestion is that sterilisers should be built into the partition wall between the sterilising room and the theatre with a door opening on both sides. Certain advantages of technique can be obtained. Whether these advantages will justify the extra elaboration of the construction I do not know.

FIELD HOSPITAL EQUIPMENT SUGGESTIONS

'Surgical cases are in even greater need of equipment. First of all a steriliser is wanted—many post-operative cases have died through sepsis—the most beloved Dr. Bethune died from sepsis.'—(With the 8th Army, Southeastern Shansi-China Defence League Newsletter, April, 1941.)

The efficient high pressure steriliser of modern design is often—usually in fact—not available. The old patterns (although still much used, alas, in civil as well as war service) are inefficient. Fortunately an efficient, inexpensive, current steam dressing steriliser can be quickly fashioned from materials practically always available on active service, even in the field. So there is no reason why any field hospital, however remote, should not have ample reliable sterilised dressings (provided, of course, gauze is available).

Any New Zealand soldier with a hammer, an old chisel (or an axe), a hack saw, a file, a small assortment of pipe fittings, a few feet of ¾ in. pipe, and 'instructions how' can do the job. This is the method I suggest, and I know it will work:

A 50-gallon benzine drum is used as the steam generator. The two screwed-in plugs on top are removed. Through the large 2 in. hole pour 35 gallons of water. (This quantity allows for sufficient steam storage capacity being left.) A piece of rubber inner tube is placed over the large hole, and a flat piece of metal held down by a 45 lb. weight makes a safety valve which will blow off at 10 lbs. pressure. A ¾ in. pipe is screwed into the ¾ in. hole on top of the drum and connects the drum to another similar drum turned upside down, with the bottom cut out and a lid fitted. The cut out bottom is used to make a false bottom and is perforated with holes.

A control tap is fitted to the top of the steam pipe. The steam generator drum is placed on an open fire, or on primus stoves. To make the steam as dry as possible the steam pipe can be led through the fire or heated with a primus stove.

The dressings are put in bags and loosely packed or suspended on hooks by the draw tapes. This apparatus allows current steam of sufficient volume to pass through dressings for three-quarters of an hour. This will destroy all pathogenic bacteria and will provide dry dressings if certain precautions are taken. Lagging of the apparatus with waterproof sheets, blankets—any old thing in fact—is an advantage.

1 DRESSING CANS

If it is desirable to sterilise the dressings in cans, 5-gallon lysol drums, which are tinned inside, make suitable containers, and the following steps are taken:

A similar 50-gallon benzine drum is cut longitudinally, and this will accommodate three lysol drums in a row. The top section is removed and makes a lid for the apparatus which can be hinged.

The steam pipe with three T's incorporated enters the bottom of the cut drum through a hole, runs along the bottom and out at the other end. A tap is screwed into the free end of the pipe to let out condensed water; three nipples into the three T's.

A 12 in. by 1 in. board with holes placed over the three steam points forms a seat for the dressing cans. These cans have holes taped in the bottom. They sit on the nipples which come through the board, making a steam joint when resting on a rubber rung. The steam must go up through the dressings and escape through the loose fitting lids. It can't go anywhere else. The cans have false bottoms, and when removed, after any condensed water has escaped, the bottom hole is sealed with a piece of Elastoplast or with a cork.

The lids for the cans can be fashioned from galvanised iron sheeting, or probably a suitable lid to fit can be found in the cookhouse. The cans are then placed for transport in stout calico bags with draw tapes.

If a donkey boiler, a locomotive boiler, or a marine boiler—no matter how old—is available, then of course a superior apparatus, far more convenient, can be quickly and easily made. Steam at really high pressure is drier, and if far more volume is available the apparatus becomes much quicker. (Surgical results in many New Zealand hospitals would improve if they fitted up my improvised steriliser in their back yards.)

2 GLOVES

A heavy rubber glove should be used by surgeons on active service; post mortem gloves do quite well. They can be sterilised with pure lysol or dettol. They should be a loose fit. Though awkward to begin with, you soon get accustomed to them and can do quite delicate work wearing them. The ordinary surgical rubber glove is far too thin and fragile. They won't stand rough usage, and they tear easily, stretch rapidly, and deteriorate quickly with boiling. They are safe neither for the patient nor the surgeon.

3 LIGATURES AND SUTURES

Domestic linen or cotton thread or fine string if properly sterilised, can replace catgut or surgical silk. Silk worm gut can be used as a buried suture or ligature. For occluding an intestinal stump or suspending an organ, silk worm gut is safe and I understand remains for years unaltered in the abdomen, causing no irritation. Horse hair for the skin is always available.

A SIMPLE METHOD OF CLOSED OR SEMI-CLOSED ANAESTHESIA BASED ON CORRECT PHYSIOLOGICAL PRINCIPLES

PREMEDICATION: Adults, 1/6 gr. of morphia and 1/150 gr. of atropine hypodermically. Children, 1/150 or 1/200 gr. of atropine.

EQUIPMENT: One light rubber bag 12 inches long to which is attached an ethyl chloride ampoule-breaking apparatus with a McKesson face-piece. For a small operation 3 to 4 ozs. of ether are put in the bag, for a long one 6 ozs.

The patient's head and shoulders should be well raised. He is ready in from 2 to 5 minutes.

Vinyl ether has a peculiar smell, but does not appear to be irritating. There is an increase of salivation, but this can be prevented partially by the preliminary use of atropine.

The patient keeps a good colour without the least sign of cyanosis. We have used the method on old and young and it is useful for small children who do not take gas well. However, it has one disadvantage, especially for children, and that is the necessity for beginning the anaesthetic so suddenly by applying the mask tightly to the face straight away, instead of gradually, as we can do with ether.

Of course, as they go under so quickly with vinyl ether this fright or discomfort is only a momentary thing and can be mitigated, except with infants, by explaining beforehand just what one is going to do.

Previous to this we have used gas and oxygen for induction, but prefer vinyl ether. The latter is also cheaper. An ampoule of 3 c.c. costs 1s 3d while gas and oxygen for induction costs us 1s 6d a case.

The following are the advantages of this method of closed ether over that of open ether with ether or chloroform induction (so common in New Zealand):—

(1) Quicker induction.

(2) The correct percentage of carbonic oxide, which keeps intact the physiological balance between respiration and circulation, is insured by our method. This, and the keeping of a sufficient oxygen supply, are the most important factors in efficient anaesthesia.

(3) The closed method avoids too deep and rapid respiration, accompanied by loss of fluids from the lungs and also the skin by profuse sweating—a condition physiologically similar to that caused by hard physical exercise, and an additional shock factor of importance.

(4) The gas is warmed by the patient's breath and is moist.

(5) Relaxation is much better than with open ether.

(6) The degrees of anaesthesia can be rapidly varied to suit the surgeon's requirements. In abdominal surgery, when the packings are all arranged, the anaesthesia can be reduced to the analgaesic stage, the anaesthetist being able to get the patient deeper quickly if required. With open ether this is much more difficult. If needed a further vinyl ether ampoule can be used at any stage of the operation. We have very seldom found this necessary.

(7) The patient is not drenched with ether as so often happens with open ether. Recovery is more rapid, the patient usually showing signs of returning to consciousness as the last stitches are being put in. Recovery should be as rapid as with gas and oxygen.

(8) Patients can be sat up in bed some hours earlier than with open ether.

(9) Post-operative vomiting is exceptional, and there is very little flatulence.

(10) Chest complications are less common than with open ether.

(11) Nothing elaborate, difficult to transport and liable to go wrong is required.

(12) Judging by our experience, we believe that all the advantages claimed by the absorption technique of nitrous oxide and ethylene can be secured by our simple method.

(13) The amount of ether used is a fraction of that used in the open ether method, and the theatre is not full of ether fumes.

(14) Patients who have endured both methods say that although the tightness on the face of the mask for the first few seconds before the vinyl ether takes effect is objectionable, it is much less so than the slow and sometimes asphyxiating process of going under with open ether.

We consider that vinyl ether as an inducing agent is an important advance in anaesthesia, and that it should make obsolete the use of chloroform, which, although comparatively pleasant, is dangerous even in mixture.

In carrying on with ether by the semi-closed method, the necessary degree of tightness of the mask to maintain the correct mixture of CO_2 and oxygen can only be learnt by experience. Every patient is different and must be watched carefully. At the slightest sign of cyanosis the mask must be slightly lifted. The excessive cyanosis that was characteristic of the Clover Inhaler is never seen.

For very short operations, vinyl ether is administered in the bag as described. An ampoule of 3 c.c. gives from one to two minutes anaesthesia, with excellent relaxation. Recovery is quicker than from nitrous oxide or ethylene, and the patient can depart as soon as the operation is over.

We have no experience of the sole use of vinyl ether in prolonged operations, but can see no reason why it should not be used. The cost is prohibitive for us.

We occasionally use premedication by nembutal, or nembutal and morphia, for nervous cases. In most cases this gives complete amnesia. A disadvantage is that the patient sleeps for hours after the operation and this causes delay in de-etherization.

We consider that it is better to do without premedication, except for morphia and atropine, and have the patient come out of the anaesthetic immediately the operation is over. He can then be got sitting up much sooner, which reduces the danger of chest complications. In the evening he is given morphia to get him a night's sleep.

We have found luminal unsuitable for premedication, as it causes such shallow breathing that induction is unduly prolonged. Nembutal does not cause shallow breathing. I doubt if the use of nitrous oxide and oxygen is safer, all things considered, than the method we advocate. The difficulty of getting sufficient relaxation counterbalances the advantages of an anaesthetic of low toxicity. For example, badly shocked abdominal cases (which may call for difficult surgery), the very cases that call for nitrous oxide because of the shock, are the ones in which it is unsuitable because of the poor relaxation.

The advent of cyclopropane may be an advance; used in the closed absorption method, its advocates claim for it quiet breathing and excellent relaxation. It may be superior to the method we advocate. However I venture to suggest that the advocates of the absorption technique have overlooked Henderson's experimental work of twenty-five years ago. He maintained that skilled anaesthesia consisted in avoiding undue loss of CO_2 by over-deep breathing, while

at the same time avoiding poisoning by retaining too much of it.

The use of luminal, by making the respirations shallow, probably prevents undue loss of CO_2, but if at the same time it prevents the inhalation of sufficient ether it seems too rather futile and altogether a curious way of attaining a physiological balance.

CONCLUSION

We believe that the technique of our method is correct physiologically, the correct amount of CO_2 and oxygen being retained in the rebreathing bag.

We consider that vinyl ether is suitable for a rapid, safe, smooth and reasonably pleasant induction, and is preferable to chloroform, either pure or in mixture. It also has some advantages over induction with nitrous oxide or ethylene gas.

NOTE: Lately we have not been able to use vinyl ether for induction owing to the scarcity of supplies during the war, but we use the same method with ether alone.

WHO IS THE MASTER SURGEON?

'We must ask ourselves, then, if these surgeons of the future should not have more experience under recognised teachers after their final surgical examination, and whether such men going out into the country under such a scheme should not be responsible for the regional surgery of the future, perhaps chosen by a committee of the college of surgeons. In this connection I should like to make one observation about the teaching of surgery. As one sees more and more of surgery one never ceases to be astonished at the recuperative and healing power of the human body. We are seeing this almost daily in war casualties: men and women with wounds that seem as though they must kill, or cripple the patient for life, recovering almost full function. We as surgeons have to inflict wounds on patients. We should see to it that we do not take advantage of this astonishing phenomenon of human recovery, but that we recognise it humbly as an aid to our art, and that we teach our assistants to treat it in the same way, so that when they leave us they go out with judgement and gentleness as good surgeons,' said John B. Hunter, surgeon, King's College Hospital, on February 5th, 1941, in his presidential address given to the Section of Surgery at The Royal Society of Medicine.

I intend to widen the field of reference, giving examples of ordinary routine surgical procedure in which Mr Hunter's injunction of not taking too much advantage of nature's capacity for dealing with surgeon-inflicted wounds, is sometimes ignored.

ACUTE HAEMATOGENOUS OSTEOMYELITIS

The disease begins with a small focus of infection in the metaphyses. The infection spreads to the surface of the bone, from there under the periosteum, down the shaft of the bone, and then, and not till then, into the medulla. That I think is now generally accepted as the pathological course of the disease. My clinical experience supports this view. In many early cases the focus of infection can be detected in the metaphyses by locating the site of maximum tenderness. X-ray is useless. The surgical procedure adopted to deal with this condition in many cases is destructive to quite an unnecessary extent. The brutal chiselling of great windows into the medulla in the early stage of the disease, in fact at any stage, inflicts a surgeon's wound which

takes nature quite a long time to heal. It is very bad surgery indeed. The correct procedure (May 1941) is: a small wound down to the bone. If you strike pus, stop; if you don't, bore a hole with a carpenter's gimlet, about the size of a match, into the bone. Pack the wound with C.L.O. and vaseline, put on a plaster case. Give full doses of proseptasine, and nature will do the rest, usually easily and quickly.

In this district we see a great deal of acute osteomyelitis, due I think to the prevalence of the skin disease, impetigo—whether staphlococcal or streptococcal type I don't know. I am astonished at the number of old healed cases of osteomyelitis I see in adults, which have been treated only with Maori medicine, maybe a poultice of leaves from the bush. (I don't think for a moment that the Maori is the least fussy about the species of leaf he uses; I would say 'fairly handy' is the favourite kind.) Nature has made quite a good job of these cases. There are other Maori-treated cases of osteomyelitis that I don't see; they are dead. But so are some of the 'chisel and hammer' surgeon's cases; whether more or less I can't say. In these very acute cases where the disease flies local treatment can not avail, and local 'brutal attack' can only hasten the end. Nature can't always protect the surgeon—protect the patient from the surgeon might be a better way of putting it. Some awkward questions haunt me, but I don't know the answers. Until we do know we should do as little damage as possible in these cases, and try not to embarrass nature by asking her to cure not only the disease, but also the surgeon's 'cure.' We must keep our wounds small, I say. I think we have been misled. Our teachers told us we must base our practice on sound surgical principles, i.e. good drainage, removal of focus of infection, complete eradication of the disease. To me that 'sound' sounds presumptuous. To-day they are unsound, false. We must forget and break them.

MASTOIDS

Mastoids are another good example (I confess that I am actually embarrased by the welter of examples at my disposal.) 'Like other revolutionaries, I can thank God for the reactionaries. They clarify the issue,' said Professor R. G. Collingwood.

Hammer and chisel again, complete eradication of the disease; all the cells must be converted into one cell, the radical operation. So the radical ear, nose and throat surgeon gives nature a big job of work, often far bigger than is necessary, I believe. ('There is always a wicked secret,

a private reason for this.'—Auden.) A comparatively simple operation is all that is required in most cases, just to the pus and then stop.

How does nature treat a mastoid? Again, let us have a look at the Maoris. I see a great number of these cases, some in the process of cure, some actually cured. Thanks to the burrowing and necrosing action of pus, it manages in a large proportion of cases to get out of the mastoid cells and the tension is relieved, and only the soft integuments remain to be negotiated, a simple job for pus. The danger is passed; nature has done the difficult part of the operation. Now is the surgeon's chance to play his part by assisting nature to save suffering and time. With one stroke from his scalpel he completes nature's cure. He ' plays the game ' with nature, with the patient's purse, and with the patient's mastoid. I don't say that it is always as simple as this, but that is what happens in a larger proportion of cases than I was taught and used to think. The danger of pus going inwards is not nearly so great as used to be thought.

NASAL SINUSES, *acutely infected*

Here nature, posture, and proseptasine will cure the large proportion of cases. The ear, nose and throat surgeon is not required. Far too often his surgical wounds are such that even nature can't restore the wounded parts to normal function. Noses make me think of the number of asthmatics I see who have had their noses ' raped ' (yes, that is the word), in the name of scientific medicine. I marvel that the victims don't retaliate (punched in . . . . . , not punched out). I saw a bushman the other day, a hefty lad, but an asthmatic. He had had a great deal of cartilage and bone ' punched out ' of his nose, and he was worse than ever, far worse, he said, and far more susceptible to dust than before operation. He had had three operations, and a bill. He was furious and very funny. He was considering punching all right, and if he does a fraction of what he said he was going to do, it will be a very radical operation. (Of course I did my best to pacify him.)

The excuse that operations may help, and often cure, is not good enough. There is available, or should be, an audit of results of nasal operations on asthmatics, which I think justifies the bushman's punching, rather than the ear, nose and throat specialist's. In a properly conducted polyclinic that abuse of the surgeon's art could never happen;

but it will continue to happen sometimes as long as our medical service is a private commercial operation.

APPENDICITIS

But I think nature's method of dealing with a pelvic abscess best demonstrates her claim to be a master surgeon. It is admirable usually. Here is an example: I once looked after a medical student suffering from appendicitis for Dr Alexander James, the famous Edinburgh physician, in the students' ward of The Royal Infirmary, Edinburgh. Appendicitis was a very dangerous disease in those days, when treated by surgery—a fact fully appreciated by Dr James who maintained that they all recovered if left alone. My duty as defined by Dr James was to protect the patient from surgeons. This I found difficult and disagreeable, because I thought the case was a surgeon's job, and not a physician's, but Dr James was not only a very astute physician, but also a very astute diplomat; so we kept the surgeons at bay. My anxiety was very great. It was my first case of appendicitis and the boy was very ill and getting worse. I really thought a life was being sacrificed on the altar of prejudice. 'Local undertakers,' Dr James called surgeons. Every morning when he visited the boy he anxiously enquired about frequent motions, and when one day I reported frequent mucous stools, he danced with joy. 'He will be all right now, he will be all right now,' and he was. Soon large quantities of pus appeared in the stools, and the change was dramatic; one day he looked certain to die, the next certain to live. Nature had operated, as Dr James explained, 'much more competently than a surgeon could,' and he was right at that time anyway. But my education was not completed; I had learnt nature's role but not yet the surgeon's role. It was a few years later that I learnt how to diagnose and when and how to operate on a pelvic abscess, through the rectum or vagina. Although this has been known for forty years, it is still not always acted on when it might and should be. The simplicity and safety of this operation and the extraordinary rapidity of recovery, makes it one of the most impressive procedures in surgery. A pair of vaginal packing forceps with points ground on an emery wheel, sharp, but not too sharp, is the tool I fashioned and use. Nothing else is required, no rectal spectrum, often no anaesthetic, no drainage tubes. It is here, I think, that you see the surgeon at his very best, completing by a very simple operation the operation carried out with infinite care and admirable judgement by that master surgeon, nature. Com-

pare: the surgeon's supra-pubic uphill drainage tube inserted by his clumsy exploring finger, pushing and separating blindly nature's carefully sealed barriers. She has a big job protecting the patient from this—to her—horrible assault. Sometimes she fails.

If my facts are correct it would appear that nature, in the examples I have given, is the master surgeon, and not the F.R.C.S.'s. Their job is to act as nature's assistant, to help, not to hinder. It is true that a surgeon can remove a gangrenous leg in ten minutes, and nature, let her try her damndest, could not do it in a week. But nature has to heal the stump, don't let us forget. The truth is that both may be required, nature and the surgeon. I want to emphasize this in case I am accused of advocating Christian Science methods of healing—leaving everything to nature, which they spell God. I know nature often succeeds unaided, but my knowledge tells me that the correct procedure is to let nature do all she can without hindrance, and the surgeon should place at her disposal the accumulated knowledge of scientific medicine to use if required, but only if required. This conception of surgery is what John Hunter, 'the Hunter of Hunters,' taught long ago, and it is still true. It would be a good thing for the people of New Zealand if this truth was realised by those who shape our laws. It would save much suffering and many lives. Every large hospital in New Zealand should have a master surgeon in charge to direct, control, and be responsible for all the surgical staff and surgical work in that institution. That is the only way to stop unnecessary and unsuitable operations. The only way to be quite sure that an operation is only done by a man who is really capable of doing it. It is the only way in which our young surgeons can be trained. It is the only way those worthy of becoming master surgeons can be selected and given priority. It is the only way to prevent some poor unfortunate who is suffering from an incurable disease, being treated as a human guinea-pig by some ambitious, misguided, and thoughtless surgeon. If such a case died on the table it would not matter; but no, the patient must be got off the table alive, that is essential. If this type of operation adds to the suffering, then I say, and I think all will agree, that it is wrong, terribly wrong. If done with a financial objective, well, there can be few greater or meaner crimes done by man to man. It is mean because he takes advantage; it is cowardly because he takes no risk. He is a fully qualified doctor, the patient consented, so did his friends. 'There was a possibility it might . . . ,' that plausible justification for cruelty

and greed, which every surgeon but no layman knows is wrong.

For the shark, he has his teeth and
You can see them in his face,
And MacHeath he has his knife but
Hides it in a different place.

—ISHERWOOD.

I don't think for one moment that this often happens, but I know it does happen. I am certain that a large majority of surgeons in New Zealand look upon this type of operation with just as much horror and disgust as I do, but they know, and I know, that there is no law or effective regulation in the land to prevent it at present. It can only be prevented in the way I suggest: by making master surgeons responsible for not only the surgery in our public hospitals, but also in our private hospitals. (A man of the medical superintendent genus can't; he does not know enough.) The master surgeon must master surgeons; that is his vocation, it is what the title means. That spells the end of surgery as a private commercial undertaking with its associated standard of ethics.

PRIORITY CLAIM FOR THE CLOSED TREATMENT OF WOUNDS, WITH REPORT OF THE CASE

Recently there has been an extraordinary amount of correspondence in surgical literature over priority claims for the closed method of wound treatment. I want to lodge a claim for a cattle dealer of Keith, Banffshire, Scotland, Lang by name, and for myself his pupil. He taught me the closed method forty years ago. This is the case:

A valuable show mare, a pedigree Clydesdale aged three years cut her right fetlock with wire. The wound was eight inches long and its edges were ragged. The significance of the wound was not the permanent disability danger but rather the blemish danger. Wounds in horses leave ugly scars; a show mare scarred is valueless. This is the method the cattle dealer of Keith advocated, and my father carried out under his instructions there and then. I held the mare. Quicklime was sprinkled on the wound and slaked with water. A complete cake of considerable thickness was built up by repeated powderings and sprinklings. The instructions given and obeyed were to leave it on for three weeks, and when it was removed the wound would be healed without a blemish. No bandages were used. He told us it would stay put and it did. (I suppose the hair in the neighbourhood of the wound got incorporated in the slaked lime and formed plaster.) When it was removed the result was, as claimed by the cattle dealer, practically no scar (unique in our experience). Later when the hair grew she was classed ' free from blemish.'

Of course it is all nonsense—the closed treatment of wounds is as old as homo sapiens; all primitive people practise it. The only new thing about it is that it is new to the medical profession as a whole. Not ' one man deep,' not even ' a thousand deep,' but deep with the knowledge of a race, our common heritage. Who then has the right to claim priority?

'The Picture of the Century: Birth of a Nation'
Caesarian Section
Surgeon, see your knife is keen,
Sharpen it up
on the Rotary strop
or on the leathery buttocks of Big Business.

—A. R. D. FAIRBURN

'Observe the young and tender frond
'of this punga: shaped and curved
'like the scroll of a fiddle: fit instrument
'to play archaic tunes.'
'I see
the shape of a coiled spring.'

—A. R. D. FAIRBURN

Chapter 10

"HE WHO PAYS THE PIPER CALLS THE TUNE"

It is true he can, and does, but it is equally true that it is wrong; as wrong as Hell, socially and ethically. Our calm acceptance of this commandment is responsible for most of the troubles of man in society. It is power politics, unabashed and unashamed, and it links that foul cancer to its true host, the power of money, as no other saying in our language does.

How does it affect medicine, social medicine? How does it affect your job, any job? Let me speak for medicine. An example: the quantity, the quality of food, which so often determines whether health is good or bad—yes, even life or death—is controlled by this law; the payer chooses his measure and the piper has to do what he is told or get out. In the last financial depression there was food in abundance available in New Zealand—food even being destroyed—while the health of quite a large section of the community became impaired, especially the children and the old and feeble. Because the bankers, having usurped the rights of the government as payer, called them to pipe a tune that became the topical tune of the time, 'Starvation in a land of plenty,' and the devils made the piper keep on playing that foul tune composed in Hell, piping and piping without respite for years, in spite of the cries of hunger and riots and protests from the decent section of the community who realised the inhumanity of the pipers. But the government, poor weak-kneed, 'herrin-gutted' pipers that they were, kept playing and playing the Hellish chanty without protesting, for

if they dared to change the tune and play a fuller, a kindlier measure, the bankers said the country would be ruined, and these foolish pipers believed it. ' Lo, my God and all.' I warn you, these pipers will play it again if we don't watch them incessantly.

' What a pretty turn it would be to see Adam Hamilton distributing free legs of mutton to all the people'—

I could give many other examples. The financial control of quinine production and distribution is responsible for the death of a million coloured people a year. Again, the control of our scientists in scope and direction is a grave menace to man's progress. Sometimes it is ignorance that decides the tune, well-intentioned ignorance. Here is a New Zealand example: even every little, fiddling hospital in New Zealand, our own included, has an Iron Lung, thank God and Nuffield. ' Marvellous, marvellous,' and all New Zealand echoed. Four would be ample; but hardly one hospital, big or little, has a really efficient modern steriliser, that little known, unromantic, non-spectacular life-line of modern surgery, so different from the romantic Iron Lung, the very name a gift of the gods to the popular press. Nuffield, the payer, knowing nothing about pipes, piping, or pipers, called a rotten tune, and New Zealand accepted it. (It was pure greed in my case, but bits of it may come in useful; or I'll swop it for a barrel of cod liver oil, yes, quite a small one.) No one had the wit to suggest a better tune—for example my choice, ' The Modern Steriliser,' which goes very well indeed.

Another bad caller was Sir Julius Cahn, the famous cricketer, who, genuinely exercised by the brutality of painful childbirth, and horrified when he found that nothing was done about it in St. Helen's hospitals, presented them each with a Minnit's gas machine, thus hoping to help New Zealand mothers. Now this machine was designed to conform with, and limited by, the midwife's regulations of Great Britain (and even then only after a terrible struggle with opposing doctors, who considered that their privileges were being usurped). It affords only very partial relief; often it is quite useless, and it can't be used for long periods in any one case. Also, gas is very expensive in New Zealand, and I am doubtful if the machines are ever used. Here again, with the best will in the world—I am certain, simply because he knew nothing much about pipes, pipers, and piping—Sir Julius Cahn called a rotten tune.

No, it is all wrong. It is humiliating that society should

be dependent on the whims of ignorant patronage. Necessity, suitability, and availability, should have the right to call the tune. Leave it to the piper, I say, for if he is a good piper he will probably know the most suitable tune.

Now, 'To him that understandeth there is said enough,' so, pipe me this tune, Mister Piper, for the good of your soul and mankind.

'Sink me that ship, Master Gunner,
Sink her, and split her in twain—'

Thank you, Mister Piper, that's a grand tune.

FROM A HOSPITAL DIARY

by An Impatient Patient

I asked the man with the most perfectly cultivated sense of observation I know to tell us what he saw when in hospital (not ours) as a patient.

Here it is:

One of my disadvantages here is that I know just enough to have some idea of what is going on. And I've noticed that people who do highly specialised work don't like you to have any knowledge of their ways that is at all accurate. Yesterday, for instance, a nurse stumbled and a little basin fell off the tray of sterilized gear she was carrying. I picked it up and she said put it back on the tray. But it won't be sterile now, I said. She didn't insist but I felt I'd made an enemy for life.

* * * *

I can't help feeling that no matter how perfect a theoretical system you work out, there must always be some point where your antiseptic technique will break down. After all, the human beings who operate the system aren't perfect; and under present conditions there will be certain pressures operating—time, limited finances, etc. Here's an illustration. A patient asked me to get him a urine bottle, but in the sluice room I couldn't find a napkin. (According to the rules napkins must always be put over bottles when they are carried about the ward.) I asked a nurse, and after a perplexed moment or two she gave me a dressing cloth out of the bag where these are put after they've been used. I raised some objection but she only continued her work with the exclamation, This hospital!

* * * *

Several points about these urine bottles and system that is worked worry me considerably. For one thing although the bottles look plenty large enough, in practice it isn't so. I've had the experience of having to wait after asking for a bottle, and then, when it has arrived, filling it to overflowing—and that without completely emptying my bladder. I believe nearly all men hospital patients have had this experience. One of the troubles is that when things are busy, any period from a few minutes to half an hour or more, may elapse between a first request for a bottle and the time when it is delivered to you; consequently dread of not being able to

get a bottle when the need is urgent affects nearly everybody. I should say it attains the dimensions of a temporary neurosis. Most patients try to get over it by the practice of asking for the bottle (preferably from some patient who can get about) long before it is actually required. They then keep it hidden in their beds and no doubt feel relieved from quite a lot of nervous strain. But the consequences are disastrous in the long run, as it will happen that every bottle that the ward has available is hidden in this way; and it may become the reason for the delay in the case of an urgent request—the nurse simply cannot find a bottle available. It strikes me, by the way, that most nurses require some instruction about the different holding capacities of the male and female bladders.

* * * *

I don't know why it is the rule that no bottle, empty or full, may be carried about the ward without its covering napkin. I suspect, however, that it is just a piece of genteel humbug. The practical results aren't happy ones anyhow. Fresh napkins soon become damp from frequent spillings; some become almost saturated; yet they continue to go from bed to bed, and are handled by patient after patient. And in the sluice room the bottles are emptied, rinsed in cold water, and are then regarded as ready for fresh use. I must admit, however, that bad though the napkin system seems to me, it has advantages over the system that is worked in some hospitals. I have experienced bottles that were clad in tight little jackets, buttoned on. The effect is *most* genteel, but it doesn't do to be curious and undo a few buttons—the interior of the bottle may be in a filthy condition, as likely as not green with slime.

* * * *

The other day I heard one patient tell another that he had been feeling his wound. It felt as hard as bricks, he said. These days it is quite easy for a patient to do this—he has only to lift up the sticking plaster. It is only to be expected too, because everybody knows that fingers go naturally to investigate any part of the body that is in a morbid condition. I've noticed that doctors are no exception to the rule either —for all their training they often cannot resist the temptation to prod with their bare fingers at an affected part that is shown to them. The curious thing in hospital, however, is that no preliminary warning by the nurses seems ever to be given. I have never been warned myself, nor have I ever heard anyone else warned. And when you think that these exploring fingers have probably been in contact with damp

bottle-napkins (just to mention one thing) it does make you wonder.

* * * *

The nurses have no 'time' in this place—that's quite obvious—but even if they had they still wouldn't have the equipment. A young fellow has been telling me an amusing story. He was required to supply a twenty-four-hour urine specimen. He started off at 9 a.m., using an old enamelled bucket that had been sterilized, and was to be kept under the sink in the sluice room. But each time he went to the bucket he found it empty. He asked the nurse and she said not to worry, no doubt sister was collecting the specimen from time to time. Late in the evening, however, he noticed the sluice room floor was wetter than usual. It was too bad, but it turned out that his specimen so far had all leaked away. A fresh bucket was provided and he began again; but when the sister came on duty in the morning she said a twenty-four-hour period beginning in the evening would finish up when the lab was shut. That was no good, so he had to begin again, using an old enamelled jug this time. But about mid-day he discovered the jug was leaking. The sister, however, would have no more fresh beginnings, she just stood the jug in a basin and let it leak. I asked him what they did with the specimen when they got it. Well, he said, I believe they inject some into a guinea pig. I expect there'll be a lot more delay while they're catching the guinea pig, he said.

* * * *

Yesterday the sister told me to take a bath. In the evening, she said. Well, I found the bathroom choc-a-bloc. Several were cleaning their teeth over the bath, and two who had petrol burns on their arms were taking off their dressings. Look out, one of them said, and as he pulled the dressing away he let the pus drain off his arm into the bath. There was plenty of it too. I went back later on and had my bath out of a basin—the least cracked and chipped one I could find. And I tried hard not to imagine what it had been used for last.

* * * *

Believe it or not, but the nurses have to provide their own matches for lighting gas rings, etc.

* * * *

You would imagine that a hospital would be about the last place where an essentially *superficial* order, cleanliness, and tidiness should be rigidly enforced. Yet this is exactly what happens. It apparently doesn't matter about the peel-

ing walls, the battered and chipped enamel utensils, but it does matter that you should have your shaving brush put away off the top of your locker when the matron is likely to come round. I imagine that much of this petty discipline derives from the semi-military origins of the whole nursing box of tricks. An inspection by the matron is, in fact, a military inspection. The time of her arrival can usually be quite accurately anticipated, and instead of the important things, she sees only the carefully arranged surfaces. First things aren't first, because that would require a system of humane and friendly co-operation. It just doesn't exist.

* * * *

This type of military discipline is even more pronounced in the relations between nurses and doctors; and junior doctors and senior doctors. An Honorary walks in the door and the first nurse who spots him drops everything she is doing, no matter how vital—to life very often I should say—and attends him like a faithful aide. The visit of an Honorary can, indeed, be ludicrously pompous. He may be short and fat, and he'll proceed slowly up the aisle between the rows of beds, his head in the air, his hands behind his back, his knees rising and falling as though he were stepping over a series of logs. And behind him come the faithful aides—the house doctor who calls him sir, and the sister who apparently never presumes to open her mouth unless spoken to. And then the bedside manner, so aloof, so brief, so . . . But I musn't be unjust. It doesn't always happen this way.

* * * *

How much of the good that they can do for you here is cancelled out by lack of sleep? That seems a question to me. You doze off and on during the night, and also after the midday meal, but I doubt whether anyone ever really sleeps. Except perhaps towards morning because of a state of complete exhaustion—but any time after 4 a.m. it's wake up and be washed. Of course at night you're offered ' something to make you sleep.' Personally I never accept. Whatever it happens to be it either doesn't act or else it makes me sick. A cup of hot milk is the best thing, but although the supply of drugs never fails, the supply of milk frequently does. Then it has to be borrowed from another ward, and usually there isn't the ' time.'

* * * *

Nurses, by the way, are most surprised when you don't respond to the drugs. They give a patient an injection and tell him to go to sleep and it doesn't happen. What, they

say, you're still awake. Now you just close your eyes and *try* to go to sleep. And later on there's another injection and more exhortations to *try*. It looks like bad medicine, it's certainly bad psychology.

* * * *

Being in hospital can almost be summed up in one word. Constipation. I imagine that given the food that suits them, most people would have no trouble. I know I wouldn't. But it's drugs here, not food. 'You're in hospital now,' as they say. Yes, and that means you spend twenty-four hours a day stewing in constipation in spite of the drugs. Hence the transition from the drug to the enema. The Lady with the Lamp is an obsolete piece of symbolism these days. It needs to be replaced by a figure resembling the Statue of Liberty—with an enema-can substituted for the torch.

* * * *

It really is very bad to have any knowledge of what they do to you here. A day or so ago they took away a blood sample from me; and now the sister has just been and added something to the file that hangs on the wall behind my bed. I intend to have a look at it when I get the opportunity, but I'm scared stiff because I know I shall find out about my Wassermann reaction.

BLOAT IN COW AND MAN

I put cow first because the disease is common in cows and not in man. (Cows first is a common order in New Zealand, a fact confirmed daily when I see our children, and our mothers even when pregnant—' well pregnant '—in the milking shed.) Bloat is often fatal in cows but not in man unless . . . . Cows develop it when there is a flush of feed; a strong growth of clover in the spring is a frequent cause. The name ' bloat ' is an apt one; they become bloated, blown up with air. So far this is all quite clear but at this point a mistake, a very foolish one, is made which is serious because it means the loss of hundreds, yes thousands of our cows annually. (When I think of those mothers and children, a good thing too!) This is the crucial fact I want you to grasp: the fine pure air of New Zealand rural districts is swallowed by the cows. Air is not formed in the cows' stomachs by the fermentation of clover acting as a gas generator. (One might guess that it comes on far too quickly for fermentation to have developed.) Here is the explanation: The cow gets violent indigestion and keeps on ' swallowing its throat '— (cows are stupid brutes)—and blows itself up just as one does a toy balloon, and just as an over-blown balloon bursts, so does the cow and that's the end of the cow. ' It's a cow,' says the farmer, but it's his fault really, not the cow's.

The cure is a very simple one, and a very good one for it always cures. Here it is: A tea-tree stick about the thickness of your wrist is inserted into and across the cow's mouth and tied tightly with a rope over the top of the head. It acts as a mouth gag and prevents the cow swallowing any more air. It cures the cow quickly and, I repeat, it never fails unless the cow is *in extremis* when found. Surely this is better medicine than sticking an atrocious looking weapon (I see them advertised in the papers for this foolish purpose), blindly into the cow's innards, hoping to let out the air of New Zealand, which of course it can't do. I learnt this when a medical student in Edinburgh from Professor Wylie, son of a Mid-Lothian farmer. He knew a lot about cows but lectured unfortunately on clinical medicine.

Human beings, almost invariably of a neurotic type, behave sometimes in just the same way as the cow in clover does. They get indigestion and swallow air. It becomes a habit with them and you can see them doing it if you

watch: 'swallowing their throat' repeatedly, blowing themselves up and getting more and more uncomfortable and sometimes becoming very alarmingly ill indeed. I have seen such cases admitted to hospital as 'acute abdomens' and very narrowly escaping the fate of the poor cow treated with the atrocious-looking weapon mentioned above by treatment with a very much similar weapon. Although no patient of mine has been so unfortunate, thanks to the son of a Mid-Lothian farmer, I suspect that some poor unlucky one, under the care of a surgeon who has not had the good fortune to listen to the son of the Mid-Lothian farmer, has. In the case of a human being I use a cork tied with string between their teeth. I have frequently done this with complete success. This condition in a mild degree is more common than is usually suspected. The extreme case is exceptional but I have seen quite a number.

It may be that the correct treatment of bloat is known in some parts of New Zealand, but it wasn't in North Auckland. Whether it is known in New Zealand hospitals or not I do not know. I know it was worth while letting the cow farmer know about it and maybe I kill two birds with one stone. If so I am indeed satisfied.

By the way, the swallowing of air in acute lung conditions and in heart cases is an important observation that is not generally recognised. Here again exactly the same mistake is made by the physician as the cocky makes about his cow, and the result may be the same.

THE COMPLEAT PLUMBER

This bill was sent me many years ago, and unlike all other bills, never forgotten. Recently it intruded in my reveries, took new shape and importance.

TOM BROWN, PLUMBER.

dr.	Man and Boy, finding the smell (2 hours)	15/-
	,, curing that smell	17/6
		£1/12/6

To that compleat plumber and his boy I am indebted for notions rather than to the young intelligentsia of today, who find the smell and leave it at that.

Listen to the modern poet:

Let us lie once more—say 'What we think we can
The old Idealist lie . . . .'

MACNEICE.

And elsewhere:

But the old guard are too strong for us
Our uniformed fears, our instincts our conventions
Always ready to deploy on every landscape
Preclude all shelter in the Wanton Woods.

MACNEICE.

Another sings: *Mother is always wrong* (Auden).

They detect the smells—then run away holding their noses mentally, some of them physically, to America. Now listen to Professor Collingwood's* protest, showing the implications of the philosopher's withdrawal and refusal to participate in our efforts to form the New Society.

'Since one must not seek it from thinkers or from thinking, from ideals or from principles, one must look to people who were not thinkers (but fools), to processes that were not thinking (but pass on), to aims that were not ideals (but caprices), and to rules that were not principles (but rules of expediency). If the realists had wanted to train up a generation of Englishmen and Englishwomen expressly as the potential dupes of every adventurer in morals or politics, commerce or religion who should appeal to their emotions and promise them private gains which he neither could pro-

*Professor of Philosophy, Oxford.

cure them nor even meant to procure them, no better way of doing it could be discovered.'

He almost alone of the philosophers realises, and unlike our poets suggests and offers help. He is the philosopher like my plumber, 'compleat.'

Birth to us is the utterly unexpected thing.
We have long grown used to death;
Death accidental, on screen or dirt-track,
Death deliberate, self-inflicted or in the air,
And we know that we all and this all must die,
But children are unfamiliar and revolutionary,
Children awake, crying for their living,
Asleep, endure, tire, change
Under the stairs in an air-raid.
In a crowded public-house in occupied territory
Where there was no room for anybody extra
And rations were scanty,
Aroused by the fires, the barrage, the bombing,
The soldiers, the Gestapo, the angels concealed in the crowd,
Some dazed and bemused mechanics
Found Him and her at midnight
When they lit the candles in the underground shelter
On the trestle table, for their Christmas communion.
And that was how they began all over again,
After the dark road, that led
To a dead end, saw
Light under a door.

GEORGE EVERY, S.S.M.

Chapter 14

MODERN MIDWIFERY

'I would willingly give something to reason as well as custom. I would be its humble servant, but not its slave,' wrote Edmund Burke—and, note that he was young when he wrote it. I quote this only for my own guidance, a private discipline for my private world to prevent my attack on custom being pressed home too far. Conscious of my impertinence, I desire to lessen it.

If you say the old is better, I don't agree, but if you say the old is needed, I agree.

My approach to midwifery is that of a surgeon interested in Sociology and the New Economics, who refuses to obey the taboos. I have taught myself. What I learned as a student I have spent my life trying to forget, struggling against my inhibitions. It was very bad midwifery indeed, and, alas, much of it is still taught and practised. Midwifery is still the backblocks of medicine. I have never read a really good midwifery textbook. I have read many bad ones, although I am prepared to admit that these books have the same qualities as the curate's egg. But the famous egg was bad; the curate made that perfectly plain.

The explanation is that most doctors, disliking midwifery, instead of being parasitic on their own experience, accept custom as always right, practise bad midwifery, and write bad textbooks, smelling of a dead past.

Few obstetricians die too young, most too old. I am rather a theoretical, almost philosophical (not surrealist, note) midwife. I talk and write a lot about it, but I keep away from the actual scene of action as much as possible. To be perfectly candid, a normal confinement, calling for masterly inactivity, rather terrifies me. I am continually amazed at the calmness and control of the nurse midwife in charge—taught, by the way, by myself. My surgical soul cries aloud for a perfectly planned and perfectly conducted caesarian section in all cases. It is so much simpler, a far straighter, more direct route into the world for the child, and so much quicker and cleaner. I am not the least interested in R.O.A., R.O.P. or R.O.T.'s; these magic signs of the midwife's ritual are to me a complete mystery.

Twenty-five years ago I could never tell an anterior fontanelle from a posterior or vaginal examination. Then I thought I was stupid; now I know I was honest. I always hedge even on the question of twins, but, if pressed, I consult and quote my most junior nurse. In spite of these confessions of ignorance I am a good midwife, as midwives go. By defying custom and dogma I believe I have embraced reason. For although in the early study of midwifery dogma and rigidity may have been needed, as knowledge increases flexibility is essential to progress.

Our methods are popular. We have requests for beds from all over New Zealand. We could get twice as many cases if we had sufficient accommodation. The Maori women who used to prefer to stay at home now all want to come to hospital. They love painless childbirth—think it a great joke.

As usual, there is a snag, serious to some but not so to me. As doctor in charge I get no credit. Seldom if ever do we read these delightful little notices, 'Thanks to Dr. ———' (There was one such notice, however. It read as follows: 'On the 1st April, at Rawene, to the wife of ———, a daughter, stillborn, thanks to the staff of Rawene Hospital.') The credit apparently all goes to the hospital and the nurses, I simply don't appear in the picture. Actually I am pleased, for it means trust in the co-operative institution and not in a single individual. This recognition of the importance of the co-operative institution indicates a dawning of intelligence in the public. I believe that medicine will never be

safe for the sick till this recognition is universal; and later in the book this will be discussed more fully.

ANTE-NATAL TREATMENT

The State maternity service has brought about great changes in ante-natal behaviour. Women are certainly demanding their pound of flesh. One gay young bride kicked me out of bed at 8.30 a.m. to inform me that she was going to have a baby. When asked when did it happen, she blushingly faltered, 'Last night.' I asked her why she had not come sooner, and succeeded in offending her so badly that I never saw her again.

I am a very busy man, and I find it shortens the first interview if I get in first and tell them very emphatically that the most important thing is to write to Matron at once and engage a bed, giving dates and all particulars. This is very, very important. I repeat it. If it is not done at once they will not get a bed, there is such a run on our hospital. I tell them to count 280 days from the first day of their last period, but never on any account do I make the calculation for them. They have more time, I say. There is a reason for this. Also they must write at once to the rest home, a private boarding-house near the hospital (this is very important), and reserve accommodation for a week or two weeks (depending on the circumstances) before confinement. If they don't write at once they will be too late, and they must not on any account come into hospital to labour, hot and bothered from a motor journey. The success of our methods depends on this. A hard-working woman needs a holiday, a rest, for two weeks previous to confinement. We advise them to eat plenty animal food, lots of meat. We promise them a completely painless labour, if they obey instructions. Unless anything alarming happens, I don't want to see them again till their sixth month.

Experience has taught me you can't protect people completely, and the best you can hope for is to limit their follies. They can, if they like—I have no objection—do all sorts of other things, and swallow all sorts of vitamins, hormones and special foods, provided they don't interfere with our food instructions being carried out. This is usually the end of the palaver.

At the end of the sixth month they turn up again. I tell them about the weekly specimen with their names and addresses in a securely corked bottle. I talk quite a lot about corks, especially after one woman who arrived at my consulting rooms with a specimen, destined for a thirty-mile

trip on rough roads, in an ointment pot with no lid, but covered with a loose piece of paper; she was hurt, I know, at my refusal to accept responsibility for safe transport, and at my sending her home to try again, this time in a properly corked bottle. I explain to them there is no need to call next day to find out if it is all right. If there is anything wrong they will be notified. If I don't, they will call. One—I was particularly busy, and many patients were waiting—called simply to express indignation; she had sent four specimens (splendid ones), and had had no acknowledgment of receipt from Matron; I advised her to send the next one by registered post. (My object in going into this trivial detail is to acquaint people with a doctor's work under a State medical service.) Not all are troublesome; some are exceedingly considerate—most, in fact.

The frequency of their subsequent visits, of course, depends on circumstances. I have no fixed rules. We carry out the usual blood-pressure investigations, of the importance of which, from admittedly limited experience, I am exceedingly sceptical. The really important ante-natal work, in the large majority of cases, begins when the case arrives at the rest home. We casually tell them to call at the hospital and see what is going on when they are out for a walk. So they usually visit the hospital nearly every day. They have nothing else to do, so it does not matter if they are kept waiting. We will see them if we have time; if not they will come again. What we really want them to come for is to see and talk to the women who have just had their babies, who have never felt any pain at all and who feel and look well. Nothing encourages them so much and allays any fear. They may be sceptical of the truth of our statements, but the assurance of women who have just gone through the experience is very convincing.

We have no special ante-natal examination room. We don't fill in any elaborate charts, and we don't waste time by continually taking their blood pressure and making elaborate abdominal measurements (mostly of no significance at all) in obviously normal cases. Not being a training-school, we are not subject by regulations to a ritual. We have no special staff. Actually midwifery is but a sideline.

I hasten to add that, if we have reason to suspect there is anything abnormal, we take a very great deal of trouble and become very fussy.

We believe that the elaborate and, I am certain, very largely useless procedure that women are subjected to in some ante-natal clinics is alarming and often very unsettling in-

deed. The investigations are often made by an unskilled staff, working without proper supervision. It is wrong to assume that by adopting ritual you can safely substitute ignorance for knowledge. Filling in forms! Filling in forms!! Filling in forms!!! These forms are quite the most 'out-size' in forms I have ever seen. Except in a training school, it is absurd to subject all cases to an upsetting routine which is only of value in the exceptional case. The plea that you never know unless you follow the whole routine is not a good one. Experienced, properly trained, and careful people do know. We know. If I insisted on my staff spending their energies on useless routine, I would destroy all their enthusiasm and fail to get them to make the special observations we want. When the filling in of forms and the technique of centralised control are used as a gauge of efficiency, the result is inefficiency. Clinical records of individual cases showing positive facts are, of course, of value, but the elaborate recording of negative facts is useless.

The unusual and rare case must always be carefully recorded, for only thus can we get, in time, sufficient numbers to allow us to generalise about rarities. In some respects our records are deficient. Our excuse is that we are trying to do special work which we believe to be of value, and we can't do both. Like most people, we do what we like best. I am fully aware of the importance of statistical figures, but, to be of value they must be accurate. The hopeless inaccuracy of death certificates, due to the infrequency of skilled (or indeed of any) post-mortem examination, plus ignorant doctors, must tremendously vitiate mortality investigations, especially in a country with a small population.

For that reason I consider that there is a type of investigation, misnamed scientific research, which should not be bothered with in New Zealand. For example, research of a statistical nature on a subject like toxaemia of pregnancy is largely futile, and very annoying for the doctors who have to fill in the forms to supply the data, unless there happen to be some special facts peculiar to New Zealand. Our population is too small, and our trained observers are far too few, to allow of work of that nature of any importance being carried out; still worse, it may be misleading. An exception, of course, must be made if our figures are required for a world-wide investigation. Nor can we afford to carry out confirmatory investigations. Let us leave that to older countries. We have work for our scientists to do, but it is different work. I appeal for simplicity in routine records,

an appeal to reason. Only by a proper appreciation of the problems can we attain that simplicity which is so indicative of truth and so convenient.

To sum up, all women should have a rest holiday previous to confinement. Every effort should be made to convince them that childbirth is not necessarily painful, disagreeable, or dangerous. To attain this object I consider that the midwife's style of approach should be apparently casual, but actually careful.

New Zealand requires more population, our politicians say. I agree with them, but for quite different reasons. (I say a bigger selection might give us a chance of getting better politicians.) Modern women are shy breeders; they do not want to do anything so childish as to have a child. We can help by making childbirth more attractive—or, rather, less repulsive.

We don't always succeed in getting them into the right frame of mind, but I think we banish fear, which is the most important thing of all. The folly—or, possibly that is too unkind a word—the strangeness of mind is almost incredible in some. They like being helpless, want to be unwell, want to be fussed over. I suppose it makes them feel important. They sometimes sorely try the tempers of those who want to please them.

Wanted, and wanted badly, is some method of bringing on labour when you want to. It would save no end of trouble. A woman often gets bored with loafing about the rest home for weeks if she is perfectly fit. Primipara are the most troublesome. They are often wrong about their dates; some of them are still in love with their husbands and object to the separation. We have tried the recognised methods of induction, but they are so upsetting and so often fail. If they fail, the patient is more upset than ever. My staff has quite decided that, taking all things into account, it is better to leave them alone.

CONFINEMENT TECHNIQUE

The patient is given a bath unless she is too far on. The time-honoured castor oil is dispensed with. (It is still given in St. Helen's Hospitals, an essential part of the ritual, a purgatory with emphasis on purgation. Good for their souls, possibly, but bad for their bodies, I know.) No enema is given, nor, in my opinion, should be given. Although orthodoxy has yielded in some hospitals about the castor oil, they won't give up their ritual enema for quite a while yet.

We know what any surgeon accustomed to rectal work knows, and what many generations of midwives should have known, that it is far better to leave the bowel alone unless you can be quite certain of getting the whole colon empty, which, of course, the single ritual enema to a woman in labour won't do. The rectum is normally empty. The enema simply brings down the normally soft faeces, more liquid than ever, from the colon. By omitting the enema there is much less mess. Sisters with St. Helen's experience amply confirm this observation. Just the other day, a recently trained sister pointed out that, if the faeces do come in the non-enema case, it is not the fluid enema consistency that runs over everything.

The enema disturbs the patient and prevents the nembutal and hyoscine getting that small start from pain which is an important item in our special method. It also saves 'nurse-hours.' (I would like to fly a banner from our flagstaff, 'No Enema Hospital.') The number of unnecessary enemas given in most hospitals is astounding. Casual nurses have remarked on the fewness of ours; 'It is the best thing about your hospital.'

The patient is shaved. Twenty-five years ago I received a letter from the Public Health Department saying that the shaving of women previous to confinement was contrary to the policy of the department; it was immodest, calling for an exposure of privates distasteful to New Zealand women; and it must be stopped in Rawene Hospital. I filed that letter and went on shaving. I have fought some strange fights.

Brilliant Green in spirit 1% is poured over the external genitals. No pad is put on the vulva; it just gets loose, and, when replaced, contaminates. Anatomically, a woman's labia is protected from contact with bedding or a skirt. Rubbing in Dettol cream is an alternative technique, and possibly the antiseptic stays more put.

The nembutal is then given in a cup of milk. We now give nine grains, instead of six, as the first dose in most cases. Also we give the hyoscine sooner. The larger primary dose is an improvement. It has lessened the incidence of restlessness very considerably. Apparently drugs get a better chance to get the patient under before the pains get severe. If the patient does not go to sleep, we give her a little ether by our own closed ether technique. Today, I have seen a case delivered during the night, who in two previous confinements, using the smaller dose and the delayed hyoscine, was terribly restless, in fact one of the worst we have ever seen. This time she was hardly restless at all, but she was

noisy, a very unusual and very upsetting incident in our hospital, but usual in other New Zealand maternity hospitals; I was greeted by a host of complaints.

Another recent and very great improvement is the use of the surcingle (belly-band), made of folded waterproof canvas, four inches wide and sixty inches long, with a leather strap on one end with numerous holes, and a buckle on the other. The canvas part is long, and the holed strap is long. It goes right round the whole bed, over the woman's chest. It is enclosed in a jaconette cover, easily removable for washing. It is kept quite loose, so that the patient can wriggle but not over wriggle. She is not tied down, but she can't fall out of bed and she can't get on her hands and knees as so many Maori patients do. Practically all Maori women, and many half-castes and quarter-castes, when under nembutal in childbirth, try to get on to their hands and knees. I have never seen a pure European doing it. Recently a sister, in great triumph, informed me that this observation was wrong. Mrs So-and-so did it, referring to a woman who looked like a pure European. I was able to inform her, however, that Mrs So-and-so's grandmother was a pure Maori; I knew her well. 'Genes' wont be denied, in spite of what the behaviourists say.

We tried two surcingles first of all, but found the one over the legs a mistake. The 'watcher's' work, thanks to the surcingle, is considerably relieved, and the nightmare of a patient falling out of bed and hurting herself is gone. It is still essential, in spite of the strap, never on any account to leave a nembutal patient alone while in labour; she just might get tangled up somehow or other.

The bed, which is on wheels, is kept in the corner of the room up against the wall. Ample pillows are used to prevent the patient hurting herself by hitting the wall when restless. The room is kept absolutely quiet, and the patient is not touched unless it is absolutely necessary. Touching brings the same reaction as a labour pain—a wriggle, and sometimes, in restless cases, an elephantine one, calling for considerable effort from the watcher, who quickly, for her own comfort, learns the importance of 'not touching.'

I notice that nurses vary. Some have almost an aura of disturbance about them, others an aura of peace.

Cases vary tremendously. Some lie like logs and you can hardly detect the pains. Others can be very restless and troublesome, but the alterations I have referred to in our methods have improved our results very much in that respect.

The attendant is in gown, mask, and gloves, and sits in an armchair close beside the patient. She has a small table, on it a bell, a watch, a writing pad and pencil for notes, her novel or paper, her knitting or sewing, and her equipment for registering the pains. Without getting up from the chair she can usually, thanks to the surcingle, exercise all the control needed in restless cases.

The pain register consists of three pill boxs with 'depot' tins containing peas, wheat, and maize. The nurse records each pain by putting a grain into the box—a good pain, a pea; a small pain, a grain of wheat. After the membranes have ruptured, maize represents the good pains. Each hour she counts the pips in the boxes and records it in her note-book (ruled to represent hours), empties the pill boxes into the depot tins, and starts again. She also notes the degree of restlessness, repeat doses of drugs, bladder details, amount of milk drunk, pulse rate, and any other observations of interest, such as increase of saliva, open mouth, etc.

At a glance the midwife can interpret progress. This is much superior to the usual report given by a nurse, of good pains or poor pains, and a time report of hours of labour. Increase or decrease in pains is accurately recorded by our method, and it can be done by anyone capable of shifting grains from one tin to another. The prospects of birth depend on the number of uterine contractions, and not on the hours of labour. In a primipara, after a hundred and fifty pains counted from the rupture of membranes, if the perineum is not beginning to bulge we suspect some abnormality, and investigate.

No vaginal or rectal examination is ever made in the normal case. The privates are kept private and not uncovered except when absolutely necessary. The horrible and dangerous habit of continuous perineum peering (often without mask or gloves, even in the training schools), is not allowed. The ideal would be to keep the patient covered during the whole confinement, and never to look until the baby's cry is heard. The 'bed flop,' a crime of the first magnitude in St. Helen's, calls for commendation here.

At this stage in my description I make a definite assertion, and I make it advisedly. Here it is: The obstetrical technique taught and recorded in text-books and pamphlets, and practised in our training schools for doctors and nurses, cannot stand up to surgical criticism, based on modern accepted surgical observations. My assertion should not provoke indignation or surprise if we read and realise the significance of the numerous articles published in the latest surgical lit-

erature, headed, for example, *War Wounds Infected in Hospitals*. It does, however, call for investigation by those in authority, rather than complacency. Exactly the same principles are applicable to obstetrics as to casualty surgery. The surgeons have got a shock. I want the obstetricians to feel that shock, and badly. Our technique is simply an application of ordinary surgical principles to obstetrics, and we have practised it for twenty-five years with only slight modifications.

Continuing my description: Continual swabbing, often with irritating antiseptics, is not in keeping with modern surgical practice. Some even open up the labia. (I will discuss this crime later on.) The only swabbing we do is anal, and, as already stated, if the ritual castor oil and enema are omitted, this is seldom needed. Vaginal discharge we leave alone.

Perineal peering without a mask is undoubtedly dangerous. Rectal examination, contrary to general opinion, is little if any safer than vaginal examination, for this reason: the examining finger pushes the vagina right into the 'os,' which normally it does not contact. If there are pathogenic organisms in the vagina, and there often are, you simply innoculate the uterine cervical canal, which is usually torn slightly, and which is normally closed and so protected. I believe that this observation can be justified from the findings in some of the large clinics, where the morbidity incidence with and without vaginal and rectal examination has been compared.

The repeat doses of nembutal are always given in milk. In long cases we try to get them to drink milk every two hours; some drink large quantities. The reason they drink is that nembutal makes people very thirsty. Very few cases vomit, only a small fraction of those in ordinary labour, or, as we are in the habit of calling it, 'barbarous' labour.

The bladder must be carefully watched, especially with those who drink a lot. We sit them on a pot every two hours. We have found that, although they are deeply under, a pot is much more effective than sitting them on a bed-pan—an interesting example of conditioning. A pot, being the usual, 'rings the bell'; a bed-pan, being the unusual, fails. Usually we succeed and avoid catheterisation, but we now consider that the need for catheterisation is greater than in barbarous midwifery. The large quantity of milk drunk has something to do with this. This is a disadvantage. In spite of care, bladder infection may occur. We always give them 693.

Recently we have observed that hyoscine given shortly before the birth makes the baby more limp. We don't think it dangerous, but it should if possible be avoided.

When birth is imminent, the bed is taken into the labour room and pushed up against the labour bed, which is slightly higher. Then one nurse from the opposite side of the labour bed keeps pressing the two beds firmly together. The other nurse rolls the patient from one bed to the other. The first time I saw this procedure a very small midwife with a still smaller assistant were being faced with the problem of getting a fat, unconscious, and rather restless Maori woman, weighing at least seventeen stone, transferred. I kept wondering. To my amazement the 'Roll out the Barrel' technique solved the problem in a matter of seconds, apparently with very little effort. I asked then if they always did it that way, and the reply was, 'How else could we do it? We always roll them.' They were right, for lifting them would be impossible. I turned on my heel, humming a topical song chosen by my unconscious mind, and I knew why.

The obstetric petticoat, which functions like blotting paper, is put on. The patient is kept on her back. She is delivered in this position. Brilliant Green is then poured over the vulva and parts. The Cyllin lotion preparation with its vigorous rubbing of the labia, the recommended technique, is bad, very bad indeed. The lotion is irritating, a feeble antiseptic, and removes the layer of Dettol paste, a strong antiseptic which is protective. Nurses who are compelled to put their naked hands and arms, after vigorous scrubbing with a hard brush, in this lotion, ruin their skins. They spent most of their wages on skin cream, they tell me. Cracked and irritated hands are themselves a source of danger. The 'one glove' technique is absurd. You can't put on a single sterile glove, keep it sterile, or resterilize it with a strong antiseptic, without the use of the other sterile gloved hand, except by some very complicated method.

The midwife, having prepared her hands, puts on sterilised gloves, gown, and mask, and gets her perineal suture and other essentials ready. She has a really sharp pair of scissors in waiting in carbolic lotion, for cutting the perineum. She drapes the patient and bed with sterile towels. She does not support the perineum or make any attempt to increase flexion. Nor does she subject the patient to a brutal squeezing of her abdomen as is so often done. (That must add to the shock.)

Whenever the head appears, the midwife presses on the

foetal part (which won't return into the vagina) with her finger, and notes the condition of the child's capillary circulation. This is a much more accurate and convenient measure of the baby's general condition than listening to the foetal heart. (I have never heard one), or even feeling the pulse (which of course you can't do). Surely this is the obvious way of finding out if all is well with the child? A slowing down indicates at once circulatory embarrassment. It is so easily done; and the extraordinary thing is that this simple, accurate, and obvious method is not taught. I have never seen it mentioned in a text-book or medical journal, and I have never pointed it out to a nurse or doctor, old or young, who did not express surprise, and wonder why they had never thought of it or been told of it. I know the reason—ritual, which blinds us to the obvious, and turns us into unthinking parrots. When delivering a breech and wondering if you dare leave it any longer, this test is invaluable.

Recently I had the experience of a very small primipara with an impacted breech with extended limbs. I tried in a variety of ways and with a variety of tools to get the legs down, and failed, but succeeded in fracturing a femur. This took such a long time and it seemed hopeless, but, on testing the capillary circulation in the way I have described, it seemed all right. As quickly as possible I applied axis traction forceps on the breech. (I had never done it before, and I don't think I knew if anybody else ever had.) I cut the perineum as far as possible, and succeeded in extracting a live child, much to my surprise. Unfortunately I nipped the scrotum, in my haste, in the joints of the forceps, and found the testicle dangling free by its cord. I removed it, tied the cord, and stitched the scrotal wound. The fractured femur united with a perfect result. The child is alive today, twelve months old and walking. (These fractures apparently require no fixation; splints are useless. I have seen one other fractured femur in an infant where nothing was done, and the result was excellent.)

On consulting the literature, I find that forceps on an impacted breech is not recommended, but has been tried. (I have tried it since on another extended breech in a primipara, and failed; the forceps would not stay on.) The child's life, in the case described, was saved by using the capillary circulation test, and discovering that it was still alive in spite of the violence it had been subjected to. The use of forceps, with extensive cutting of the perineum, is the only way possible of delivering such a case alive if you fail to get

the limbs down.

Capillary testing also does away with the sepsis-inviting habit of pulling the cord down over the child's head, when it is around the child's neck. Although the cord is coiled several times around the child's neck, there is no danger at all of asphyxiation. The only possible danger is a short cord actually holding the child back, and the possibility of tearing it. I have never seen it happen, but I know it does.

To resume my description of our usual technique: If there is delay in the perineum, or if it obviously has to tear, we cut it in the mid-line for three-quarters of an inch. The mid-line incision is better than the oblique incision, it is easier to stitch accurately. 'To save it, cut it,' as a slogan or rather as an S.O.S., is good midwifery. The fetish of the intact perineum and the 'disgraceful tear' of our training schools has been responsible for much bad midwifery. I wrote of this at length in my first book. I repeat it, it is so worth while saying. The folly of imagining that you can support the perineum with the flat of your hand is an insult to the meanest mechanical intelligence. The damage to the perineum and other parts which matter is from excessive stretching and bruising, brought about by long continued pressure in long and tedious labours. A tear, if stitched, heals quickly and completely, and, even if not stitched, does not seem to matter. The tear is not responsible for a rectocele or cystocele. Nor is it the cause of prolapse or other displacement. The great rarity of prolapse and other displacements in Maoris compared with Europeans, noted during twenty-six years of practice, here supports this contention. Maori women don't have their torn perineums stitched (except in hospital), and they tear just as much as Europeans do, we know.

We never allow a head to loiter on the perineum more than two hours. Forceps can be used on these cases easily, safely, and quickly, and should be used. Inserting the forceps blades without the guiding hand lessons the risk of sepsis, and causes no pain. An anaesthetic is unnecessary, unless the patient is so restless that her resistance makes the application of forceps impossible. Sometimes, if the delay is due to a lack of pains, a small injection of pituitrin will start the uterus contracting sufficiently violently to expel the child quickly and so avoid the use of instruments. It is only given to robust women who have not had many children.

Immediately the child is born, and before the placenta is

expelled, we stitch the perineum if need be. We use silkworm gut in a large needle with a good curve, and make certain that we include the whole depth of the tear and not simply the skin. I now never use buried catgut sutures, even in the most extensive tears. If the silkworm gut is put in properly, you can get perfect apposition the whole depth of the wound. The stitches should be cut long, three inches. It prevents them ' sticking in,' and they are more easily removed.

We leave the uterus severely alone. No kneading or squeezing or rubbing. We watch the amount of blood lost, and the patient's pulse. We keep her lying on her back, and on no account shift her on to her side at this stage. Recent literature points out the danger of haemorrhage in the lateral position if the conditions are favourable. If we see any signs of excessive bleeding, or if the woman has a history of previous haemorrhage, we give her an injection of Ergometrine intramuscularly at once—and, note, before the placenta has been delivered. The dogmatic statements of our textbooks that ergot preparations must not be given until the placenta is delivered (I noticed it given as a test question in a midwife's examination paper recently), is wrong, and in my experience deprives us of the most important use of what I think is one of the most valuable drugs made available in recent years, Ergometrine. The old ergot preparations we used were of little use. Its extraordinary efficiency in doing the job it is supposed to do, was forcibly demonstrated to me when it was administered in a caesarian section. To see a great flabby uterus, oozing blood all over the incision, converted into a hard ball with a dry incision in a matter of seconds, is amazing, and a chemical triumph of tremendous importance.

I venture to affirm that all danger of post-partum haemorrhage, uterine type, can be avoided if the Ergometrine is injected in time, that is, before the uterus gets so slack and distended with clots that its muscles can't contract. Also, if you wait till the woman's general circulation is so feeble from haemorrhage that the Ergometrine stays put at the site of the injection, of course it won't work. (This occurs with other drugs—morphia, for example—in shock.)

Recently I saw a woman, who at three previous confinements and one miscarriage had nearly bled to death, delivered safely without excessive bleeding, by injecting Ergometrine immediately the child was born and before the placenta was separated. We have done this now in a sufficient number of cases to know that the supposed danger is not a

danger. We have, however, seen two Ergometrine cases in which, although the placenta came away in the normal time, the membranes were retained and came away next day. This is of no importance. Retained membranes have never worried me. The membrance retention may have been but a coincidence in these two cases. I want to repeat that, if my observation is correct, I consider the use of Ergometrine is one of the most important advances in midwifery in my time. It is not mentioned in the latest available textbooks, nor taught in the training schools. It is rank heresy to mention it, and orthodox midwives, doctors, and nurses pale with horror—a reaction typical of orthodoxy.

We don't try to remove the placenta for twenty minutes, leaving the patient sleeping quietly on her back without disturbing her in any way, simply covering her with a sterile sheet and watching her pulse. We use considerable traction on the cord; I might just as well own up—we pull it. We think this is better than violent abdominal pressure. I have done this for twenty-five years, and it works well. Fortunately, this time I am not a lone heretic, in fact I sin in the best of company. No less an authority than Munro Kerr, of Glasgow, the eminent obstetrician, pulls too. (See *Operative Midwifery,* Munro Kerr. Latest edition.) The placenta delivered, we pour Brilliant Green over the vulva, apply a pad, and if, and only if, her condition is perfectly satisfactory, we get her into her own bed by repeating the 'Roll Out the Barrel' technique in reverse. If she is not all right, we leave her where she is, till she is, undisturbed and in a mess. Moving a shocked patient is madness unless absolutely necessary. Nurses, and doctors too, sometimes sacrifice too much to cleanliness. 'Making the patient comfortable,' they call it. It is sometimes fatal.

Now there is a point I want to make and emphasise. (My book is worth while if for this warning alone.) It is, the danger of inhalation anaesthesia in a patient deeply under nembutal and hyoscine. Great care, very little anaesthetic, and plenty of air are essential for safety. Chloroform, or chloroform and ether mixed, should never be used, only ether alone with vinyl ether. We have had two frights. In both, respiration became very embarrassed. They recovered very quickly whenever the anaesthetic was removed and plenty of air got into their lungs. Plenty air and very little anaesthetic is needed, I repeat.

POST-NATAL TECHNIQUE

Our midwifery aseptic and antiseptic technique has at least the advantage of simplicity and ease. This is acknowledged by all. It is a saving in nurse brains and nurse-hours. We have altered it very little during the last twenty-five years. To prove beyond cavil that it is more efficient clinically, with less immediate and less remote morbidity, is more difficult, in fact impossible, because the data for comparison are not all available nor always reliable. Unsupported assertion is useless. I claim, however, that our methods more closely conform to sound surgical principles than the orthodox methods. This can be shown.

The odium attached to notification leads not to honesty, but to aspirin. In some government maternity hospitals, aspirin is routine. The habit of taking temperatures in the axilla is suggestive. It takes three times as long; why is it done? We don't use aspirin, and if a sister was found faking a chart she would be sacked, and she knows it. Temperatures are taken in the mouth. If a midwifery case has an abnormal temperature we notify the authorities at once, and without fear. We have had no trouble with infection during the period under review (twenty-five years). I might mention that only one woman has died of puerperal infection in this time, for which we are responsible; this woman had suffered from severe puerperal fever in two previous confinements. The other cases were confined out of hospital, or interfered with outside. Three deaths in all.

A careful study of temperature charts in any general hospital reveals abnormal and quite unaccountable temperatures to be more common than is usually realised. Puerperal women must show similar abnormalities, and we see these very occasionally. Influenza infections are so common that post-partum cases exposed to infection must occur. Recently a post-partum case ran a temperature for a few days, due to cystitis; she had been frequently catheterised; we were of course responsible for that case.

That our good results must be due to the methods we employ, and not to the great god Chance, is supported by the magnitude of the difficulties—dangers, in fact—that we face. Our hospital is a general hospital, and we have no special maternity staff. Half the maternity cases are nursed in a general medical and surgical ward, a ward that practically always has septic cases and often very highly infectious cases of pneumonic influenza (probably a type of Weil's disease) which is endemic and epidemic, in this district, and known as 'Hokianga Disease.' We, of course, take trouble

to locate patients in the ward as safely as possible, and we use screens. Recently I noted two cases of acute erysipelas in the ward.

I hasten to add that, far from advocating this state of affairs, I highly disapprove of it. Working under these handicaps we have to take infinite care. That infinite care does not necessarily mean increased elaboration, but the reverse, is shown by the fact that the nurse-hours required for our methods are but a fraction of the nurse-hours required for St. Helen's technique. We have only the staff of our general hospital, and even that is well below average. All nurses, comparing the actual confinement, after conducting a brutal confinement in the public maternity hospitals of New Zealand and a painless confinement as conducted in our hospital, say they are far less tired, through less physical exertion, and less harrowed, and less anxious, using our methods. We have few registered nurses. The rest of our staff is unqualified. Some have been on our staff for a considerable time and are highly efficient in our special methods. The junior nurses are often exceedingly raw, and, I regret to say, rather a shifting population.

The differences in technique which account for the saving in nurse-hours (factual), the simplicity (factual), and the greater safety (alleged only), I will describe under separate headings.

HANDS AND GLOVES

I think it extraordinary that surgeons have not made use in their technique of the fact that you can with impunity apply to the surface of a glove when on your hand an antiseptic so strong that if applied to the naked skin would destroy it.

Apply this technically: powder your hands, put on your gloves, and immediately rub thoroughly pure dettol (or lysol) all over the glove, cuffs included. Wash this off at a running tap or in a basin of carbolic lotion, one in forty, and you have, in a matter of seconds, sterile gloved hands. Compare the orthodox technique of scrubbing the hands; and then soaking them in a solution of antiseptic weak enough to prevent damage to skin. Unless you scrub for twenty minutes, which is never done, your hands are not sterile, and, even if sterile, when used for any length of time they quickly become septic, rough friction causing penetration of the superficial tissues.

If a nurse has to touch a variety of patients, she can do so with impunity and rapidity using our methods. Using the

orthodox methods, she would spend most of her time attending to her hands, and even then would not be safe. I shudder of what would happen to our confinement cases if subjected to orthodox aseptic methods of maternity hospitals.

Beside each septic or infectious case is a small bowl of pure dettol and a basin of one-in-forty carbolic, also a gown with mask attached. Dettol paste can be used instead of dettol. The disadvantage is that it is more difficult to remove. Gloved hands sterilized with pure dettol can quickly be made suitable for other duties, at a running tap or bowl of lotion. After writing, for example, they can quickly be resterilized when required.

The motto of the hospital is '*Touch not a patient but a glove,*' and it is literally obeyed. Our nurses wear gloves sterilized in the way I describe, between each service, and for all contact services for a patient. They wear a mask and a gown with long sleeves tucked into glove cuffs, and correctly designed, the mask made of impervious material. (Later I describe gowns and masks in detail.) Each nurse has her own gloves in a bag of calico, with her name on it. She is responsible for her own gloves and is their sole custodian. The rule should be that no nurse should even put her nose into a ward without being gowned, gloved, and masked. To do so is to be on duty without her uniform, a crime of the first magnitude.

To the suggestion that such a technique is only needed in a poly-diseases ward such as I have described, I reply that if our methods were applied in those maternity hospitals which are most up-to-date in design and fittings, they would improve the morbidity results, whatever they are, and reduce the nurse-hours very considerably, and give the staff a feeling of safety they can't possibly have using the methods they do. All hospitals should adopt our motto, '*Touch not a patient but a glove.*' I will refer to this again.

Our nurses use the red domestic gloves, as sold in all stores. They can't be boiled. They are poor quality rubber, but cheap. A heavy rubber surgical glove is preferable, but they are unobtainable nowadays. Twenty-seven years ago, I wore such a pair of gloves daily, for six months, and kept them intact, in a busy out-patient department. I developed the technique described above with that pair of gloves, and have used it ever since.

GOWNS AND MASKS

The gowns are made of strong calico, and are of different

sizes. The sleeves are long, so that they can be tucked into the cuffs of gloves, and they stay tucked in. If short, they pull out when the elbow is bent.

The masks are sewn on to the neck of the gown. They are twenty inches long and eleven inches wide, and made of two layers of calico with rubber stitched between, of the variety that stands sterilizing. They tie at the back of the head with two pairs of tapes, the top tapes tie tight, the bottom ones slack. The masks are made big and loose to allow the bottom to act as a tray for spray. The sides are also loose and act as baffle plates, which catch the spray, and at the same time admit ample air for comfort. If the top tapes are tied properly, this type of mask can almost entirely prevent 'smoked glasses.' A nurse on ward duty can slip her mask if she wants to talk and replace it easily.

Surgeons have worn masks for a long time, and the admission (see *'Surgery, Gynecology, and Obstetrics,'* January 1941) that most of them are useless is extraordinary but true. It is commonsense to make them of impervious material, but this is seldom done. Having them attached to the gowns is also commonsense. The only other hospital using sewn-on masks that I know of is the State Hospital in Copenhagen. It is commonsense to make masks large and loose. They are far more effective for stopping spray, and far more comfortable. Most masks are designed by someone visualising only anaesthetic masks, small and close, and very uncomfortable.

It is only recently that the tremendous importance of masks has been realised. The sleeveless gowns are, and should be, considered the uniform of the past. They are still used in some government hospitals in New Zealand.

THE LABIA AND THEIR TOILET

The labia have the biological function of protection. They protect the birth canal from infection. Nature is prodigal, as usual, and supplies two sets, the big and the little labia. They act as valves or shutters, and are water-tight, air-tight, and bug-tight. They are Nature's bastion, and, but for them, all sorts of dreadful things would happen to women, I imagine. As long as the labia are closed, there is no danger of infection. The danger of infection in childbirth begins when the labia open up for the child's exit. The danger ceases when they close after the child's birth.

The midwife's assault on the labia begins when the first vaginal examination is made. It is continued each time this is repeated. Scrubbing with the antiseptic Cyllin lotion is a further assault. Worse still is the insertion of a wet

swab of Cyllin between the labia. 'Perineal peering' (holding the leg well up and abducted), an essential part of the recommended technique, is another insult, for it often means spraying with pathogenic organisms from the nose and throat of the peerer. True masks are worn sometimes, but not always, and not by every individual in the labour room, and these masks are almost invariably inefficient. The 'supporting the perineum' farce is another golden opportunity for bugs from hands of the meddlers, well augmented by spray bugs from their maskless or inefficiently masked noses and throats. Even after the confinement, when the labia have closed and are again watertight and bug-tight, the assault continues, in the ritual known as 'changing and panning.'

That the labia are water-tight can be shown by pouring brilliant green over the genitals, and noting the absence of staining on the red inner surface of the labia when they are opened up. If the labia did not close after childbirth, then most women would become infected.

Till these assaults cease there is bound to be trouble, and aspirin will continue to be used in our maternity hospitals. That the actual mortality rate is not high is because puerperal fever is only fatal in exceptional cases; but the morbidity rate is far too high. In fact we don't know how high it is, but it is certainly higher than it is reported to be. The late morbidity results we know very little about. The violating of the labia, as I have described, must play an important part in this morbidity, if not the most important part. If those in charge of the government maternity hospitals could only forget the old, and think out a new, this morbidity and mortality could be prevented.

OUR POST-PARTUM TECHNIQUE

A properly gowned, gloved, and masked nurse is armed with forceps, a bowl with sterile pad and eight swabs, and a small bowl containing 2% boracic. She uses swabs dipped in the lotion to remove discharge on the outside of the vulva. Then she pours the remainder over the parts, turns the patient over, dries her back, and applies the sterile vulvar pad. Exactly the same technique is employed if the perineum has been stitched. We pay no attention to the sutures. The special technique employed in some hospitals for stitched cases is unnecessary and defeats its object. We never have any trouble with stitches. I don't consider that our post-partum ritual is important, but I can say it is at least harmless. After a few days the mothers are taught to

do it themselves in the same way. I am doubtful if it is any more important than a woman's menstrual toilet. What is important, however, is to realise that nurses attending a number of cases may be a source of danger, and for that reason all precautions must be taken.

The rule insisting that nurses should carry out this ritual for ten to fourteen days for the mother is absurd, and is actually a source of danger in a ward, besides being a shocking waste of nurse-hours. My contention is supported by the fact that the women of the slums and industrial England, living often in absolute squalor, and attended at their confinement by the Jubilee nurses, show a lower sepsis incidence than the cases in the maternity hospitals. These women, in the large proportion of cases, do their own toilet and panning. True, the nurse may visit them once a day, but that can't make much difference if they have to be changed every four hours. It certainly shows that sterile pads are not the essential factor, as these women use any old thing for that purpose.

The Maori habit of getting into a bath whenever the baby is born, and of keeping on getting into the bath daily, is I think a sound technique, and much more pleasant for herself and her associates. At Rotorua the Maori women used to use the hot pools for this purpose, immediately the baby 'came out.' The pools were ideal for this. The large volume of running water made them safe, safer than the most plutocratic chromium-plated bathroom in the world. I recommend that the pakeha women of Rotorua do likewise.

GETTING THEM OUT OF BED

If I were asked what was the most important factor in the prevention of post-partum morbidity, immediate and remote, I would say, 'Getting them out of bed, soon.' Whether they have been stitched or not, we get our cases up on the third day, unless of course there is some special reason which makes this undesirable. We have always done this. I am certain that a stitched perineum heals more quickly and more perfectly if the patient gets up. Nurses from other hospitals, where they keep stitched perineums in a horizontal position for ten to fourteen days, say that our perineums do much better. Getting them up prevents the vagina from becoming a cess-pit from defective drainage. This is probably the reason why perineums heal better. It prevents the patient's muscles, not only her limb and trunk muscles, but those muscles and ligaments of the pelvis which support

the uterus, suffering from the loss of tone and subsequent stretching, caused by disuse. The uterus itself, because of better drainage, more quickly returns to normal size.

We don't see the mythical condition known as 'sub-involution.' We don't need to insert filthy rings to support a prolapsed or retroverted uterus. A good deal of nonsense is talked about the displaced uterus, anyway.

Just a few days ago I was visited by a woman who had been confined in an Auckland hospital, and who had been told to report to me because she had a retroverted uterus which required attention. She had no symptoms, looked and felt well, but she had a retroverted uterus, she said. Her doctor, an old friend of the family, had told her. I tried to explain that she had probably always had a retroverted uterus, many virgins have, and that unless she had symptoms nothing was required. That was no good. To satisfy her, and much to my annoyance, I had to examine her vaginally. (This is the way doctor's time is wasted, doing useless work.) She had a certain amount of retroversion, but otherwise her uterus seemed normal. I told her the truth and tried to make light of it. But she wanted me to insert a pessary, willy-nilly, because the Auckland doctor had told her it would be necessary if the uterus remained displaced. I refused, and she went away dissatisfied, and I am certain she will go to Auckland and get her wretched pessary inserted. The Auckland doctor is not to be blamed, but the fool who taught him midwifery is.

I saw a similar case three months ago, with an almost identical history, who behaved in just the same way, and whose fate will be the same. To tell a woman she has anything wrong with her genitals is dynamite; to tell her she has anything wrong when she hasn't, is criminal. These are examples of State medicine, bad State medicine, undirected and uncontrolled.

To resume: To get them out of bed is to lessen the risk of thrombosis, phlebitis, and embolism. The 'white-leg' of my student days I never see. If there is any sign of phlebitis in cases of bad varicose veins, we get them up sooner and keep them up longer than usual, and we do all we can to persuade these cases to keep on the move, even although it hurts. This is the best treatment for phlebitis. I think that is generally recognised. If they develop phlebitis, movement shortens the duration of the attack, and 693 sometimes at least helps.

A person in good health, put to bed for ten to fourteen days, is not particularly fit for the wash-tub when she gets

up. If in addition she has experienced a painful labour, she is very much less fit for it. In the government maternity hospitals, I am glad to say that this battle has been won. It has taken years to storm this citadel of custom and folly. It is ridiculous, but there it is. In some private hospitals the folly still persists. We still hear mutterings about sub-involution, heavy uterus, and suchlike. Having practised so long in the same district, and having practised 'third day out of bed' since the beginning, I should have found the hens coming home to roost in the form of uterine displacements, and I know they have not.

The Maori mothers usually go home on the fourth day, some of them on their second or third day. It depends, of course, on where their homes are. We can't keep them any longer—they won't stay. The average for pakeha and Maori is seven days. One European women, a trained nurse, went home on the fifth day, with stitches in. She took them out herself. I did not ask her how. The average European leaves on the ninth day. We don't turn them out, they want to go, and if they are fit we let them. If not, we don't.

Owing to this rapid turnover of patients, we are able to do double the number of patients we can accommodate. The significance of this lies in the very important, and at the moment, burning question, of maternity accommodation. If the St. Helen's hospitals did as we do, they would automatically increase their accommodation by more than one third.

Now I am not suggesting for one moment that the St. Helen's cases should be kicked out in nine days unless they have the same rest before confinement that our cases have. That is essential. Give them an ante-natal holiday, discharge them on the ninth day, and, provided they are not subjected to the devitalisation of a painful and brutal confinement, they will leave hospital fit for the wash-tub, as ours are. There is of course no reason at all for a refusal of painless labour in St. Helen's. This deprivation, and a very serious one it is, is entirely due to the inherent conservatism of the staff, those in authority. How long this will be allowed to dominate, I know not. I think there are signs, however, that New Zealand women are beginning to be aware that painless childbirth, safe (yes, safer) for the mother and child, is possible to-day, and has been for several years. A department's attitude in New Zealand is to wait and wait, until the new has been subjected to what they call 'the test of time,' and then adopt it just when something better has been discovered. The departmental 'new' is always old when adopted by them, and very often obsolete

—bureaucratic procrastination. This is demonstrated by the obsolete methods, so obsolete they are ludicrous, they are just beginning to use in St. Helen's to procure painless childbirth. I use strong words, but they are true words. The method of understatement has been tried for some years and found incapable of piercing the armour of apathy.

I scourge the wrong because I know the right; someone must. 'I do not criticise persons, but only a state of affairs,' is a common approach. I don't agree with this smug excuse. It does not work. Good ethics should produce good, and do it quickly, there is not much time. Rather do I advocate: Kick, kick hard, but kick the right stern! Individual responsibility is just as important for man in society as individual freedom. You can't really have the one without the other.

To continue: The difference in the fitness of our patients on leaving hospital would amaze the staff of St. Helen's. All visitors to our hospital are amazed at the fitness of our maternity cases.

For other hospitals to do as we do would, of course, necessitate the provision of rest home accommodation for the mothers, but this could be provided at a fraction of the cost of the increased hospital accommodation. I don't consider it necessary for all mothers to go to the rest home. Many of them, especially the primiparas, don't require it. Our cases nearly all go, but the reason is mainly geographical, and would not be a factor in the cities.

It is rather amusing to hear that the mothers from the smart maternity hospital are being kicked out in nine days, while the mothers in the government maternity hospitals have to stay in fourteen days, willy-nilly.

Recently our Hospital Board had the extraordinary experience of being informed by the powers that be that our custom of discharging maternity cases on their seventh day was depriving women of their legal rights under the social security legislation, which entitles them to free board and lodgings and attendance for fourteen days, not seven days. As our patients all want very badly to go home as soon as possible, this departmental complaint is comparable to that of an inmate of Mt. Eden who, because of good behaviour, has had his sentence remitted for a period, and has complained of being deprived of free board and lodgings at His Majesty's cost for the remitted period.

We have tried to get the government to pay the thirty-five shillings a week, which is the cost of the ante-natal rest home, but have failed. As we are allowed twelve shillings

a day for maternity cases in hospital for fourteen days, and only claim for an average of seven days, we think this very reasonable request should be granted; but, no, the Act does not allow for it. To hell with the Act!

The enormous saving in hospital and nursing costs, quite apart from the benefits to the patient, that the adoption of the new methods would bring about, one would think would appeal to the government, but politicians and their permanent staffs are strange beings, not to be judged by ordinary standards. The word 'permanent' is sinister to me; there is a stale stink of death about it. Worn-out sleepers on the permanent ways are removed because they are dangerous; the same should be done to sleepers on our permanent staffs (I include hospital medical staffs) and of course our political 'sleepers.' They are often deeply interested in, and insistent upon methods of economy they themselves originate, be they never so trivial, but they are exceedingly tardy in adopting economies suggested by others, however practical and important they may be. 'The plan of things has been laid down'—and that is that—and that is death.

THE MAKING OF MIDWIVES

A midwife should be taught how to manage a normal confinement. She ought to be taught as far as lies within her power to recognise normality and abnormalities, without subjecting patients in the hospital teaching school to unnecessary risks. She ought to be taught how to deal with those emergencies that are within her capacity. But to teach her meddlesome investigations that are dangerous, to teach her how to deal with conditions that are quite beyond her capacity to cope with, is useless. She ought to be taught sufficient theory to make her practice intelligent and not an act of faith. Her knowledge should be knowledge related to experience, and not knowledge as examination matter. That should be the hall-mark of a qualified nurse.

The present curriculum, its content, and its duration of twelve months, are ridiculous. A trained nurse who has recently completed her training can be quickly and easily taught sufficient midwifery to allow her to practise it with safety and intelligence.

This is what I want a nurse to know. I will call it '*The Compleat Midwife, her Hand-book.*' It is just about all I know for certain.

CHAPTER 1

A woman has a hopelessly difficult birth canal. It is crooked, not straight like other animals. In exchange for being vertical and dispensing with her tail, she has had to accept this crooked, troublesome pelvis. The child is squeezed out by the contractions of the muscles of the uterus. The mother's efforts, similar in nature to the act of defaecation, are useless. The more relaxed she is, the quicker the uterus does its job. The water in the uterus plays no part; it matters not when 'it comes.'

A baby comes out head first, biggest part first. Usually the baby comes out facing its mother's anus, this being the easiest and quickest way. Sometimes it turns its back on its mother's anus, which is a foolish thing to do as it makes it more difficult to get out. You often can tell by palpating the abdomen, and feeling a 'tremendous lot of arms and legs,' that this has happened. Often, although it starts taking this difficult course, it changes its mind after a bit and comes out the right way. This is the best that can happen in these cases, but the turning round business takes some

time. Apart from slowness, it does not matter a great deal. Doctors seldom know until they see the baby's nose. I may suspect it, but am never sure, and as I leave them well alone it is of no consequence. Some doctors turn the baby round. I don't, and you can't, so what's the good of saying any more about it. By the way, sometimes, but very rarely, for some reason, we don't know why, the baby bends its neck tremendously backwards and it comes out face first. You can't do anything to help and it comes out all right usually, so why worry?

CHAPTER 2

Now sometimes the baby comes down feet first. You can usually tell that is going to happen by feeling a hard, round sort of lump, in the upper part of the mother's abdomen. It feels like a baby's head; it is a baby's head. Usually the baby tries to come out by folding itself up neatly into the smallest possible parcel, thighs folded right into its belly, and the knees well bent, and it makes its appearance usually by presenting its buttocks, or sometimes a foot. Now the trouble about this way of coming is that the buttocks are (at this stage of its life) smaller than its head, and although the buttocks and legs come out all right, the head has still to come out and is liable to stick. In a primipara this may be very dangerous to the child, for the cord is apt to get pressed on, and if this pressure is continued for more than about eight minutes the child will die. In a multipara the cord is not nearly so apt to get pressed on, as there is more room.

Now the delivery of a breech in a primipara is difficult, even for an experienced doctor, but if a nurse keeps her wits about her and does just exactly what I am going to tell her, she can manage all right. It is the most difficult thing a nurse-midwife is called on to do, but, as they are fairly common, you may be faced with the job in an emergency. Nowadays, they are practically all diagnosed before labour, and proper arrangements can be made.

I don't expect you to be able to do this until you have seen someone else do it. There are other methods, but they are difficult, and I think this is the only method a nurse can use hopefully; so it is the best for you, and the best I think, even for a doctor. (It has recently been described and come into general use.)

Do nothing till the breech is out and the legs clear. Then quickly (you have only a few minutes) get the woman across

the bed (you must have help—anyone will do) and put her in the lithotomy position with her buttocks well over the edge and some one holding her legs. Then let the baby dangle in mid air over the edge of the bed. Wait till the baby is free up to the neck. Next, take your sharp scissors and (if a primipara) quickly cut the perineum in the midline for three-quarters of an inch. By this time the child is out, right up to near the top of the back of the head. Then, and not till then, seize the child's legs and lift the whole child, keeping it well on the stretch by standing well back, and swing it right up between the mother's legs, always keeping it taut, till it almost hits the mother's abdomen. The head will then come out, sometimes quite easily and sometimes not so easily, unfortunately. This is the best you can do, and fortunately your best this time is quite good enough. The secret of success is in not starting the swinging-pulling act too soon. You must wait for the back of the head to appear. This waiting is difficult, I know, but essential.

Very rarely the child comes down horizontally instead of vertically, and the first thing to come out may be a hand. This is the worst way of all. A very experienced obstetrician, when asked by a very young doctor what to do, took a good look at him and replied: 'Run for your life.' A nurse should do the same, or maybe 'Run for your doctor.'

CHAPTER 3

Twins

When the mother is very big you suspect twins. It may be either too much baby, too much fat, or too much water. (This has a Latin name, but don't bother about it.) But you know twins when you feel two heads; if you can't, you may know after number one is out, and the mother is still big; so you feel the uterus and may fortunately feel number two. (It is an awful disgrace if you don't.) If you don't, you won't know till number two twin appears. I have diagnosed them at all three stages, often after stage two, and sometimes, I regret to say, only after number two arrives. X-ray may be used.

Twins come out easily unless they come to grips and get tangled up. This is rare, and a nurse can't cope with it, so again you don't need to worry.

The most important thing about twins is to know, after one is out that there is still another to come. Number two is often overlooked; sometimes number two takes hours to

appear after number one. Listen to this authentic case—it is important, and may save you. Once I had to go back twice for triplets. The mother, father, and neighbours in attendance, were all drunk and thought it a great joke. I got a reception when I returned for number two, but when I returned for number three, the whole street (it was in a slum district in Scotland) were out to greet me with cheers and back-slapping. I was young and dignified, and not amused, especially as I wasn't quite sure that there wasn't a number four. Fortunately I regained my presence of mind sufficiently to give them precise technical instructions, what to do when number four arrived, and assured them that there would be no necessity to send for me, whatever happened. I left them wondering about number four, like myself, and felt a little better.

By the way, tie both ends of the cord in 'doubles,' or number two may bleed to death; not usually, but it may. But in 'singles,' tie just the baby end. The placenta comes quicker if the mother end is not tied.

CHAPTER 4

Bleeding

Sometimes women lose more blood than is safe. Usually this happens after the baby is born, sometimes after the placenta comes. The treatment should be preventative; making mothers fit for childbirth and keeping them fit during childbirth, by relieving pain, feeding, and, if great delay, delivering them with forceps, if possible. The dangerous cases are the worn-out multiparas who have had many children. This treatment should be employed:

If excessive bleeding occurs, inject Ergometrine deeply into the buttock, and give it at once. If you wait it is useless, whether the placenta is out or not. Raise the foot of the bed, keep her warm, and give a pint of normal saline by the bowel. This almost invariably succeeds, but sometimes, I don't know why, the bleeding is tremendous ('flooding' well describes it).

If the placenta is still in the uterus, it must be got out. The nurse has to act quickly, and has to do a very brave thing, calling for great courage and also great physical strength. As quick as lightning, smear your hands and arms right up to the elbow with Dettol, get your hand into the uterus, following the cord as a guide, until you reach the placenta. You whole hand, remember, and it has got to go

in a long way. Use the other hand to push down and steady the uterus. Get that placenta out, find the edge of it, use your nails and take a handful of it, get it out quickly, quickly. I advocate the ungloved hand; the gloved hand is slippery, and you miss your nails. If you leave some membranes it does not matter.

If you make a mistake and find the placenta in the vagina, it is a pity, but get it out, which is easy if you take a big handful of it. Now it is not the least likely that you will ever have to do this. When the placenta and clots are out of the uterus, it will contract and the sinuses will shut up. By the way, putting your hand into the uterus is very painful. Don't, however, let that stop you. But be quick—quick in spite of the mother's remonstrances. What will help tremendously is ½gr. morphia deep into the buttock. You may very probably have infected her, but if you had not got that placenta out of the uterus she would certainly have bled to death. Dettol has made this procedure safer, 693 still safer.

Bleeding after each pain at the beginning of labour, if excessive, indicates that the placenta is attached to the mouth of the uterus instead of the body. Before the baby can be got out it has to be dealt with. A nurse can't do it, but she can raise the alarm by suspecting it. It is very dangerous, especially to the child, but often to the mother as well.

Haemorrhage may be due to a tear in the vagina or cervix. It is never serious, and if you treat the symptoms she will be all right. Rupturing the membranes, with an undilated cervix, is not a nurse's job.

Haemorrhage may occur before labour is seen, but it does not call for any special knowledge from a nurse.

By the way, a placenta comes away itself; if not, sit the mother on a pot. It does not matter how long it takes if the woman is not bleeding. Never worry about a retained placenta, and don't pummel or squeeze her uterus.

CHAPTER 5

Fits and Vomiting

Sometimes a pregnant woman takes fits—'Eclampsia,' it is called. They are just like epileptic or uraemic convulsions. The cause of these fits is pregnancy. This seems rather obvious, and not very helpful, but actually it is about all we know for certain.

'Might take fits' signs are: albumen in urine, high blood pressure (they say, I am not certain), and oedema.

' Will take fits ' signs are: scanty urine, headache and defective eyesight (black specks, often), mental disturbances such as loss of memory, mental stupidity (even for her), and curious temperamental changes.

If any of these signs or symptoms appear—and often it will be only one—raise the alarm. The treatment before the fits is not a nurse's job, but the treatment of the convulsions may be, and often is, the nurse's job. Here it is: Give, immediately you can get her to swallow, a full dose, nine grains, of nembutal. If you can't get her to swallow, give her it by the rectum. I am certain nembutal is safer and better than morphia. Repeat the nembutal as required.

' Vomiting of Pregnancy ' may be dangerous if it continues too long. There is nothing mysterious about it, in spite of what the ' Toxaemia of Pregnancy ' cranks say. The woman dies of starvation. Doctors still use a splendid long name in a dead language for this condition; (they were very ignorant, so to conceal it by appearing wise they talked in Latin); I want you to know it as ' Severe Vomiting of Pregnancy.'

I know how to cure it, how we cure it, and have never failed to cure it. The medicine we use (and a common one, alas, in hospitals) is good, greasy, hospital Irish stew. Get her into hospital and insist on her eating the stuff; tell her it will cure her; if she vomits it is no good, she will just have to swallow another lot, and, if the worst comes to the worst, threaten her with the same lot; remove any possible receptacle for vomit, except her own bed. I consider that hospital Irish stew as a cure for vomiting of pregnancy is a real contribution to obstetrics. I confess to being very proud of it. I hasten to add that it is very important to use the cure before the patient's condition is actually critical. By the way, the cure suggests the cause, very forcibly I think. I'll leave it at that.

CHAPTER 6

And this chapter completes ' The Compleat Midwife.'

The Blue Baby

If the baby when born does not breath and cry properly, if it is blue-looking, you don't need to worry. But keep it warm, and don't knock it about with violent artificial respiration. Real murder, that was, and it was the method advised. Keep it as much upside down as you can, with its head on its side. Get its mouth clear, in fact do just as you would for an anaesthetic case with embarrassed breathing.

The White Baby

This is quite different. It is dangerous. It is a badly shocked baby, and should be treated just as shock is treated. Don't move it, or if you have to, do so very gingerly. Keep it upside down and see that its mouth is clear. Keep it warm, best with a warm blanket. Very gently, with your hand under the blanket, compress the lower ribs intermittently, and keep doing that till it makes some attempt at breathing. If the heart can't be felt beating, try squeezing it intermittently with one hand pushed well in under the ribs, and the other over the heart outside. Sometimes this succeeds in getting the heart to beat again. It is worth trying. If oxygen is available, of course give it; it is invaluable. Mouth to mouth inflation should be tried, it sometimes succeeds.

I have little faith in drugs when the baby is in this condition, for this reason: they are not absorbed, they just stay put where injected. They can't get into the bloodstream and so to the organ and organs which they might, at least theoretically, help to start functioning. So if you use drugs, inject them deep into the muscles, or better still into a vein (the cord veins can be used), or direct into the heart. I have often tried all methods, but have never done any good. The reason is, of course, that some of the babies have cerebral injury, and you can do nothing for them.

In conclusion, I repeat, the correct approach for a nurse, and that most likely to succeed, is to consider these cases as shock, and to act accordingly. The shocked ones can be saved, the others can't.

PREFACE TO 'THE COMPLEAT MIDWIFE'

It is usual for the writer of books to get some distinguished person to write the preface; I can't, for this book within a book, so I do it myself, here and now, when the writing is wet from the pen. My intention was to do just a part of the subject to demonstrate the idea, one chapter only; but I became so engrossed that I wrote a 'Compleat Midwife.' My attempt will be subjected, without doubt, to the silent contempt of the obstetrical timocrats, but I hope someone, a friend maybe, will draw their attention to it. They will slaver at the mouth, and talk about over-simplification and its immense dangers. I hope that someone will point out to them that the Commandments of Moses were equally short, and they have been well spoken of, and ran to many editions, not quite so popular nowadays maybe. No, the fault in my commandments for midwives does not lie in their

shortness, for cut out the ' blah blah ' and they can be written on a post-card. The difficulty lies in the correct emphasis. In case I have left out something, however, of major importance, I am going to ask the publishers of my book to insert one blank page at the right place, so that nurses can write down for themselves the wisdom I don't know, the wisdom they will acquire at the midwifery schools.

I also want to speak of, or at, the specialists (not the obstetricians this time), many of them my good friends—surgeons and consulting physicians, men of parts, I know, but one-eyed. Their apathy and their lack of help to us in our campaign for painless childbirth distresses me. They say they know nothing about it, and that is probably true. But they should know something about it, and they should help. They must, if they know their own job, see the tremendous amount of morbidity caused by childbirth. A lot of that could be avoided with better midwifery. Is childbirth beneath their notice? We are short of doctors just now; the specialists (I would love to see some of them at it) may now have to do a spot of midwifery before long, and I hope it won't be bad midwifery. I commend to them ' The Compleat Midwife.' It is short and very simple. I believe it will do to begin with.

Listen: An assistant had met his chief, a very eminent surgeon, on his arrival at Edinburgh station by the London nonstop express. The great man was pale and trembling, and was stuttering violently, a habit which he ordinarily could control. ' Good God, I have had an awful trip. A horrible woman had a baby in the train, and there was no other doctor about. I nearly died, and still may. So did she. So did the baby. (Note the order of his fears!) I had nothing but my new gastro-enterostomy clamps.' This was the case-history elicited in the hansom-cab with the greatest difficulty from the stuttering and badly shocked famous surgeon.

I say, let my specialist friends pay heed. They also may easily enough be called on in such an emergency if more G.P.'s go overseas, and they will have to down tools, or more probably down blankets, and go for their lives. Ignorance will not be accepted any longer for an excuse for refusal. I would hate to see them upset like the famous surgeon.

CONTINUATION OF THE MAKING OF MIDWIVES

Just now, although New Zealand is short of trained nurses, nurses who have already spent six months in a maternity hospital have to return to a maternity hospital for a further six months to get what is called ' higher qualification.' I am bitter about it. Sisters who have for six months been taught and have practised midwifery in our hospital, and are excellent midwives, leave us to go to St. Helen's to learn a style of midwifery which they have been taught is inferior, and are themselves convinced is inferior. They don't want to go; they hate being probationers again for six months. It means a great financial loss to them, but cheap nurses for St. Helen's. They have no intention of ever practising midwifery without a doctor, but they have got to go if they aspire to get one of what they call ' the good jobs.'

The efficiency of the training is suggested by this record. A well trained, fully qualified, and very intelligent nurse, holding a very important and responsible position, and just recently returned from her midwifery training in St. Helen's, told me that she had vaginally examined twenty women, and had felt the cervix only once. I believe this would be the usual tale if all nurses were equally candid. Surely it is unfair that St. Helen's patients should be subjected to risks by repeated vaginal examinations, insisted upon by this absurd and useless training. No nurse should be allowed to do vaginal or rectal examination, either when in training or in practice. It does not in any way increase her efficiency. Doctors must be given opportunities to learn their job, but surely it is enough if the mothers of New Zealand are subjected to their handlings. If the nurses don't protest, and they should, through their union, I hope the mothers who use St. Helen's do. They have a grievance, rather a big grievance I think; but they don't know it, and that makes it even more unfair. Maternity nurses don't make vaginal examination, it is only fair to state.

This extensive training of nurses in midwifery has been brought about by the habits of bygone generations of doctors in the practice of midwifery, especially domiciliary midwifery. These doctors, doing midwifery practice (it was nearly all domiciliary in these days), wanted quite naturally to spend as little time as possible at the bedside of a ' crying ' woman. They wanted a nurse who could be depended on to

send for them at the correct moment, that is, when the patient is more than sick of it, the nurse sick of it, the fond husband half mad with anxiety, and the cervix fully dilated. Then the doctor arrived with his bottle of chloroform and his forceps, delivered the woman, earned his fee and the mother's gratitude for life. That was the ideal confinement. To attain this perfection in the art of timing, the nurse had to repeatedly examine the patient vaginally, to know exactly how far on she was. If she sent too soon, she was a bad nurse; if too late, also a bad nurse; (a B.B.A. was half-fee). But nowadays doctors, knowing the great dangers of vaginal examination, never allow nurses to do it.

In our hospital, where the matron attends practically all the confinements, and is, and has got to be, a very efficient midwife, none of them in twenty-five years has ever examined a patient vaginally when in labour. There is no need to—there are other methods of knowing all we need to know. No district nurse I have ever worked with, although they attend cases alone on the district, examines a case vaginally. I would just about knock their heads off if they did, and they know it. I think this opinion now is practically universal, so why continue telling them about this dangerous and unnecessary procedure, if they are never going to practise it. (I examine less than 5% of the cases vaginally.)

Midwifery is different from other branches of medicine. The conduct of childbirth being a nasty job, doctors relegate as much as possible to nurses. So naturally they approve of their being taught as much midwifery as possible, although it is the doctor's job, note. It salves their consciences, I suppose. I notice no such approval, however, shown to the training of nurses to do work they could do very well, much better than midwifery, (a nurse can't cope with a complicated case) if the doctors would allow them—for example the administration of anaesthetics, not to mention 75 per cent. of a G.P.'s domiciliary work. Doctors oppose the teaching of clinical medicine and surgery to nurses by bedside clinics—the only way of making nurses something better than automatons. 'That is our work you are teaching them,' they say. They are very inconsistent, if it suits them. They can talk very eloquently about the importance of defining the scope of a nurse's work by her capacity to do it as long as we can keep an eye on them. But in midwifery, 'Ah, that's different!'

If the extra six months made the nurses more efficient, then of course it would be worth it, but it doesn't. The one thing that all midwives should be taught, and which requires

considerable experience to make them really efficient, and would justify extra training, is the modern technique of painless midwifery; and that is precisely what they refuse to teach them at St. Helen's. When I picture some of our nurses, who after twelve months have become highly efficient, having to go to St. Helen's to study and practise the farcical humbug of administering a few drops of chloroform in a Murphy's Inhaler, in the last five minutes of a long labour, I almost despair. This is how they obtain 'higher qualification.' Six months allows sufficient time to train a nurse to be an efficient midwife. I think, however, when painless midwifery is general, some special qualification will be necessary for nurses undertaking this work. Some system of accrediting would be just as efficient, and far more convenient for all concerned. This could be done perfectly well at small hospitals.

In conclusion, I offer no apologies for being dogmatic. I am fully conscious of my responsibilities as a heretic. Though I advocate a heresy, I only do so after having carefully tested its truth. I am not dangerous, but a dogma which is generally accepted may be very dangerous indeed, when it is wrong and acted on generally. I consider that the practice of midwifery is more dogma-ridden, and unprogressive, than any other branch of medicine. 'Birth, copulation, and death' is man's story on this earth, and he has not yet got his first adventure either safe or agreeable, owing to the inaptitude of his obstetricians.

Earth, thou riddle,
Or Heaven, thou fixed intent,
Divine us what is meant
When in the middle
Of man's long weaving, the long rent
Mars the whole cloth.
Why are the years,
Riotous and wroth,
Forever in arrears
To his good plan;
Why far too long the span
That holds his tears?
And, if thou canst, make plain
The need of pain.
Be thou an oracle
To one who fears.
Then from the cloud there fell
This parable:
"The pearl perfects herself against the shell
Man—on the event;
Therefore 'twas sent."

Chapter 17

REVISED NEMBUTAL AND HYOSCINE TECHNIQUE

N. BEDGGOOD—Matron Rawene Hospital

As soon as pains commence, the patient is shaved, made to pass urine, and given a bath. No enema is given. She is then given nine grains of Nembutal by mouth, usually with a cup of milk. In twenty or thirty minutes, she is given 1/100th grain of Hyoscine hypodermically. This is usually sufficient for three to four hours. Then the patient begins to move and complain of feeling pains, although afterwards she has no recollection of this. She is then helped on to a chamber and encouraged to pass urine. Many of them will pass urine when told to, and others ask very frequently for the chamber, but about 15% have to be catheterised. Three grains of Nembutal are then given by mouth with a cup of milk. This usually quietens her for another two or three hours, when, if she is likely to be more than two hours longer in labour, 1/150th grain of Hyoscine is given hypodermically. If delivery seems to be near, three grains or four and a half grains of Nembutal are given, and not the Hyoscine, as if it is given too short a time before the baby is born there is sometimes a little difficulty in getting it to breathe.

For multiparae, this is usually sufficient. Primiparae usually more. They are given three grains of Nembutal every three or four hours. If labour is prolonged over eighteen or twenty hours, another 1/150th grain of Hyoscine is usually given, as by that time the patient may be really waking, in spite of the Nembutal she has had.

Occasionally, a patient who is very excitable, or one who is admitted when labour pains have already commenced, does not go to sleep after the Nembutal and Hyoscine have been given. A small quantity of ether by the closed method puts them under, and they then continue under Nembutal anaesthesia. Since using larger doses of Nembutal and smaller doses of Hyoscine, less ether has been necessary for controlling restless patients during labour, and instrumental deliveries are the only ones in which ether is necessary, because, even if the patient's behaviour is suggestive of pain at the time, she has no recollection of it afterwards.

Sometimes a patient, with slight irregular pains, who may be undecided herself as to whether labour has commenced, is admitted. She is shaved, given a bath, and given three or four and a half grains of Nembutal. This puts her to sleep, and if labour really commences some hours later, she is given six or nine grains of Nembutal, followed by 1/100th grain of Hyoscine, and, being drowsy from the former dose, goes to sleep immediately. This is a great advantage with nervous patients.

These doses have to be modified for the individual patient. Lately we have used less Hyoscine and more Nembutal because we noticed that the pulse rate after Hyoscine goes up to 120, or even more. It usually settles down to normal after an hour. Also, although patients can be made to drink milk, those who have had larger doses of Hyoscine are less easily fed.

Sometimes a dose of Nembutal is given, not because the subsequent amnesia may not be complete, but to make the patient less restless.

There is no evidence to show that the weight of the patient is a guide to the dose of either Nembutal or Hyoscine. Sometimes the temperament of the patient is of some use as a guide. That is another reason why patients should board near the hospital for a short time before admission in labour. From their conversation and behaviour on their daily visits, the staff may form some idea as to how they will behave when the drugs are given.

A nervous patient, however much she has been reassured beforehand, often becomes excited when she gets a ' show,'

and is more difficult than quieter patients to put under when the pains really do begin, and she may need ether. If she is put to bed and given three or four and a half grains of Nembutal, she goes to sleep until roused by pains commencing, it may be some hours later. She can then be fed with milk, made to pass urine, and be given six or nine grains of Nembutal, and 1/100th grain of Hyoscine, and she goes quietly to sleep. Later, she does not as a rule remember taking the second dose of Nembutal.

Those cases who can be put to sleep quietly are the least restless all through the confinement.

The largest dose we have given is thirty-six grains of Nembutal, and two 1/100ths of a grain of Hyoscine, in thirty-six hours. This was a Maori multipara with a pendulous abdomen, an ante-partum haemorrhage, a breech presentation, and a premature separation of the placenta. Labour was prolonged and the baby was dead, but the mother was well and discharged in seven days.

In two hundred cases we have had twenty-four restless ones, i.e. 12%, but in all these amnesia was complete. Of these, nineteen could be controlled by the surcingle and the nurse not required to leave her chair. Since we began using the surcingle, restlessness of this type is of no importance so far as the staff is concerned. The remaining five were more restless, but did not need two nurses to control them. These five were all primiparae, one of them a mentally defective Maori, and one a European of twenty-nine who had eclampsia. There were two patients noisy all the time, shouting, but not a high-pitched scream. Neither was restless and both had complete amnesia.

These were no cases of excessive haemorrhage. There was one case of cystitis, the only one we have had since we began using this technique.

In these two hundred cases there were eleven forceps cases.

There were nine dead babies: two difficult breeches, both primiparae, one an extended breech, and perforation was required. (This presentation was diagnosed at seven months, and the mother was warned, but neglected to return until in advanced labour.) The other, a mentally defective Maori, was also an extended breech which was not diagnosed because she had neglected to report.

1 Caesarian section. This baby was abnormal, very small, waxy appearance, with veins showing through skin. Mother a dwarf.

1 premature separation of placenta.

1 prolapsed cord, admitted prolapsed, labour well advanced.

1 cause unknown, had probably been dead for three weeks.

I Oedematous baby. Hydramnious. The previous pregnancy a Tydatidiform mole expelled at four months.

2 cerebral injury. Both died three days after birth. Both primiparae. One instrumental delivery. Both babies appeared normal at birth, and breathed well. One mother had been treated for three months for albuminuria, and for impending symptoms of eclampsia.

No baby died of shock or lung condition that might be attributed to Nembutal. For two hundred cases, 3005 grains of Nembutal were used, and 253 1/100th of a gain of Hyoscine were used. Cost, 1/11 per patient.

Chapter 18

TWO CASES

1. *Mrs ——, a primipara aged* 29. In labour for 32 hours; 271 pains. On examination: What at first felt like a tense bag of membranes was a very thinned out cervix. The os would only admit one finger; on inserting the other finger, something like a thread in the mouth of a bag seemed to snap when the two fingers were separated. The cervix opened right up with the greatest of ease and the membranes ruptured. 22 more pains and the baby was born.

Munro Kerr has reported a similar case. I have no explanation to offer; neither has Munro Kerr.

2. *Delivery through a Fibroid.* A hunchback with a small pelvis. Second pregnancy. First baby stillborn after a long labour and an instrumental delivery. When admitted she had been in labour with strong pains for about one hour. Pulse 92. She was given Nembutal, Hyoscine, and ether and she went to sleep, and was kept asleep during labour with further small doses of Nembutal. For 42 hours she had irregular pains, and her pulse rate varied from 120 to 144. She was then examined vaginally. The head was not coming down, and the cervix was very little dilated. Four hours later she was re-examined vaginally; no progress had been made. Pulse 136. A caesarian section was then done with ether anaesthetic.

The uterus was symmetrical; nothing abnormal was noted. On incising it I noticed that I was cutting through a practically bloodless uterine wall, and then I realised that the uterine wall was a flattened out fibroid tumour (like a flat dry sponge). The placenta was on the posterial wall. No difficulty was experienced in suturing the wound in the uterus. The baby was alive and normal. Convalescence was uneventful.

A WARNING

Mrs. W., a primipara, aged 31. Medical induction, bowels very troublesome during labour, first part of labour very slow, pains slight, but in the last three hours 51 pains. Child born at 6.50 p.m. Total amount of Nembutal given .15 gr. and 1/100 gr. Hyoscine. Last dose of Nembutal 3 gr. at 5.5 p.m. She was restless at 4.50 p.m., but after the last dose she was quiet. She had one stitch put in.

She was put in her own bed in her own room immediately after labour. She was still deeply under and was not fed. She was frequently seen by the nurse in attendance during the night.

At 1.30 a.m. the nurse reported that her patient had disappeared. Subsequent investigation revealed her itinerary. She had gone out by her bedroom door which had been open all night, then outside through an outside door which had also been open all night, and followed a complicated and difficult course up a series of very steep steps and over a steep grass slope into another corridor where there was a light, then into a lavatory which she used, and followed the usual technique, but very badly indeed. Then she returned along the same route, but went in at the wrong door when she was found by her nurse (much more upset than the patient) who led her back to her bed but never spoke to her. A few minutes later Matron saw her in her bed and asked her if she would like a drink. She said yes, but did not open her eyes. She drank a full glass of milk. Her pulse was normal and she was not even cold.

She went to sleep at once, and did not waken until 5 a.m. when she used the pan, drank more milk, and went to sleep until 7.30 a.m., when she sat up and had a good breakfast of porridge and smoked fish. She fed herself. When seen by me at 9.30 a.m. she was beaming, and said she had felt

nothing and had slept all night, and felt perfectly well. She had no recollection of her night's adventures.

Note, the nurses never asked her any questions. This is the usual procedure. Questioning them before they are quite out of the anaesthetic sometimes leads to a sort of garbled memory.

In spite of her confinement, violent purgation, exposure to cold, and considerable physical exertion, this woman showed no signs of shock. She was not upset in any way, due to the fact that she was protected by Nembutal.

That she went outside instead of to the indoor lavatory she had been using for some days, can be explained by the fact that her own home provides only outdoor sanitation. The Nembutal blotted out her memory of recent habits, but had no effect on the highly conditioned memory of a life-long habit, outdoor sanitation, with no alternative.

This incident was caused by the castor oil, which we never give as routine, and only for a very occasional medical induction. But there is something also to note, and which I want to record. It proves conclusively that a woman, though deeply under a barbiturate, can get out of her bed and carry out quite a complicated series of actions, provided she has previously been strongly conditioned to them. That is what Mrs. Mareo did, and the doctors swore it was impossible. Though well under the influence, she helped herself to more veronal and swallowed the dose which killed her, and sent her harmless husband to languish in Mt. Eden for life. It also shows that doctors have no right to speak emphatically about a special branch of medicine of which they have no special knowledge, and that ordinary juries are incapable of coming to sound conclusions on technical subjects. The Minister of Justice, although I have the best of reasons for knowing that he fully realises a grave error of justice was committed, apparently has no intention of making the only amends he now can make, setting Mareo free.

I repeat what I wrote four years ago: that in spite of what the court decided was justice in this case, after two separate trials if subsequently there is good and sufficient reason to suspect that with the best intent in the world they have made a mistake, it is the duty of the Minister of Justice to rescind the decision of the court, and let an innocent man go free.

SHOULD WOMAN SUCKLE HER YOUNG?

Yes, if she can. Unfortunately this answer does not help us very much, for the difficulty lies in deciding if she can. For some reason or other, modern woman is a very poor milker indeed, and I think she is getting poorer as we go on. You see much the same thing in certain breeds of cows. For example, some cows of the really aristocratic beef type of shorthorn, are often nowadays quite unable to feed their calves (they are not asked to), and have to have a wet nurse for their offspring. The Aberdeen-Angus, another specialised beef breed, is frequently almost devoid of mammary glands. Jersey cattle and certain other breeds, on the other hand, can not only feed their own calf, but can produce enough milk for three or four other calves.

I can account, I think convincingly, for the great differences in cow breeds. Here is the explanation: In the beef breeds, the females selected to breed from are the ones that show a special tendency to fat, and as the cocky says, they can't put it both on their backs and in the bucket. For many generations the Jersey cow selected to breed from has been the good milker (and she gets thinner and thinner as she lactates). The reason why milk, rather than beef, has been the goal of the Jersey farmer is this: Jersey has a large population for its area, the holdings are very small, the stock they carry is therefore strictly limited; the peasant's cow is not eaten, she is milked till she dies. She is far too precious to be eaten because she can't be replaced. (This, by the way, determines the diet of the peasant population; milk and its various products, cereals, vegetables, eggs, pigs, the only bovine meat being veal—mostly, I expect, the bull calves, and those heifer calves which are rejected for some reason as probably bad milkers.) This is also true of various other breeds—the Guernsey, for example, the Kerry in Ireland, the Dexter in England, and the Ayrshire in Scotland. Where pastures are rich, on the other hand, and land is held in larger areas, the peasant's cow is replaced by the roast beef producer, the shorthorn and similar breeds, which caters not for a peasant class, but for a much wealthier class who eat different food.

Now I think we can deduce one definite fact, and it is this: in cows, anyway, the quality of good milking has been developed by breeding, which means selection. Nature, not

nurture, is the determinant. No amount of food, be it ever so suitable, will ever make a naturally poor milker a good milker. Of course it is true that good food improves the milk production of a good cow, and also to a lesser extent, that of a poor cow. Still, Nature is the important and practical factor.

Ludovici, who has written much on the subject, a few years ago wrote a book on ' How to Choose a Mate '—a tome, not a pocket manual; and his selection of a suitable mate is based purely on physical grounds, his goal being the propagating of numerous and healthy children. The selected mates, because of their physical makeup, have easy confinements. He believes in busts, curves, broad hips, and nice knees but ' knockers.' This type is invariably a good milker, he asserts. His instruments of precision for this selection are a pair of calipers and a measuring tape, and he measures not only the lady's pelvis, but her ears, nose, and eyes, in relation to one another. If these measurements are satisfactory, although to the uninitiated the connection between the short upper lip and the perfect life mate, seems very obscure, it is actually the way the cocky picks his milking cow; for example, the points of the Jersey cow's head, and the nostrils, are all used, and rightly so, in selecting good milkers. Ludovici does just the same (or rather he thinks he does) as the cocky, and the principle is that the desired quality of good milking is always linked with certain physical measurements, which in themselves may seem quite irrelevant.

So, to pick the perfect cow, or the perfect life mate, you have, according to him, got to make certain physical measurements, which, as far as my knowledge goes of the procedure, can be done, anyway the preliminary surveys, without compromising seriously the relationship of the selector and the selected (I know a man who did it just in this way). If this is true, then the only way to get all the mothers of New Zealand to be capable of raising their babies is for the males to select their mates in the manner described, and go a-wooing with Ludovici's book, or rather a pocket edition (the book itself is far too big), a measuring tape and a pair of calipers in their pockets. Thus the faulty females, however charming, would be never loved, and so doomed to celibacy, with consequent disappearance of the type.

I would suggest that an ' Advice to Lovers ' campaign, with the slogan of ' Curves, not flats,' should be started from commercial broadcasting stations.

If this argument is correct so far, then it would appear that New Zealand men for some reason or other, have for

several generations been selecting their mates for some quality which is not linked with good milking; the good milkers never getting a chance because they are not asked to mate. Does this help us? Curves, which mean busts, which mean milk, were considered desirable in the Victorian ages. To-day, the male type of female, narrow-hipped, small sterned, flat chested, is the fashionable type, and therefore the most desirable female figure; but she is not a good milker—rather the reverse. This type is the Grecian type of beauty; it is the male type and you would not expect them to milk well. Every cocky knows that. Now the Greeks were homosexualists—Socrates was, that was his undoing, the end of him in fact. He dared to practise the habits of the privileged class of Athenian society, the nobility to which he did not belong, and he was strafed, not because it was morally wrong, but because he was poaching on the preserves of his betters. Ludovici has a great deal to say about this, and he attributes most of our troubles, including bad milking, in the propagating of our species to this source. He says that the Greeks, because of the homosexual inclinations, favoured the male type of female, and subsequent civilisations, slaves to Greek culture, have continued to do so by selecting the male type to mate with, anyway as a first choice. Now, I am sorry I can't swallow that as a complete scientific explanation of the poor milking in modern women, and I don't believe it was true of the common people in Europe, then or now. It is quite a good story, however, and Ludovici is supposed to be a very clever fellow; but I think he has forgotten the most important factor in selection, and that is S.A.—that indefinable aura that some women have in abundance, which has little to do with physical beauty based either on the Greek ideal, the ' flats,' or the Victorian ideal, the ' rounds.' Why we see some women who, far from being beautiful judged either as ' flats ' or ' rounds,' seem in some extraordinary way to attract a regular bevy of lovers, while their sisters, who may be beautiful, are loverless. The one has S.A. plus plus, the other has S.A. minus, and that's that. It has been the habit of our time to jeer at the Victorians, and despise all the wisdom of our grandmothers, but I am certain they were right about the ' rounds ' anyway. Socrates was wrong. No, no, it does not matter how many tomes Ludovici may write, and lovers may read—and he writes very well and convincingly—S.A. will win every time, and S.A. has nothing to do with potential good milking capabilities. Some other explanation must be found, and after very careful analysis of my own observations and those of others who

have had opportunities to observe, I offer this explanation: Modern woman is a bad milker because she has ceased to be a cow. She refused to be cowed by her husband, and insisted on doing everything a male does in society. In some way which we can as yet only guess at, this altered attitude and its associated conduct, has altered the hormone rhythm on which lactation depends. Did the advent of the suffragette caboosh modern woman as a milker? I wonder. (That lactation depends on hormones must be the case, but complete knowledge is lacking for the application of this fact to be of use. What I can personally vouch for, however, is the efficiency of Stillboestrol in stopping lactation, which is rather suggestive.) Can this be proved? No. But there is a great deal of evidence to support it, nevertheless.

I notice, and my staff notice, that the principal characteristic of the bad milker is that she is temperamentally very un-cow-like, not placid. They are easily upset; any little thing wrong with the baby, or themselves, makes them agitated, and they fuss over trifles. Some of them are 'vitamentalists,' and have very fixed ideas on what they should and should not eat, based on rumour rather than reason. Many of them have read vitamins and swallowed vitamins ad nauseam. They are usually very determined to nurse their child, and they struggle away, often with tears in their eyes, trying to supply their unfortunate offspring with nutriment from a milkless unappetising breast; as futile as getting blood from a stone. This performance leads to a vicious circle. The milk, they do manage to secrete is what I call 'silly milk.' It has probably too much or too little, of certain things which go to make up 'sane' milk. Anyway, whatever is wrong with it, it upsets the baby, and the mother becomes more upset than ever, and the milk becomes 'sillier' than ever, the baby worse than ever, and so on in a vicious circle, till everybody concerned is nearly driven mad, and the baby to an early liquidation. You can do what you like as often as you like, but you will never get this sort of case to secrete anything else but 'silly milk.' They sometimes carry on for some months, ruining their own health, and the baby's, not to mention the happiness of the whole household.

Breast stimulation adds fuel to the fire of folly, but not to the quantity or quality of the milk. Some of these women have plenty milk, but I repeat, it is 'silly milk.' They sometimes, if they take it into their heads (or some fool adviser does) that they have not sufficient milk, and supplement with some bottle feeds, but this does not usually improve matters much. Actually, till they stop giving the child any 'silly'

milk, that child won't be right. Even then their troubles are not quite over. Sometimes the child has been so badly upset, that when it is put on the bottle, you may still have trouble. The silly mother, in her anxiety because the child is still not doing very well, won't do what you tell her, but listens rather to a multitude of advisers, and tries all sorts of different methods of feeding. These babies sometimes die if you don't get them away from their mothers and her ' precious ' advisers. This type of case is of course an extreme one, but not by any means unusual. We see quite a few every year, but minor degrees of ' silly ' milk and milkers, are very common indeed.

The type of mother who simply has no milk, or so little that even she realises that she can't nourish her child, is easily managed. They submit to putting the baby on the bottle. It is the mother who secretes not only ' silly ' milk, but plenty of it, who is arrogant to a degree and maintains that she is a magnificent milker. This type I have seen milked by the Plunket nurse, and the milk diluted with water. Could there be greater folly in the name of expert advice!

In actual hospital practice we can usually spot cases of ' silly ' milk from the start, and advise them accordingly. Some accept our advice, some say they think they will be all right when they go home; so we leave it at that, and they go home nursing the baby. It is not only primiparae that secrete ' silly ' milk, some multiparae are just as bad. They think that having made a bad job of their previous babies qualifies them to make a good job of this one in exactly the same way.

Contrary to popular opinion, the modern mother, in the country districts at least, wants to suckle her young whether she can or whether she can't, willy-nilly. This must be the result of propaganda, I simply don't believe it is natural, the maternal wife idea. It is conditioned, I am certain, by a lot of very stupid people, who, posing as experts, succeed in having their folly accepted as wisdom. They do a lot of harm.

Our matron who has had a great deal of experience, says that the big fat women with great big breasts rarely milk well. They ' put it on their backs, and not in the bucket,' like the beef breed of cows. Very thin women also don't milk well. Not too fat, and not too thin, is the best type. I suppose she means ' just nicely plump.'

Babies put on the bottle straight away don't lose weight, but gain steadily from the first, whereas the breast baby loses weight, and not all have regained it by the time they leave

hospital. Our staff talk feelingly about the superiority in general conditions of the bottle mother to the suckling mother. Nothing in my medical experience enrages me more than to see a mother, rather bloodless and worried, going home to an inconvenient house to tend a lot of other kids, with no assistance, and a wretched baby sucking the life blood out of her; a baby that would do just as well, and often far better, on the bottle. I call it 'cannibalism'; and this crime is committed in the name of modern medicine. Pseudo-modern medicine is the correct description.

The contention that lactation is essential to the proper restitution to normal of the mother's organs, is simply not true; it is rubbish, it can't be supported by clinical evidence that will stand investigation for a moment. That the breast-fed baby is better than the bottle-fed baby is also not true, but what is true is that the bottle-fed baby is far better than the breast-fed baby fed on 'silly' breast milk, or insufficient breast milk. Besides, even from a national point of view, the mother is more important than the child. The following incident indicates the degree of acceptance of this undoubted truth by some nurses. A mother, who was very anaemic was discharged from our hospital nursing her baby. About six weeks later I was asked to see her, and she was very anaemic still, and very miserable. So was the baby. On discharge she had been given large supplies of Blaud's pills, with full instructions how to take them, but when I saw her again, she had stopped the pills for some time, as the nurse had told her that the vomiting and diarrhoea the baby was suffering from was due to the iron pills, and she had better stop them in the meantime. In point of fact the vomiting and diarrhoea was due to starvation, much the most frequent cause of digestive disturbances in babies that are otherwise well looked after. That incident unfortunately reflects the official attitude of 'To Hell with the mother, so long as the baby is all right.' It also displays the nurse's ignorance of a now generally recognised fact, that under-feeding is the commonest cause of digestive disturbances in the baby. Not only is this not accepted, but the contrary opinion is held and taught, and unfortunately acted on, that the commonest caust of digestive disturbances in babies is over-feeding. Let me say here and now, that it is very difficult to overfeed a normal baby; that a healthy baby will do very well indeed on all sorts of milk mixtures and foods provided you give them plenty of it. I repeat our instructions—feed till they overflow; and it usually works.

The Plunket Society, whose magnificent work I freely

acknowledge, has unfortunately made mistakes. Sir Truby King reduced the infant mortality rate in New Zealand by teaching the mothers cleanliness in the handling of the milk. That was his great contribution. His was the first nation-wide effort, and the result was magnificent. Unfortunately his advice on the amount of food a baby or a young child requires, was bad. They were starved, and several generations of New Zealanders have suffered, and suffered very seriously in my opinion, from this mistake. I notice with pleasure that this mistake has recently been recognised and acknowledged by the Plunket Society, and partly remedied, anyway. They have been many years behind recognised authority on this very important matter, and they only yielded after severe criticism by medical men of repute in the public press.

They are making another serious mistake in insisting that a large number of mothers, who are not fit for it, should nurse their babies. They are damaging many mothers, and almost undoubtedly, quite a lot of babies. Mixed feeding of breast and bottle is often unsuccessful, in fact it usually is. There is nothing to be gained by either mother or child by keeping a woman nursing who can't do it, and there is much to lose. But that breast feeding by a healthy, and temperamentally placid mother, may be life-saving for a premature or delicate baby I acknowledge. I also admit that if a woman is fit and wants to nurse her child, she should do so. Anything else would be foolish. But for women who are not fit to nurse to be officially urged to do so for reasons which are not true, is terribly wrong. The properly fed bottle baby is just as good a baby as the best of the breast fed babies. I hasten to add that my criticism of the Plunket Society is not a criticism of the Plunket nurses, as nurses. My experience has been that they invariably do their work conscientiously and well, according to their lights. They are most attentive, and seem imbued with the spirit of self-sacrifice. They teach the mothers a tremendous lot of technical facts of first-class importance, and they do a tremendous lot of good. The faults in their methods are due entirely to their teachers. The nurses practise what they have been taught, only too well sometimes, unfortunately; for Plunket methods have become a ritual in which nothing must be altered. The explanation of the insistence on breast feeding is well known. The death rate in the bottle fed babies of the poorer classes in Great Britain was found on investigation to be tremendously high. That class had no technical knowledge of the meticulous care and cleanliness so essential to

safe and efficient bottle-feeding. In the better-off classes of the same period, the large majority of babies were bottle fed, and the technique was and has been good, generally speaking, for at least forty years. The mortality rate directly attributed to faulty methods was very low. To bring the lower classes up to that level of perfection in technique was considered, and quite correctly, I expect, to be impossible. So the policy adopted was that of insistence on breast-feeding, where possible. In New Zealand the technique of bottle-feeding before Sir Truby King intervened was probably bad, and breast-feeding the method of choice always. An American influence, a sort of pseudo-medical-biological campaign, spread to New Zealand, and New Zealand fell for it. It spread like a new religious creed, which it probably was, and which it certainly has become here. Actually New Zealand women are to-day persuaded that breast-feeding is a duty, and not to do it is something to be ashamed of, whether fit or unfit. I think that must be an accurate explanation of the Plunket Society's policy. It is certainly not based on scientific medicine.

Amongst the Maoris, a bottle-fed baby spelt a dead baby up till a few years ago, so the policy of breast-feeding was imperative, and still is usually. During the last few years, however, as a result of the excellent work of the district nurses, some of the Maori mothers who for some reason are unfit to nurse their babies now practise quite a good bottle technique, and the results have improved very much. Of course dried milk is the method of choice but the cost is often prohibitive, unfortunately. Subsidised dried milk for the Maoris would, I think, lessen the infantile mortality of the Maori bottle babies more than anything else. The Plunket Society also has failed to realise the advantages of the dried milk preparations, apart from the price. They are in many ways preferable to the so-called humanised milk, safer and far less variable than ordinary raw cow's milk.

In conclusion I want to say that pure cod liver oil and ordinary sugar are just as good (the pure oil being preferable, in fact) as the proprietary preparations, which are very expensive indeed. It is not fair that poor people should be persuaded to buy these proprietary articles which are recommended by the Plunket Society, in the belief that they are superior. The Plunket Society should either openly acknowledge this statement to be correct, or prove it to be wrong.

I want to see the activities of the Plunket Society increased, and above all, incorporated in a co-operative national medi-

cal service. That aloofness, characteristic of a cult, which it so proudly cherishes is noxious to efficiency. But I want to see its methods conform to the accepted authoritative methods of 1941, in these very vital aspects which I have endeavoured to describe.

I hope ' My feet have touched the meadows and left the daisies rosy.'

Chapter 20

THE FEEDING OF BABIES

N. Bedggood, Matron Rawene Hospital

THE MILK MIXTURE

A baby on the bottle from birth has for three days:
17ozs of boiled water;
13ozs of milk;
2 level tablespoonsful of cane sugar.
For the next two or three days it has:
15ozs of boiled water;
15ozs of milk;
2 level tablespoonsful of cane sugar.
After that most babies have:
8ozs of boiled water;
22ozs of milk;
2 level tablespoonsful of cane sugar.

The babies are given as much as they will take, and are fed four-hourly unless they are 6½ lbs, or under, and then they are fed three-hourly.

On the third day they are given five drops of cod liver oil in each bottle, and a little more is given each day until they have fifteen drops in each bottle. When a month old they should have orange juice. Begin with a teaspoonful, and increase till they have a tablespoonful.

The third mixture with fifteen drops of cod liver oil in each bottle is given until the babies are six months old. Then the water and sugar are gradually left out, until at nine months they have whole milk. Some sugar may be left in if the baby refuses the milk unsweetened. The fifteen drops of cod liver oil are still given with the four-hourly feed.

To make the milk mixture, use a double saucepan, or, if

you have none, use a strong jug standing in a saucepan of boiling water. Put the sugar in the inner saucepan, the boiling water over it, add the milk, and just bring the mixture to the boil. Take it off the fire, cool quickly, and bottle. Have a bottle for each feed; *i.e.* a baby fed four-hourly will need five bottles, and one fed three-hourly will need six. Put the required amount in each bottle, stand the bottles in a pan of cold water; cover with a piece of gauze or linen previously boiled, which touches the water on each side. The linen soaks up the water, and the evaporation of this water helps to keep the milk cool. Stand the pan of bottles in a cool safe, or in a refrigerator.

After using each bottle, wash and fill with cold water, and stand aside to be boiled later. 6oz or 8oz medicine bottles make good babies' feeding bottles.

In hot weather, if you have no refrigerator it is usually wiser to make the mixture night and morning.

After the baby is a few weeks old, it is of no importance whether he has the milk cold or warm, but it should be one or the other every time. Do not give it cold one time and warm the next. The simplest way to heat the bottle is to leave out a certain quantity of water when making the mixture, and when a bottle is needed, add one fifth (or one sixth) of this quantity of boiling water to the milk. If the baby is fed four-hourly to begin with, leave out five ozs. of water from the total quantity, and add one oz. of boiling water to each bottle. You will find out from experience whether you need more or less boiling water to bring the mixture to the right temperature for your particular baby. This small quantity can easily be heated in a spoon in the flame of a small spirit lamp. This method of heating the milk does away with the necessity for a basin half full of hot water, to stand the bottle in, and is also much quicker.

If fresh cow's milk is unprocurable or is of doubtful origin, dried milk in some form should be used. The day's supply can be prepared, and then bottled and stored with the same care as the former mixture, and can be heated when required in the same manner. The recipes for preparing the dried milks for the babies' use are usually too weak. For their age, some babies need double the strength recommended on the tins. When using dried milk it is most important that the baby should get fresh fruit juice daily, as well as the cod liver oil in the same quantities as with prepared fresh milk. The cost of dried milk prevents its use becoming more common.

CARE OF UTENSILS

This is important. All utensils used for preparing the milk must be used for this purpose only. Before use all utensils—inner saucepan, jugs, graduated measures, spoons and bottles—must be thoroughly washed, all traces of milk being removed, and then boiled for twenty minutes daily. Teats must be cleaned and rubbed inside and out with common salt and boiled for one minute daily. They should be stored in a dry boiled basin on the pan under the cover with the prepared bottles of milk. As each teat is used it should be washed in cold water to remove all traces of milk, and placed in another dry basin, covered, to keep the flies off until it is boiled again.

If all utensils are not kept thoroughly clean the baby will probably develop vomiting and diarrhoea, with green stools. This is sometimes hard to cure, even after the mistake in technique has been rectified. This form of diarrhoea must not be confused with the diarrhoea of starvation. If a baby is starved—either given too small a quantity or too weak a mixture—he will very often get diarrhoea. This form has not as a rule green stools and is not usually accompanied by vomiting, and is easily cured by an increase in the quantity and strength of his food.

After six months, as well as the four-hourly bottle the baby has more food. To begin with give strained porridge, patent barley, or Granose or Weet-bix soaked in the milk mixture. Give about a tablespoonful twice, and then three times, a day, and increase the quantity daily until the baby has all he wants.

After a few days, when he gets used to this, give a very lightly poached or boiled egg, or a little mince-meat, for one of the meals each day. Three eggs a week are enough, but if eggs are unprocurable, give meat every day. To make the mince-meat get good steak and mince finely, put in a jar with a little water and pound until some of the meat juice comes out into the water. Stand the jar in a pot of boiling water for a few minutes until the meat is warm, but not cooked. Give the baby first the juice, and then some of the meat. When he gets teeth he can be given bits of raw meat, and mutton chops, to chew.

Increase his diet gradually, until when he is nine months old he has three good meals a day. Give him soup, made of meat bones and vegetables, milk puddings, all vegetables (not too much greens mixed with the mince-meat), fruit, especially apples, cooked and raw (if he has teeth). Until he has teeth to chew, see that there are no lumps in his food.

He will either choke, or spit the lumps out, and then will not try to chew when he does get teeth.

When the baby is from six to nine months old leave off the last bottle at night, if possible, but do not struggle to make him do without it if he really wants it.

The baby should be drinking from a cup when he is about a year old, but keep on with the bottle longer if he does not get enough milk from a cup. A bottle of milk when he goes to bed will often make him go quietly to sleep.

Keep on with the cod liver oil. After he is a year old give two or three teaspoonsful every day, for another year, and after that if he is a normal child, give it in the winter only.

A breast-fed baby should be weaned at six months. Begin with the second milk mixture for a few days, then use the third with cod liver oil. Then carry on with the same food as a bottle-fed baby has.

S. O. S.

To all mothers who love their children

Never give castor oil or any other purgative to a child with a pain in its belly who has not had its appendix out. Starve them, and when I say starve, I mean starve. Water is just as bad as Irish stew.

Adults would be well advised to accept the same advice.

'And the wind shall say: Here were decent Godless people, their only monument the asphalt road and a thousand lost golf balls.'

—T. S. Eliot.

'Never, never, never, never, never.'

—Othello.

Chapter 21

'GOOD GOD, GIVE US ANOTHER CHANCE!'

Kaikohe Chamber of Commerce Dinner

We, safe in New Zealand, will be under a big handicap when the time comes to clear up the bloody mess of war.

We have not been bombed; and I hope we won't be. Many of us, especially our politicians, are complacent—indeed, very complacent. Our two old political parties try to make us believe they oppose each other; they don't. 'Leave us (as) in Peace,' they cry, and get irritable.

They have refused battle with their financial dictators, and they were so brave! and that is the most important battle of all. They have practised appeasement like the men of Munich, and with the same result. They have now retired to lick their wounds, but undismayed, they say. Let us forget about them. A new force will arise. I see signs of it. They will fight and win, I believe. If wounded, and they probably will be, at least they will be Greek wounds, anterior ones.

England is quite different. The people, having been bombed, know that the end of a day has come. They are not going to refuse battle. They are going to take a big leap and carry their politicians with them, willy-nilly. And the leap is forward towards a kindlier society, a more natural society, a more scientific way of life. A way of life that can best be described by that greatest of all injunctions, 'do unto others as you would they should do unto you.' For nearly 2000 years we have talked about that, but now we are going to obey it.

This does not mean a return to religion which some seem to think is all that is required. It has nothing to do with mysticism; it is simply the adoption of a fundamental biological law of the greatest survival value. A life pattern, and I believe the only one left us. Politics is a biological science, or should be.

England, according to Priestley, is fighting two wars, one

against Hitler, the other against the old life, the old tyrannies, the old follies. New prophets are being listened to, of all kinds: novelists, journalists, poets, actors, taxi-drivers, soldiers and sailors, churchmen, factory workers, and another class backing them up, the scientists and still another class, the New Economists, who are the best informed of all. Listen to what Dr. Temple, Archbishop of York, and the best loved churchman in England, says . . . . 'The object of all these proposals is to reverse the reversal of the "natural order" which is characteristic of our phase of civilisation. The trend towards war is inherent in the internal economy of the modern nation. The essential evil in the ordering of European life has been the inversion of the proper relations between finance, production, and consumption.'

The politicians, the bankers, the orthodox economists, people can't be bothered with. Daventry knows that. N.B.S. controllers have not tumbled to it yet. And we still have Freedom Leagues, which talk of the Liberty of the subject. License, they mean, when they cry 'Liberty.' I don't object to them having freedom, but I do object to their freedom depriving me of my freedom. 'There can be no freedom unless all are free.

The freedom of vested interests which is the freedom they want, is a tyranny, a Fascist regime, a Hitler regime; and we won't have it. Their manifesto is 'Capitalists of the World Unite.'

The friendship and help from America is largely due to these new prophets. The politicians, bankers, and economists could never have done it. Winston, of course, is a new prophet; but his job is Hitler, and it takes most of his time.

Kaikohe will adopt the new way of life, and it would be rather a good idea to start at once. I am rather worried about New Zealand, her economic position in the new order. If our government had developed certain basic industries, iron and the light metals, as they promised, and which they could easily have done, our position would have been vastly different today. Not so many roads and tunnels and palatial railway stations; but we would be armed, and could if attacked put up as good a show as the Greeks.

Finance and vested interests decided the fate of New Zealand. We could have been nearly self-sufficient, and safe. I can never forget or forgive. Some years ago I thought New Zealand would lead the world into a new age, but I was wrong. Now it looks as if we would have some difficulty in getting her to follow.

I would like to see rural industries developed in New Zealand. We don't all want to milk cows . . . . besides if England develops her agriculture as she says, and I believe she will under the new order, our butter won't be required.

Let Kaikohe make something; any old thing, and become famous for it. I know towns at Home whose fortune and fame were made from such humble products as pies, sausages, and sauces.

Let all freight and transport be charged by weight and dimension as with postage and not by distance. Why not? Transport should be state owned. Geographical punishment would be stopped, and people could live and work in the country and not in the beastly cities. You city fathers of Kaikohe can arrange it, I am sure. Kaikohe has valuable assets . . . certain citizens, the deepest street gutters in New Zealand—and you had a visit from Algie last week.

I think of ' Wings over Kaikohe ' . . . not flying machines, and not exactly the ordinary type of angels, but rather special angels. Herald angels, Evangels, to announce the End of a Day.

Gentlemen, I give you a toast, or is it a prayer? (It does not matter.) ' Good God, give us another chance.'

Chapter 22

FOUR LETTERS TO J. A. LEE OUR VITAMENTALISTS

TO KNOW OR TO BELIEVE

Lee,—You ask me to write about the 'genes' of man, nature; but I know more about the food of man, nurture, so I write of it; besides we can change our food, but our 'genes' are inevitable, a depressing subject. Can the 'Butcher Bird' control his 'genes?' Vansittart says no, and he ought to know; but I think we are beginning to control them for him, thank God. The war news was good this morning, Lee.

Now the fundamental principle of the Democracy I believe in, is that the people should *know, know;* decide for themselves what they want. The fundamental principle of fascism and communism on the other hand is that the people should *believe, believe,* and a dictator of a bureaucracy decide—a vastly different thing. The difference between the actual knowledge and blind faith. In the same way I want the people of New Zealand to know certain facts about their food, facts based on the most authoritative published scientific opinion and dated November, 1940.

To make their minds receptive to this knowledge it is necessary that some false gods and their prophets be strafed, so I must assume 'the offensive.'

LETTUCE VERSUS CARROTS

To-day the people's knowledge of food and vitamins is got from advertisements and from the 'vitamentalists' (my word). A 'vitamentalist' is a man of any old trade or profession who continuously by land, sea, or air, talks familiarly about vitamins, whether he knows anything about them or not; and when they can't put up with him any longer in his own country he comes to New Zealand. The complete bore. Of course we have our native ones as well. They are divided into schools of thought or confusion. The 'greens school' talk spinach, lettuce, etc., 'the yellow school' talk carrot, and I think recently, apricots. 'The wholemealers' are of special interest to us. They have fought for years a losing battle with the 'whitemealers,' the millers, big big business. The 'wholemealers' maintain that the white flour of modern milling processing is bad—which is correct—and

is responsible for all the ailments humanity is heir to, which is not correct. The 'whitemealers,' although not denying that the flour is bad, maintain that if the suggestions of the 'wholemealers' are carried out the millers would all be ruined and thousands of small shareholders, with the usual large proportion of widows and orphans, would become destitute.

The 'vitamentalists' were very noisy and very eloquent, and some very much in earnest. On the wireless you could hear them morning, noon and night; so the politicians had to give tongue, and from the House of Representatives we heard the story of a brilliant new plan. (Read slowly and with dignity.) 'We will add vitamin B to the white flour and so save the health of the people of New Zealand.' and the millers. The usual record was then turned on. There was loud applause, much kudos from the press, vested interests; and the millers of damned bad flour were saved for certain, and the health of the people perhaps—very much perhaps, I say. The 'wholesalers' are slaughtered—and they had quite a good case, if they had stuck to a limited objective and not talked rubbish.

THE SYNTHETIC VITAMIN RACKET

And how much is there in this vitamin business? For New Zealand very little indeed, I say. There is no problem to be solved, no difficulty, provided you have the brains of a louse and use them. I speak advisedly and this is the reason. We know beyond cavil that New Zealand has in abundance in its natural foods sufficient vitamins in a convenient, agreeable, and cheap form for ten times its population. So the sale of concentrated foods and synthetic vitamins, most of them imported, in New Zealand is nothing else but a racket. Only in very rare cases of sickness do we require them.

In spite of that, this is the way thousands of New Zealanders feed. From the grocers they buy processed, refined and devitalised foods in packets, tins, bottles, in any old thing; and from the chemists they buy concentrated and synthetic vitamins to supply what is lacking in the grocers' muck. If the chemists' stuff did really supply the deficiency it would not be so bad, but the trouble is we don't know all the deficiencies; we only know some of them. No one knows them yet, and our children are feeding this way. What damnable folly.

Let us take vitamin B, the 'vitamentalist's' favourite child, a first born. There are many many factors we don't

know. Vitamin B complex it is now called, and although we know quite a lot about five members of the complex (they have all nicknames now for the convenience of the advertisers and 'vitamentalists'), new members continually turn up. The big manufacturing chemists get going very quickly, the advertisers and the 'vitamentalists' give tongue and the New Zealand housewife rushes away to the chemists to get another little bottle of the very latest in vitamins. Being new it is very expensive. I notice the more they cost the more peopie buy, the fools.

WANTED A BRAIN VITAMIN

I regret to say that some doctor 'vitamentalists,' often of a very pernicious type, are using their professional status for authoritative vapourings. Factor W, the anti-grey hair factor, a very recent discovery, intrigues me. Grey hair doesn't matter a hoot, but oh, Lee, if only it could penetrate to the little grey cells underneath—'what visions'!

New Zealand natural food has in abundance factors we know about; and what is more important, all the factors we don't know about—and the unknown factors may be of tremendous importance. That is the crux of the whole matter I think, and realising that, there can be no question as to what we should eat.

Listen. A sheep fed on healthy pastures (healthy pastures is another story worth telling. Scrim, I think, has got his story right now, if he sticks to the 'compost' and Hunza story and realises that the Hunzas have no pigs or sheep and have to do all their own metabolism. I advise you to listen to him on Sunday night) contains all the vitamins known and unknown, and if we eat the whole sheep we must get all the vitamins into us. This sounds very alarming, but it is not really. We must eat not only the muscles of the sheep. We must eat the innards, the 'guts' (guts makes guts I think), the liver, kidneys, stomach, lungs, brain, sweetbreads, also skin, tendons, fascia. In Scotland all skin of sheep's head and trotters is eaten, and I am certain the early settlers in New Zealand did the same. Our cooks require a refresher course conducted by their grandmother.

A NATIONAL DIVIDEND IN VITAMINS

A sheep's carcase, with all the innards in a suitable container, could easily be distributed to each family each week by the food authorities. This would be much better, much

nicer and much cheaper and more in keeping with modern scientific facts than the grocers' and chemists' stuff. The pig is just as useful and has played a similar role in many countries and still does; but remember it must be 'the whole hog,' feet included.

In conclusion, I want to remind you that man is carnivorous. I refuse to eat like a sheep. I want the sheep to eat my 'greens,' and that sort of tack, and I will then eat the sheep. The sheep's metabolism and innards are specially designed for greens, mine are not; all the raw salads so beloved by Americans and copied in New Zealand, I want the pig to eat and I will eat the pig. It is presumptuous of us to undertake the pig's job in 'the wheel of life.' Of course a small amount of what I call sheep's and pigs' food is quite nice. I have no objection to that, but as 'a meal,' a staff of life—not on your life. Fruit I put more or less in the same category.

WORRY A CHOP

I believe that our failure to realise this obvious biological truth has led to a whole generation of our children being starved in their early years in New Zealand. For all young New Zealanders I recommend for a foundation feed, a good, long, fattish mutton chop with plenty of rib and all the fat, fascia, and the rough bits left on. To hell with the polite cutlet. Eat what you can by conventional methods. Then use your fingers—'bite it,' 'suck it,' 'chew it,' 'tear it,' 'worry it' like a dog. Begin them young. Whenever a child's teeth appear the good God meant him to start eating chops.

I believe all the latest and best informed medical opinion would support me in this view. The greens, beans and fruit racket is bust. The roast beef of Old England, the mutton chop of New Zealand, and above all 'the haggis' of Scotland, 'champion of the puddin' race,' is again supreme. 'Haggis' is the most scientifically correct of all the dishes. It is complete, has everything 'intillit,' all 'the guts' are represented. Unfortunately it gives the Sassenach belly-ache, the reason for this being that the English, being a greedy people and rather weakly, eat too much of it.

My story is not even half told, but my time and your space is exhausted, so if you want to know more read this letter again.

Lee—

'I give you the end of a golden cord,
Only wind it into a ball;
It will lead you straight to heaven's gate,
Built in Jerusalem's wall.'

References—(1) Your grandmother's or greatgrandmother's recipe book. (2) Any biology text book. (3) *Nature*, November, 1940.

'ENOUGH TO MAKE DARKNESS VISIBLE'

You say my letter was rather long. You are polite but untruthful. It was far, far too long I knew, and know, but I had no time to make it short.

You ask me now to tell the rest of the story, but I left it to you to fill in the gaps. Actually it was all there. I told you to read my letter twice. Now you tempt me to repetition, which is the technique of the sermon (not my job), a technique I object to. My object is to record, to parade theories, supported by facts—bring them to light—expose them as a camera lens does a film. Your job as a politician is to develop them (my films), and if you approve of the proofs put them (and so you) 'over,' so that all can see 'the light.' You may throw no more light than that which Milton tells us shines in Hell, 'Enough to make darkness visible,' yet it were well done, it is all we can hope for.

I repeat, the only way to get round this special corner is to reverse and go back a bit, then round the corner (easily do it) and continue our journey to a saner way of feeding. I advised you to eat the food that your grandmother or greatgrandmother ate, and cooked the way she cooked it. There is no other way. If we knew all the vitamins that natural food contains and we require for perfect health, and your chemist could separate them, then we could live well on grocers' food and chemists' tabloids. But we don't, they can't, so we can't.

The 'vitamentalists' are frauds. They don't know—'superficial dabblers,' scientists call them. Doctors have done a lot of harm (I include almost the whole profession). Certain of them, backed by no scientific observations of any value, have advocated a diet of sheep's, pigs', cows', and monkeys' food, as ideal for *homo sapiens;* and others who knew they were talking rot could not be bothered exposing

the folly. They say educating the people is not their job. I think it is. For a generation the public heard of uric acid and rheumatism, kidney trouble, blood pressure, etc., etc., caused by butchers' meat (white meat not so bad, they repeat; actually there is no difference), all just absolute nonsense, and known to be nonsense 30 years ago by men whose opinion was of value.

The Plunket Society for many years underfed babies and children. Sir Truby King's work was magnificent, much of the baby technique was splendid, and many infants survived that but for him would have died. For the first time a simple technique of cleanliness in infants' food and general care was energetically taught to the mothers and nurses of New Zealand. That is the reason for the great success. It was not due to their ideas on feeding; that part of it was all wrong, and known to be wrong 30 years ago. (But note, a healthy baby is tough. He can usually survive in spite of a faulty diet.)

THEY DEFY 'CALORIES' AND DOGMA

The Plunket method of infant feeding is now being brought up to date, and results will be even better. I have been indignant for years at the 'successful folly' of this part of Plunket teaching, the folly inherent in all dogma. For it is almost impossible to overfeed a healthy baby. If the food is even approximately what its metabolism was designed for, the surplus will just 'overflow' if he takes it; but almost invariably he won't. Water is irritating to the gastric mucosa of the baby's stomach, so never give them water; you never see a lamb, a calf, a foal drinking water, for they have more respect for their gastric mucuous membrane. The large proportion of digestive disturbances we see in babies (not due to dirty feeding) is due to under-feeding, not overfeeding or wrong feeding. A good rule is to double the strength. It usually succeeds, we find. It is advisable to add cod liver oil and ordinary cane sugar to the feed. Using special preparations to supply these deficiencies in cow's milk has certainly no health objective on a scientific basis. They are expensive, and it is not fair that the poor mother with limited purchasing power should be humbugged into buying proprietary preparations in the belief that they are superior.

Plunket nurses should be paid by the state, and controlled and assisted by specially trained medical men, selected and paid by the state. Actually the work in many districts should be done by the district nurses, who have been specially

trained. The overlapping in many places is absurd. At present the Plunket Society work is carried out often in deadly opposition to the general practitioner. This is neither's fault. It is the fault of a system which is non-co-operative. In a properly organised medical service working from clinics, the work would be co-operative and non-competitive. A panel system is not going to help, I am sorry to say.

We are going to see a boom in the manufacture of grocers' foods and vitamins in New Zealand. Money will be made available by the bankers for the purpose all right—'Big Interests' are interested. To pay for them we will take more and more food out of our soil and put less and less back. The rape of New Zealand will be speeded up. We must, as our orthodox government backed by our orthodox economists so often tell us, maintain a favourable balance of trade exports—more than we import. We are practising bankers' farming. It is not 'farming': it is 'mining.' We are destroying New Zealand. The whole of the food producing world is being destroyed in the same way. It is a world rape of an idiot world.

I would like to tell you the story of the Maori people—it is a sorry tale—and what is being 'done for' them, yes, 'done for' is correct. Paying the bankers for the Maori war I suppose you would call it. 'The hectic search for a quick profit at no matter what ultimate cost is destroying with terrifying rapidity the fundamental basis of a life giving agriculture.'—C. T. Wrench, M.D. That I believe is the greatest crime committed by the controllers of our money system. I believe it is more serious than the war. I agree with you, our secondary industries must be developed; but using up 'man hours' to manufacture concentrated and synthetic vitamins when we have them already in natural abundance seems folly. I believe in freedom, but I am convinced there can't be freedom without some regulation; but it must be regulation for the public weal and not for a privileged class. 'Planning,' yes, but not a biassed planning.

'Thus far I have come and no further,' the rest is your pigeon, Lee. Reconstruction is a synthetic study.

References—(1) *Already Walks To-morrow*, by Street, a novel and exciting love story, written by an expert scientific farmer. (2) *The Rape of the Earth*, by Jacks and Whyte. The authoritative work on soil erosion. (3) Any modern standard book on feeding infants.

THE VITAMENTALIST

Lee, the worst has happened. You have let loose a very, very angry vitamentalist indeed, at me, on me. You must grant me a little space to try to soothe him. His anger is his own fault, not mine. I told you to read my letter twice, and you told him to read it several times. He paid no heed, so he misunderstood. I know that man can live quite well on pig's food, I said so. I spoke of the Hunzas. I prefer, however, to eat the pig. I believe it is the better way. It is far more convenient and agreeable. It is biologically and physiologically correct. If, however, we are faced with starvation, short of agricultural land, short of imported fodder, and short of animals, then we must utilise our limited resources to the maximum, forget about the pig for the time being, banish him from our land and live on his food.

This is what happens in war time. It happened in Denmark, in fact, all over Europe during the last war, and it is happening again to-day. But not in New Zealand. That is my grievance, and my case against the vitamentalists. Here there is no necessity to eat like a pig or a sheep. We have ample food for both man and his flocks and herds.

Dr. Hindhede, the Danish vegetarian (the vitamentalist of these days), realised that people could best live in war time by eating the pig's food. There was nothing new about this. It was the method of primitive man, in fact that of his tailed ancestry; but vitamentalists please note—when man's front brain developed sufficient intelligence to catch the pig, he caught it and ate it.

Picture the antics of delight of our ancestor who first smelt and tasted roast pig. See him kicking his platter of greens, fruit, nuts, and whole grains, sky-high. 'Good-bye to all that.'

Now the Danes, being sensible people, resumed their pig-eating as soon as they could. Their mortality and morbidity rates still continued to improve, so the improvement during the war period could not be due to the low protein diet, as the vegetarian Dr. Hindhede maintained. The medical literature of the period pointed that out. He had made the old mistake, '*Post hoc, ergo propter hoc.*' He was a vitamentalist, not a scientist. Continued improvement in our own vital statistics of the post-war years have corroborated this. The low mortality rate in certain diseases in the war period was due to the fact that most adult men living a sedentary

life eat far too much. In war time they can't, so they don't die of these diseases.

In conclusion, I have a suggestion to make; I fear it sounds like appeasement (someone is always sacrificed); but I want Peace, not anger. I have just returned from a visit to Wellington and Auckland. I have observed carefully, and I believe that many of the white-collared males would be the better for a jolly good starve, so hand them over to the care of the vitamentalists, to bant. I insist, however, that the vitamentalists leave the children, adolescents, mothers, and all those who sweat to live, to the care of modern science.

By the way, the explanation of my lack of politeness (his word) in the handling of chops is entirely due to Queen Victoria, who always picked a chop just as I described and advocated (John Brown looked on and approved). All well-brought-up children of my generation, loyal subjects of the Queen, were told this, and practised it.

VERTICAL DRINKING IS THE QUICKEST ROAD TO HORIZONTAL INTOXICATION

Lee,—You wrote me once, or did I write you, in praise of 'beer gardens'? It is a worth-while subject. Now in our town we have a vacant space, right in the middle of our 'city'; there are trees, flowers, rippling water, lights across the harbour, and often the moon. It has a perfect shape, no shape at all, no boundaries, not a square with rails all round and symmetrical borders. An old house was there—it fell down, it just died, like its owner, of old age. Creepers—periwinkle, honeysuckle, and all sorts of nice old-fashioned roses—took charge. God took charge and made it very beautiful—the brutal, stupid hand of man was never raised. Now all it requires are tables and chairs, some in the limelight, and some in the shadows for the lovers, and an enlightened government to alter our licensing laws. I would ask Paul Robeson to sing some moonlight night in my beer garden. I am sure he would come—you would come, the whole of New Zealand would come.

HAS WINE A VITAMIN?

Why can't we have the continental cafe system in New Zealand? Why should we persist in vertical drinking in our beastly bars? Homo-sexual orgies I call them. Why can't men and women and their families meet at night, drink the light wine and beer of their country, coffee and tea, and talk and talk, and listen to the music, to the music of the people, the Maori music. In time, perhaps, the pakeha might learn to sing, ' instead of opening a tin,' they could dance, they can dance. Light wine is good for a man, just a little bit of kick which raises him on to ' his summit,'—not too ' high a summit ' lest he get light-headed. I believe we need wine, ' the wine vitamin.' We are frivolous but not gay.

The drink must be dirt cheap—the actual cost of production, not that cost plus the bankers' costs, plus the costs of a private monopoly, plus the costs of government taxation. (The high cost of beer is its worst feature.)

A government that fails to realise that money is but a ticket and insists on running the country by extracting from the people's purses tickets that are required to exchange the goods and services actually and potentially available, needs changing.

There should be no drink restrictions, except that of quality and potency, no monopoly. Let everyone make it who wants to and can, let everyone sell it, let everyone drink it. Have it in your home, drink it with your food.

On the continent with no restrictions, you rarely see a drunk man. In New Zealand, with more restrictions than anywhere else in the world, you see—I hate to say it.

TOO MUCH ' HAVE YOU HEARD THIS ONE '

A man accompanied by his wife and family does not get drunk even in New Zealand, especially if he is in the habit of drinking light alcohol with his meals at home. It is vertical drinking, the strength of the beed, and ' time, gentleman, time,' and the absence of women, that makes men drink till drunk. Our habits give us too little opportunity to talk, swap lies on all sorts of subjects, especially politics. In our homo-sexual bars horse-racing, football, and wrestling are the topics—they listen in to them too, but not to the war news, I notice. And of course bawdy conversation—that apparently physiological adolescent necessity, product of our modern civilisation, which once established becomes a habit persisting unto death. Harmless in itself, perhaps, but it takes up far too much of our short lives. Politics are prac-

tically *verboten*—not ' the thing,' too controversial they say—for having an argument in New Zealand is having a fight, even in the eyes of the law. The publicans don't like it.

In the cinemas, that land of fantasy, again no talk. Bridge has been a curse and crossword puzzles and sports cults the same. The wireless—listen in but no talk-in. This lack of opportunity for exchange of views and discussion amongst the people and between the sexes is a grave handicap to our education and establishment of a real democracy.

Our cities at night would become ' possible '; at present they are ' impossible,' the dullest in the world, so visitors say, and I agree. For lack of harmless amusement we seek harmful amusement. I know no reform that would do more for the education, culture, and good behaviour of the people than the alteration of our liquor laws by their removal in the way I suggest. Worst of all, we are dull, we have lost our gaiety. Our laws are of Puritan origin, and the Puritan is still in our midst. Let us strafe him, Lee.

> *' The sun is lost and the earth, and no man's wit*
> *Can well direct him where to look for it.'*

I ask your assistance; or rather, offer mine.

'Still they have made us eat
Our knowing words, who rose and paid
The bill for the whole party with their uncounted courage.'

Chapter 23

MEDICINE AND HEALTH IN NEW ZEALAND

A Review

A highly qualified and successful New Zealand surgeon in active practice has had the courage to publish a book critical of his profession.

It is difficult, perhaps, for the public to realise than an action of this sort has frequently meant for the author professional or financial ruin, or both. It is unnecessary to give details of the disciplinary methods adopted by the profession. They are subtle, but very effective; not always, however, and we hope Mr Robb will escape. I think he will, for the public is beginning to realise that the practice of medicine is far too often suggestive of a financial racket, and they will respect and perhaps reward an honest and constructive critic.

In recent years many books, novels, autobiographies, etc., have been published, highly critical of the medical profession. They have been, but for a few notable exceptions, written by medical men of little professional consequence, or by men of repute, become senile and slightly garrulous, retired from active practice and so safe from professional discipline. I have noticed that many of these books, I suppose with the object of making them sell, are full of extraordinary improper stories (often doctor's chestnuts). These stories are to the layman so arresting, that the critical message of the book is often overlooked. Mr Robb's book is quite different. It is not exciting, in fact rather dry, but it is technically correct, written by an expert mature but not senile. On these counts alone this book deserves attention.

Does Mr Robb hope to convert and so secure the active co-operation of his brother doctors? If so he will be disappointed; for the reason that most doctors who know their job know just as well as he does the hopeless inefficiency and humbug of present day medical practice. They know, but they do not want the public to know, for the simple reason that they are getting on very well indeed, 'thank you,' and don't want any change. Brigands don't want the laws of their country altered to interfere with their brigand-

age. They call that interfering with the liberty of the subject, and join the Freedom League. Mr Robb apparently objects to being a brigand, so he has written a book about it and blown the gaff. Brave lad!

The most important part of Mr Robb's book is his conception of the clinic system. A health factory with a staff of doctors supplied with all the best equipment, working co-operatively to produce the goods, namely the good health of the people. In charge of the clinic we see an eminent medical man. The control and the discipline is similar to that of the mediaeval guilds, control by experts within the organisation, not by laymen as in hospital boards, or by centralised authority as in a fascist or communist state.

In a recent debate in the House, Mr Lee mentioned this book. He spoke of the clinic system. He apparently is the only member of the House who realises what a modern stage medical service should be. (He did not say half enough.) The government spokesman only restated the story of Sir Henry Brackenbury which we have heard *ad nauseum*. Sir Henry Brackenbury is a medical politician, and the official spokesman of the panel doctors who are getting on very well indeed. He is, or was a general practitioner, and no doubt a good one, but he has neither the right nor the qualifications to speak of modern scientific medicine, and his description of the medical service at home is quite misleading.

Mr Robb thinks we may still have the opportunity to introduce a modern health service. He is not completely downhearted at the failure of the government to accept advice, namely to get the hospitals and their associated clinics right first, and then link up the G.P. service to those centres. He points out that the new G.P.'s must be differently trained to fit them for different and more important work. If Mr Robb is correct, and he brings forward very heavy artillery in support, then the government's establishing of a G.P. service of panel doctors is very bad medicine. He believes in co-operative, not competitive medicine. Panel medicine is certainly not co-operative. He realises that the practice of medicine must be looked upon as a social service, not as a private enterprise.

I believe that if the clinics were established the public would soon find out that the advice and treatment they got would be so vastly superior to that of the panel doctor in his private consulting-room, that they would never bother going near him. The public agitation and subsequent consent of the government to include out-patient departments (embryo clinics), supports my belief. It does seem rather absurd how-

ever, that the government pays out annually a few million pounds for work which is largely useless, and could be done more cheaply, and, which is far more important, more easily and far better, by the establishment of clinics.

The most effective piece of writing in the book is the story of the Auckland Hospital. Here, as usual, Mr Robb uses the method of under-statement, but one can hear between each line, each word, the thunder of indignation. Dr. Watt's recent letter (I hope an ultimatum), to the hospital board, supports Mr Robb's contention. The board's reaction as reported in the press is true to pattern.

Mr Robb writes of the work of the Obstetrical Society; but why does he not criticize their apathy in the face of the failure of the maternity hospitals to introduce what is probably the most revolutionary and humanitarian advance in midwifery since the introduction of chloroform? Painless childbirth. Possibly consulting surgeons, so aloof on their pedestals, still believe in the stork story.

Mr Robb must agree with his 'cynical friend,' who remarked, 'we are not doctors, we are the disease.' For has he not written a book supporting that contention. Why did he not go the whole hog and use that for his title?

A STATE MEDICAL SERVICE FOR NEW ZEALAND

Reprinted from the 'Mirror,' July, 1939.

The fundamental fault in the present medical system is the financial relationship between doctor and patient. The health objective of the sick man and the financial objective of the doctor are diametrically opposed. The longer your illness and the more operations you have the more I, as your doctor, will get out of you! In private practice a lot of unnecessary work is done. There are such things as financial tonsils and appendixes. Dr Cronin's book, *The Citadel* (officially but not privately condemned by the doctors) is not exaggerated.

The Minister of Health says that, failing the co-operation of the doctors in giving effect to the legislation, the government would have to proceed with the institution of a state medical service.

To this ultimatum the association's representatives replied 'That in their view a state medical service was preferable to the present scheme of contract with practitioners.' (Press report.)

I, as a medical practitioner, welcome the minister's ultimatum, and for once agree with the British Medical Association's views. I consider that their slogan, 'Hands off the general practitioner,' is an obstacle to human welfare. It would appear, then, that at last we have an opportunity to establish a really fine medical service in New Zealand; an up-to-date 1939 service. New Zealand doctors, if they are guaranteed economic security with a high standard of living, sufficient leisure, the right to be selected and judged by members of their own profession, should now be able to co-operate with the government.

We have in New Zealand able and capable men willing to advise the government in the scientific application of medicine, and I sincerely hope that the government will welcome such advice and act upon it. Although the government has decided on the policy, the method of carrying it out should be left to technicians—in this case the doctors—who are specially interested in modern scientific medicine in distinction to those who are specially interested in medical politics. This distinction is exceedingly important.

REASONS FOR AND AGAINST

Let us briefly examine the chief advantages of a State Medical Service. They would allow of:

(a) Complete co-operation between medical men. Team work, impossible both under the present system and the panel system. Team work is the only method of properly applying modern medicine.

(b) The establishment of polyclinics linked up with the general hospitals and all the other health services. At present they are not linked up, but actually in some cases violently opposed to one another.

(c) The auditing of results of treatment, making it possible to act on the results shown by such an audit.

(d) A co-operative 'specialist service' that would be far more complete and effective than under any other system.

(e) The same treatment for rich and poor, Maori and pakeha.

(f) The abolition of the present relationship between doctor and patient in which the financial objective of the former is diametrically opposed to the health object of the latter. This will prevent unnecessary surgery and useless domiciliary visits.

To be quite fair and logical, let us now examine the disadvantages of, and the arguments against, a whole-time state medical service.

I could probably not do better than quote the following objections taken from an article in *Medicine To-day and Tomorrow* (March, 1939), dealing with the Walton Plan for a state medical service. These objections should be regarded as being fairly representative of the profession, as they were raised not only when the Royal Society of Medicine discussed the subject in London this year, but have also been put forward in New Zealand.

(a) *That a state medical service would destroy the almost sacred personal relationship between doctor and patient which is the pride of the profession.*

To me, personally, the relationship means that I am a doctor with certain medical knowledge to sell to people who are, or think they are, ill. Having given my advice, I demand a fee which is more or less fixed by law and recoverable by law. I acknowledge, there may be something I have missed, perhaps by being in too much of a hurry. But, which is the

more valuable? A sacred relationship and inefficiency, or a business relationship and efficiency?

(b) *That the doctors would suffer a loss of the freedom which is essential for good medical work.*

How much freedom has a struggling general practitioner under the existing system, or an over-worked successful one? My conception of freedom in medicine is—to be free to accept all the help I can get from other medical men; to have economic security and sufficient leisure.

It is impossible to practise modern medicine properly without team work. Almost all the new work of value to suffering humanity is done by whole-time salaried men.

(c) *The opportunities for some doctors to make large incomes will be very much restricted and this will mean that men of great ability are less likely to be attracted to the profession.*

I accept the statement of fact; it is perfectly correct, but I deny flatly the inference. To quote from the Walton Plan article in *Medicine To-day and To-morrow*: 'We do not wish the medical profession to be recruited by careerists, but rather by men who wish to be set free from financial anxiety so that their attention may be directed to greater ends.'

(d) *The average man cannot be trusted to give good service unless he is energised by self-interest.*

Professor Bernal, of London, in his recent book, says that medical students are mentally the poorest students attending the University of London. (I don't believe him.) He does not say that they are ethically inferior to the other professions, and as in practically all other professions the remuneration is by salary, the above contention applied to doctors is rather insulting.

If the 'average man' (actually there is no such thing) does not give good service under the new scheme which I envisage, his services will be quickly dispensed with, or he will be replaced by a non-average man who, I presume, *is* a good man.

The self-satisfaction a surgeon gets when he has done a good job of work has to be experienced to be believed; naturally, a good fat fee adds to its flavour, but it is secondary. Besides, economic security would be assured under a state medical service, but (and this is really the point) there would be a strict medical audit of service and results, and any member not doing his work properly would not enjoy

economic security for long. A strict discipline, but a just one.

(e) *Freedom of choice of doctor by patient would be interfered with.*

Patients select doctors for all sorts of reasons—most of them quite trivial. Proximity is probably the most common, and quite a sensible reason. In England, where a partial panel system has been in operation for twenty-five years, freedom of choice is allowed.

At the recent discussion of the Royal Society of Medicine on state medicine, it was said that when a panel doctor dies and his house and practice are sold by his widow to another doctor, practically all the patients automatically go to the new man although they have the right to go to any doctor they like. Apparently freedom of choice is exercised only by the widow who sells the practice.

This supports the contention that choice is largely decided by habit—going to the same house, like a man to his favourite bar. It has also been noticed that the doctor with the best qualifications, and one who is held in highest repute by his professional colleagues, has not by any means always the largest panel list, which supports my contention that the ordinary layman does not know an efficient doctor from an inefficient one.

A SERVICE AS I VISUALISE IT—THE POLYCLINIC

The working of a state medical service should be rather different from the operation of any other state department. Doctors would not work well under bureaucratic control with its lack of elasticity and dictatorial methods. The following is my ideal of what would be desirable.

As at present, the Minister of Health, associated with whom is the Director of Public Health, would be in control. But there should also be a Director of Curative Medicine, who, of course, would collaborate with the Director of Public Health. The Director of Curative Medicine must be an eminent physician or surgeon who is familiar with the clinical medicine and surgery of to-day, 1939. In each of the main cities a polyclinic would be opened, closely connected with all the hospitals, special and general, in the district.

The polyclinic would be the 'heart' of the service. It would comprise consulting-room and out-patient department for all the doctors in the city, and would be equipped with everything necessary for the diagnosis and treatment of ambulatory cases. The director of the clinic would have to

be a skilled clinician. He would select his staff, who would all be under his control, and he in turn would be responsible to the Director of Curative Medicine.

All the specialists in the city would have consulting-rooms in the clinic. Some of the general practitioners could do special work in the clinic and others would be selected to attend to the people in their own houses. Roughly speaking, each doctor would have allocated to him a district of about 3,000 people, if possible in the area in which he had previously practised, so that, as far as possible, people could still have the doctor to whom they had been accustomed.

The procedure would be something like this: All requests for visits would be telephoned to the clinic each morning between 8—9. These messages would be taken by a doctor or trained nurse, who would note down certain particulars, nature of illness, urgency, etc. A request for any certain doctor would be noted, and the patient told that Dr. H—— would go if his list were not too full; if he did happen to be fully occupied, the patient would be given the choice of having another doctor or waiting till his favourite doctor found time to see him.

Until the public had learned to put their faith in the clinic instead of in any individual doctor, there would need to be considerable latitude in the arrangements.

Cases of urgency and out of hours would be attended by a special staff, and the clinic would be open day and night. The doctors selected to do the domiciliary work would call at the clinic every morning, meet one another and map out their work for the day. All cases that for some reason had to be treated in their own homes would have the right to specialist advice. This could be arranged for them by their visiting doctor. Actually all sick persons would have the right to the best available specialist treatment in their own homes if their condition was such as to make removal to hospital undesirable.

MATERNITY WORK

The maternity work of the city would all be done by a specially trained staff of doctors and nurses, with a Director of Midwifery in charge. Ninety per cent. of the cases would, as now, be attended to in hospitals, but there would be a few emergency domiciliary cases.

Ante- and post-natal work would be done at the clinic, also Plunket work, which would be supervised by a doctor with special training in the diseases of children. A staff of trained nurses would belong to the clinic; they would assist the

doctors in many ways, sometimes visiting with them and sometimes instead of them. At present, in many instances a visit from a nurse would really be of more use to the patient than a visit from a doctor.

The contention that the present system is the best in the world is not correct—it is a foolish boast. New Zealand's methods, generally speaking, are still those of a rather barbarous and ignorant past; because women are subjected to painful and damaging confinements owing to lack of the use of the modern technique of painless child-birth. Although the mortality figures in New Zealand are quite good, I venture to say that the figures representing the number of damaged mothers are distinctly bad. This can be greatly improved.

Domiciliary midwifery is a thing of the past, and rightly so. Modern maternity accommodation must be made available for every prospective mother in New Zealand. The state, and the state alone, working in collaboration with the respective hospital boards, can do this.

I have just read a letter in one of our prominent newspapers, vigorously and vociferously objecting to the proposed inspection of maternity case-wards by the Medical Officers of Health and Inspectors of Hospitals.

This inspection is the custom of to-day, and has been for twenty-five years in New Zealand, to my knowledge. All hospitals that do maternity work are subject to inspection and audit of results. Case records are kept giving all the harrowing details. It is the duty of the inspector to examine these cards. In late years the inspection has become much more rigorous, resulting in a considerable fall in maternity deaths and mortality rates. New Zealand mortality rate in child-birth used to be one of the highest, now it is one of the lowest. This is due to the fact that the government Inspector of Hospitals (a salaried official, please note) is one of the keenest and most efficient medical men I know. The inspection and audit of results in general hospitals would, I am sure, yield similar magnificent results. The lay-man (or -woman) who wrote this letter to the paper may be excused for his mistake, but I regret to say that a similar criticism was made by a leading medical man in New Zealand. He must have known the facts.

A NEW TYPE OF PRACTITIONER

The work of those engaged in the preventive branch of medicine would also be centred in the clinic in close collaboration with its other activities.

There should be comfortable waiting-rooms, a tea-room, literature—everything to make the clinic as pleasant and cheerful a place as in the circumstances it can be. In a properly equipped modern clinic the patients can have complete privacy.

There should be no objection to all this from the doctor—his life should, with all these conveniences and opportunities for co-operation, be a much easier one and less anxious than it is at present. But what appeals to me most about such a scheme is its educational value. Doctors would be attending a medical school all their professional lives, and would never get out of date. The opportunities to keen men to advance in their profession would be magnificent, very different from the stagnation that is frequently the lot of the general practitioner to-day. There would be great opportunities for original work which are almost completely absent in ordinary private practice.

In the smaller centres, clinics of a similar nature would be required; these would be visited by itinerant specialists from the city clinics.

The complete co-operation between the general practitioners in such places would allow of those who desired to do so giving attention to some special branch of medicine, and of course in time those men would rank as specialists.

The result of this system would be the evolution of a new type of practitioner much superior in training to the average general practitioner of to-day.

The staffs of the base hospitals would be, naturally, full-time salaried men working in connection with and also at the polyclinic as well.

It would be the aim of the Directors-general of these large hospitals to train men to become master surgeons and physicians, as is done in the London County Council hospitals and at the Hague. Every year a few highly trained men would be turned out and they would be used as staff in the smaller centres. These young men would have to be paid adequate salaries while undergoing their five years' extra training.

It is not only in New Zealand that the necessity for a change in the medical service has been realised, but in practically every civilised country. England, America and Canada are in the throes of the struggle. The Scandinavian countries—always the first in matters of reform—have already altered their systems. The Walton Scheme for England is practically the same as that drafted by the writer five years ago and published in his book.

MEDICINE OF TO-MORROW

The medicine of to-day and to-morrow cannot be made available to the people of New Zealand by the same methods as the medicine of yesterday.

The private general practitioner and the panel system are the medicine of yesterday—non-co-operative and diametrically opposed to the best health interests of the community.

The medicine of to-day and to-morrow requires a co-operative technique which can only function under an up-to-date state medical service.

Readers must not think that I stand alone in my views on this subject. I venture to suggest that no medical man who is conversant with modern medicine would oppose the suggested reform for scientific reasons, which are the only reasons worthy of consideration.

There is very little difference of opinion among those of us who are interested in scientific medicine, that is the medicine of to-day. My own medical friends see eye to eye with me on these matters. A careful study of contemporary medical literature shows that in other parts of the world medical men hold the same opinion. At the same time, apparently in New Zealand the B.M.A. still considers the general practitioner as the backbone of the medical profession and is officially opposed to the development of the polyclinic and to the staffing of hospitals by full-time medical officers.

It is rather difficult for a layman to understand this apparent inconsistency. I think it can be explained by the fact that the executive members of the B.M.A. belong to the old school, men who are getting on very well indeed under present conditions and can easily persuade themselves that everything is quite all right and that to alter that ancient and sacred relationship (which actually to-day barely exists) between doctor and patient would be a ghastly mistake. It is an old observation how interest smoothes the road to faith. The younger men, though they hold very different opinions, are not in a position to air them openly; in fact, if they have the temerity to take any active steps to alter things their very livelihood may be endangered.

I believe this concept of medicine is 'correct within the limit of current knowledge, which is enough to expect.'

'Hear us—we can find it.
The path is straight
And the object to be reached
For the reaching.'

'. . . . . why should they be
A history only of departed things
Or a mere fiction of what never was?'

Chapter 25

FIRST AID

In New Zealand as elsewhere the war has forced a real attempt to make a working knowledge of first aid the common knowledge of the people. The very extent of this campaign makes it very important indeed, that what is taught should be practical and simple and on time; by that I mean that the people should be taught only the methods that are recognised as the best by those who are able, and so have the right to speak authoritatively to-day, May 7th, 1941.

A perusal of the latest available edition of the first aid text books as used in New Zealand to-day reveals that the methods recommended do not conform with these essentials. It is but a compilation of second-hand thinking—a thing of scissors and paste—collected from surgery books, some of which must have been written thirty years ago. I don't want to be misunderstood; I don't suggest that many of the facts and methods described in the book are not correct and simply and well described, but the emphasis in the book is all wrong and the omissions are so serious that 'first harm,' rather than 'first aid' might easily be the practical result of following its teaching in some cases. For example:

Much the most vital first aid service that one member of the community can render another is to recognise and treat correctly in a case of serious injury, the condition of what is known as shock. This is not emphasised nearly enough in the first aid text-book. On the other hand, a great deal of attention and prominence is given to the subject of tourniquets, the application of which is required very rarely indeed. Furthermore, no warning or explanation is given of the dangers of the inadequate tourniquet. These serious omissions alone are ample excuse for attempting to describe what we know of the essentials of first aid in May, 1941. I can assure you that the latest current literature advises very different methods from our N.Z. text-books. Nor is it only the amateur first aid that needs re-writing; the first aid methods of the surgeon need it badly as well. It is being done to-day, and done in a hurry forced by the urgency of

war. God knows, they have plenty clinical material in England on which to base their new ideas.

In my last book I told the same story; but I have far more and bigger guns to fire now.

SHOCK

I repeat, the first and far the most important service rendered in first aid, is the treatment of this condition. A short description of a recent case will best explain:

A car, failing to take a corner, rolled down a steep bank. One man was seriously injured. I was sent for and arrived about an hour after the accident. This is what I found: a young man was lying at the roadside where he had been placed after his removal from the wrecked car. He was very pale and beads of perspiration showed on his forehead. He was silent and his voice could barely be heard when he was spoken to. He kept groaning and complained of great pain in his back. His breathing was shallow, and he looked very anxious. His skin felt cold and clammy. I could hardly feel his pulse. He could not move his legs and when lifted they were quite limp. I pinched his legs and he never moved them. He could move his arms. He looked just like a person near to death; and he was, I thought. This is what we did: A sister from the hospital had arrived half an hour before I had. She had covered him up with rugs, and had given him $\frac{1}{4}$ gr. of morphia hypodermically. She said it seemed to have had no effect as his condition had not improved. I gave him another $\frac{1}{4}$ gr. of morphia injected deep into the muscles. I sent to the nearest house for hot bottles and tea with plenty sugar. I waited a quarter of an hour, and when he did not improve I gave him another $\frac{1}{4}$ gr. of morphia into the muscles. The hot bottles arrived. He could not swallow the tea, and felt he was going to vomit. In about another ten minutes I noticed a slight change. He seemed a better colour. I noticed his lips showed some redness. He had stopped groaning and seemed to be asleep. We left him undisturbed and quiet for about half an hour. His colour was now much better and his pulse could be felt, though still feeble. When asked he said he felt better, and swallowed a few mouthfuls of hot sweet tea. (Note especially, we had never moved him in any way up to this stage.) We waited a bit longer, and he slept. It was a very warm day so we fixed some ti-tree branches to shade him. By this time a proper stretcher had arrived from hospital. His colour now looked almost normal. He drank quite a lot of tea, and when asked he said he felt ever so

much better. We still waited, and he then volunteered the information, ' I am quite comfortable. I could lie here all day,' and he smiled. His pulse was now fairly good, and we decided that now we could safely try to move him. I examined his back, and the deformity was obvious, just about half way down his spine. His breathing though shallow did not seem seriously interfered with. Very carefully three of us lifted him on to the stretcher without hurting him, secured him by ropes tied right round him and the stretcher, and then into the lorry. In spite of the fact that the wretched lorry broke down and he had to be transferred to another, he arrived at hospital in good condition.

(1) If we had not waited till the shock had passed, in my opinion he would have died in transit.

(2) Morphia, given in large doses, and injected into the muscles or into a vein is the only effective way of using ' God's own medicine ' in badly injured and badly shocked cases. The usual subcutaneous $\frac{1}{4}$ gr. or $\frac{1}{2}$ gr. is practically useless if pain is severe and the circulation feeble. It is not absorbed quickly enough. That is the explanation of a badly injured person requiring huge doses of morphia subcutaneously to produce maximum effect. I believe this to be an observation of first-class importance which is, strange to say, unknown to most doctors.

(3) Warmth and hot sweet tea, quietness and sleep are the important means to adopt; and note that he got no sweet tea till the feeling of sickness had passed. The reason why we use sweet tea is because a sugar solution is partly absorbed by the stomach, and the rest in the duodenum and the upper jejunum. About a teaspoonful of glucose to the pint is the correct strength, for, if stronger, absorption is delayed because secretion is required to dilute it before absorption takes place. Water is not absorbed by the stomach and very little in the small intestine till it arrives in the lower part. Shock, of course, slows down the passage of fluids very much and probably keeps a great deal of it in the stomach and very little in the small intestine. I write elsewhere of the folly of giving fluids to post-operative cases by the mouth; the explanation is the same. Anaesthesia and the operation produce stasis. All this has been taught by physiologists for years but many surgeons either have never learnt it or have forgotten it. Weak alcohol like lager beer is absorbed, partly anyway, in the stomach. It is also useful.

I will now give you an example of ' first harm ':

A young man out shooting from a bush camp tripped and the charge went into his upper arm blowing his arm to

pieces. He bled, but not very severely they said. His mates put on a very tight and efficient tourniquet at once (it was on when he arrived in hospital). He was quite near a shanty and they got him in and into a bunk quickly, and gave him hot tea and food and got him warm. His condition they told me was then quite good so they decided to shift him to hospital. They first tried to carry him the quarter of a mile to the road, then they put him on a horse. Finally they got him down to the road where he had to wait for a lorry. It was a very cold night. The lorry arrived and they got him aboard. Lying on his back with no mattress and going for forty miles in a heavy lorry on a rough road is an experience few men badly injured could stand. All sorts of delays, including transhipment to another lorry, this poor boy was subjected to. When he arrived in hospital I saw he was hopeless. He was conscious but almost pulseless, and cold, cold as ice. He said himself, poor chap, ' If only I could get warm,' but he couldn't. In spite of everything we did we could not get him warm and he died in a couple of hours. Now this man did not die of hæmorrhage. He died of ' first aid '—' first harm '—treating a traumatism by administering an even more severe traumatism. If he had been left where he was and we had gone to him instead of him coming to us, I am certain we could have saved that man's life.

So the slogan for first aiders should be, in all serious accidents, *Make him comfortable; leave him where he is* and *send for the doctor;* not ' Rush him to hospital ' as has far too often been the practice of first aiders, not only amateurs but, what is astounding, professional first aiders.

There is one point I want to make—that the diagnosis of shock is not always easy. All the signs and symptoms are not always present. For example I have seen a man injured to death—talking quite well—and saying he was alright. An estimate of the force of the violence he has been subjected to is a help.

BURNS

I will again say what I want to say by giving a recent example:

Aged twenty months had boiling fat poured on one side of its face and practically the whole of its left arm. The father reported it by telephone at 6.30 p.m. The child was extremely blistered and the father had immediately poured pure cod liver oil over the burns. I could hear the screaming child as he spoke on the telephone. The matron of our

hospital collected the following equipment and picked me up in her car:

(1) A drum of dressings with gowns, masks and towels.

(2) Two containers of cod liver oil and vaseline dressings, one holding gauze rolls and the other pieces of old sheet.

(3) First aid box containing anæsthetics, drugs, bandages, safety-pins and hypodermics.

(4) Dry unsterilised gloves.

All these things were collected in a few seconds as they are always ready. When we arrived the child was screaming the house down. We put on our gloves with ethereal soap and sterilised them in Dettol; then our gowns and masks. A big roll of the cod liver oil and vaseline was quickly applied to the whole of the arm right up to the shoulder. Next a dry gauze roll was applied and a splint of ' Heralds,' folded to encase the whole arm, was applied with three separate lengths of bandage. The face was dabbed freely with cod liver oil and vaseline. The child was still yelling and throwing itself about and we could do nothing with it. Next we gave it one capsule ($1\frac{1}{2}$ gr.) of nembutal with a little milk, and waited for about six minutes by which time it was fast asleep. We decided to take it to hospital. It slept the whole way and did so without moving until 3 a.m. next morning, when it wakened up and cried, and sister gave it a half capsule of nembutal in half a cup of milk which it drank freely. (Nembutal makes you very thirsty.) Next morning I saw it at 9.30 a.m. It was quite all right, had fed well but was cross plus plus. So we decided to send it home, a mile from hospital. Five days later I dressed it. The parents said the child had been quite all right. It seemed quite happy and looked in perfect health. The parents had made an ingenious bag out of an old sheet to hold the whole splinted arm, and had fixed it round the child's shoulders and neck. This prevented the dressings from slipping off when the child was sitting or standing up. Its face was looking very well and won't be scarred as it probably would have been if tannic acid had been used. They had continually been putting fresh applications of the ointment to replace what the child had continually been removing by rubbing. The arm burns showed a healthy looking raw surface. A few blisters on the hand had to be removed with forceps and scissors. A similar dressing was again applied and the splints and patent bag secured. It wasn't looked at for a week and neither was the child, by me. On the fifteenth day the arm was again dressed, and with the exception of a small area

on the upper arm it was healed. The face burn was perfect. The delay in healing of the area on the arm was due to friction from the moving of the dressing and the splint and demonstrates the importance of the dressing being sufficiently firm and sufficiently splinted. (We have frequently noticed this with cod liver oil and vaseline dressings. It also leads to exuberant granulations. We always give proseptasine in all burns, usually internally. In one very extensive burn in which certain areas were badly infected we have used it locally with, we think, benefit. Our experience is far too limited to allow of a definite statement.)

Now let me summarise what can be learnt from this case:

(1) The dressing is quickly and easily done without further shocking of the child and with materials which can be prepared and kept ready in every hospital, in every district nurse's car and cottage, in every school. No long shock-producing treatment is required as in the tannic acid treatment for which this case would have required a general anaesthetic.

(2) The use of nembutal in these cases (but note that it must be given in full doses just as in midwifery) is a tremendous advantage. You can't use morphia; it is dangerous to children in full doses. The child feeds well under nembutal, an important advantage in a shocked child, and it doesn't vomit.

(3) Frequent and painful dressings are not required.

(4) Scarring and contraction with subsequent disability is largely prevented.

(5) It saves the patient's pocket and the doctor's time.

(6) It can be treated at home.

Note particularly that no first aid dressing should be applied unless you have the right stuff. Pure cod liver oil is excellent. I know of no other suitable dressing that is likely to be available. Leave them alone and don't remove clothing; you cause pain and expose the wounds to infection. Treat for shock and send for help.

If it is seen at once, plunging into cold water may limit the burn. For example, in a severe benzine burn on a launch, jumping overboard may save a live (with certain provisos). Plunging a badly burnt child, clothes and all, into a cold bath at once is good treatment as it puts out the smouldering clothes and if really cold relieves the pain.

HAEMORRHAGE

Recent London experience proves conclusively that a tourniquet is seldom required. There are only two sites where a tourniquet may be applied, the upper arm and the thigh. The latter is really a difficult place for an amateur. We are in the habit of stopping haemorrhage by removing the tourniquet put on by the first aider. For some extraordinary reason I have never seen this explained to a first aider. Just recently it has been noted in current medical literature that, subsequent to experience with the bomb casualties in London, the explanation is simple. The tourniquet blocks the veinous return but not the arterial supply. The result is that the arterial supply of blood leaks out from the injured vessels. Taking off the tourniquet lowers the pressure in the veins and allows the blood to return to the heart. Local pressure, not a big pad but a firm one, will stop most bleeding wounds. It may be necessary to remove the clot before this can be effective.

FRACTURES

I am not fussy about splints; any old thing will, must in fact, do for first aid. The principle of supporting the joint above and below the fracture is a good one, but of course is not always possible. Splints should be well padded; for example if you use a board tie a towel round it: I like paper splints, the Auckland Weekly, the Mirror, your file of John Lee's Weekly (at present one copy is too small, but it is growing, he says).

The position of ease is often ignored by the first aider; he is wedded to the prone position which often causes unnecessary pain and increased shock in some cases. Just the other day this happened. A boy aged twelve broke his upper arm, twenty-five miles from here. It was well and securely splinted. They put him in a motor car lying flat on his back, bumped him on rough roads, with every bump well and truly transmitted directly to the fracture. Two men carried him awkwardly into my house. The boy was very pale and complained of great pain. He had had a horrible trip. I got him on to his feet at once, and he walked out to the car and himself volunteered the information that he felt all right now. He travelled up to the hospital sitting up and perfectly comfortable. The weight of the hanging arm kept the fractured ends in position. God's shock absorbers, the fluid joints, the intra-vertebral discs, and His other devices did their job and did it well.

The use of local anaesthesia, 1% Novocain, is sometimes of

great value in fractures and allows of painless reduction and subsequent relief of pain for some considerable time. For example I have proved to my own satisfaction that in a case of badly torn ligaments of a knee joint, Novocain injection will allow a man to walk who otherwise would have to be carried. In certain circumstances, such as mountaineering accidents, this may be of great practical value. The needed equipment is small in amount and certainly much easier to transport than a stretcher. It could be made available at every first aid centre—I think it should be, combined with plaster bandages. Many a case that otherwise would have to be carried, could walk out.

Most of the advice I offer to the non-prefessional first aider consists of '*don'ts*.' Recent experiences in England show the necessity for limitation of the scope of the first aid worker. I believe it is correct to say that unless you have available all the necessary materials you do more harm than good—'first harm,' not 'first aid.'

I acknowledge that circumstances in New Zealand are peculiar, but even here, looking back on my own experience, I am certain that this attitude is correct. With the possibilities of bombs over New Zealand, one should not hesitate to broadcast the truth even though it may hurt some very excellent people. Removing the charred and stuck on clothes from a badly burnt, and that means badly shocked person, is exceedingly painful and should not be done without previous administration of drugs, drugs that first aiders don't have. Burns, considered as wounds, are probably very nearly aseptic to begin with and the burnt clothes in contact have also been cleaned by fire. Even scalds are probably sterile except for spore-bearing organisms which in open wounds are not a great danger. If the first aider attempts to do anything but treat the shock, he will only increase the shock, and in all probability convert a sterile wound into a septic one. The first aider's slogan should be 'We are the shock troops, the shock troops . . . . ' etc.

For small burns he can be more enterprising, with this very important proviso: That in children trunk burns, especially on the belly or genitals (even if quite a small area) should be considered dangerous.

Now if a civilian first aider is to have his activities limited, it is not much good if the doctor or nurse who takes his place is but little better equipped. The doctor who so often at great inconvenience to himself rushes to the accident provided only with his little black bag, is not really good enough for many cases. The little black bag does not hold enough;

his stuff can't be sterile, and he can't possibly ram into it a fraction of what I want. True he has a hypodermic and morphia, a tremendously important item, but there is more to it than that. 'I met a murder on the way. It was carried in a little black bag.'

A description of what I always carry in my car will best explain. Quite a lot of brains have been picked during the years in the evolution of this kit.

(1) *The white box* (a distinctive box, a box of character, known to all) a light 3-ply box with divisions for bottles and a rug strap handle to carry it. It is painted white. My first box was a black box, I suppose in deference to 'the little black bag.' Here are the contents:

Dettol, Ether, Ethereal soap, Brilliant green, Elasto-plast, Safety-pins, Hypodermics with a variety of needles, Local anaesthetics, Nembutal, Phenobarbital, 693, Proseptasine, Soluseptasine, Adrenalin, Morphia, Ergometrine, Coramine, Pituitrin, Acetylcholine, Novocain crystals, Aspirin, 2 soft rubber catheters, 3 Trachetomy tubes, a funnel, 4 gauze bandages, one 2lb. jar of cod liver oil and vaseline, a pair of dry gloves.

(2) *The Cathcart Steriliser,* made of copper, 17ins. by 4ins., and containing the following instruments:

8 pairs artery forceps, assorted sizes; 1 pair plain dissecting forceps, 1 pair toothed dissecting forceps, 2 small retractors (wrapped in a dressing towel).

Needle board (small) with 1 dozen assorted needles, 2 scalpels, 2 pairs scissors (wrapped in a dressing towel).

1 bag of sutures, 1 of every size of catgut, plain and chromic, 6 pieces silkworm gut, 1 length of dermal suture, 2 pairs of gloves.

Lysol is added to the water in which this is sterilised, to prevent rusting.

(3) *A Drum,* carried in an unbleached calico bag with a drawstring, and containing in a dressing bag:

1 gown and mask, 1 draw sheet, 8 dressing towels, 6 big dressings of cottonwool and gauze, 30 gauze swabs.

(4) Another similar calico bag containing a tin of ether, an ether bag, and vinyl capsules (when available).

An equipment something like this—it might easily enough be improved upon I know (blood plasma for example)—should be carried by the professional first aider. It is my opinion that first aid should always be 'on tap' in all hospitals, large or small. It is the only type of first aid that can be really efficient in many cases. No private practitioner can conveniently have ready to snatch and run what is necessary for maximum efficiency. A nurse should accompany the surgeon. This is a social service that must be catered

for and there are ample hospitals in New Zealand to do it. Equipment and personnel only are required. Often of course an ambulance should be sent, but I want to emphasise this point: Sending an ambulance to a major accident without proper surgical assistance is wrong. Nurses and ambulance men are not good enough. They probably won't dare to give the case as much morphia as he may require. There is more to it than simply getting the case into hospital, and that may easily enough be the very thing they should not do. What equipment the ordinary New Zealand country ambulance carries I do not know, but I would be surprised if they carried all I want. They have splints, cottonwool, etc., but modern first aid uses different tools, tools that are changing every week just now. Gas and oxygen cylinders, for example, should be carried.

I consider that the addition of nembutal to first aid equipment is essential in the light of recent knowledge. Every nurse should be able to give approximately the correct dose but it is useless if given in too small doses. It is safe, far safer than morphia and preferable in every way for children.

When the poly-clinics are established in our cities all first aid services will of course be centred on them. It is only in this way that the casualty death rate, a very high one by the way, can be reduced in New Zealand.

NOTE BY SISTER POLAND, Rawene Hospital

A patient had a haemorrhage and was unable to sit up in bed without everything 'going black.' It was necessary to remove her to another bed. Enough help to carry her comfortably was not available so the patient decided to crawl the distance. She did so without any upset to herself and without undue exertion, and she did not feel any giddiness. This experience may be of use to readers called upon to render first aid to such a case or to cases suffering from shock.

SURGICAL UPANISHADS

1. Pyorrhoea is not responsible for gastric or duodenal ulcers, nor rheumatic conditions, nor anaemia, nor for general ill health (whatever that is); nor for dyspepsias usually. Don't get your teeth out unless they feel bad or won't work properly.

2. Tonsils. They should not be removed unless the patient suffers from repeated sore throats, and never in young children. Size is of no importance. Dissection of tonsils is in a large proportion of cases unnecessary, dangerous, and often futile. The sharp guillotine operation with local anaesthesia (a mouthful of 1% Novocain held in the back of the throat is efficient if no spray is available), is quick, safe, and recovery is immediate.

3. Very very few children should be circumcised. It is a mutilating un-physiological operation, a life's handicap to the victim but a financial success to the doctor.

4. The ' focus of infection ' explanation of chronic disease is ' hocus-pocus ' in most cases.

5. In cases of shock or haemorrhage, all drugs must be injected deep into the muscles or into a vein. (Noted elsewhere, but repeated as a Upanishad because it is.)

6. Nembutal in a large dose to a baby or child will often make tracheotomy unnecessary, also prevent death from shock.

END OF THE ERA OF 'MURDER MEDICINE'

I don't blame the doctors for not accepting the panel scheme—I blame them for not advocating the right scheme. I don't blame the government for fighting the doctors—I blame them for forcing them to do the wrong thing.

When the present government came into power they were genuinely imbued with a desire to improve the health of the people. All credit is due to them for that conception, for strange to say it was a new conception in New Zealand politics. But all blame is due to them if they, knowing how to do it—and they do know how—fail to do the right thing. In fairness to the government the task was, and still is a difficult one. But it is not so difficult as it was. They were heavily handicapped, and their greatest handicap was internal, their own preconceived ideas. 'We know how to do it, all right,' they said, but they didn't, they didn't.

I listened to them talk on the air. I read what they had to say, I talked to some of them; they were adamant in their opinions. The criticism by the Opposition which might have helped if it had been informed, was hopeless. They wanted to do nothing but obstruct. None of the politicians had the least conception of the 'content' of modern scientific medicine, and of what its administration involved. They listened to the worst of so-called expert advice, equally ignorant and biassed. They slung platitudes around right merrily. 'Prevention is better than cure'; but they did not know in the least what that means in modern medicine. They thought that making a G.P. domiciliary service available to everyone (concentrating on quantity not quality), would nip illness in the bud. Actually they told me that the specialists would not be required as there were plenty of G.P.'s to do the 'nipping.' They were obsessed by the 'once over once a year' delusion. Some of them, I believe most of them, were 'vitamentalists' with no sense of proportion. They thought that a plethora of G.P. service would do away with the necessity of much hospital accommodation —a delusion. It didn't at Home and it won't in New Zealand where the people have gradually been using the public hospitals more and more whatever their social status. And a jolly good thing too, the public recognition of the superiority of the government hospitals over the pri-

vate hospitals. Yes, the panel doctor will biff them into a hospital all right, whenever they get troublesome, and I don't blame him.

They talked about a 'stitch in time' and thought that one panel doctor could insert the 'stitch' in his crowded consulting room in the form of a panel bottle of medicine, and so prevent the necessity for nine. The truth is that the panel doctor simply can't do it, for even if he diagnosed correctly—which he very often can't do—where the stitch should go, the panel bottle of medicine is seldom if ever an instrument of precision. It is but an instrument of faith, a *placebo*, a humbug. It is even worse than useless, it is actually harmful because it gives the patient a false sense of security. Let me give you an example, not a very unusual incident of manslaughter. An elderly man, Jones by name, visits his panel doctor. (He was one of twenty that night.) He complains of constipation, no pain, no other symptoms of any kind. He accounts for it himself by some change in his habits. He looks all right and boasts to the doctor of his physical fitness, 'can beat the young ones yet.' The doctor has a large panel, is quite good to his patients, who swear by him; just the average G.P., in private life a very decent fellow. He prescribes two bottles, one a cascara mixture, the other liquid paraffin, and the usual story about green vegetables and brown bread, you know, the usual vita-mentalist stuff. 'Try that for a month, Mr Jones, don't expect it to come right all at once. You may require several bottles.'

In a month Mr Jones returns. He says he is a bit better but still not quite right. Some alteration is made in the prescription, a bit stronger, and another month passes. That last month was the most important one in Mr Jones' life, because it was fatal. He did not know it. Neither did his panel doctor (that old family doctor who understood the Jones 'constitution' so well). Mr Jones actually had a cancer of his bowel, it was diagnosed at a public hospital clinic by instruments of precision used by a man of precision. 'A young looking bloke in a white coat, I don't even know what his name was, wearing a mask over his face and rubber gloves. Rather sulky, I thought. But he seemed to know what he was doing, and he didn't hurt me.' So Jones told his wife. Actually the young surgeon did not compare very favourably in Jones' eyes, with the Jones family doctor. They never do, that is the tragedy.

In these two months the cancer became inoperable. He might have been saved, yes he would have been saved. He

would have seen Hitler shot, and now he won't, poor devil. If and only if, he had visited in the first place a modern polyclinic where the cancer could have been diagnosed either at once with certainty, or at least suspected and investigated by means only available at a properly equipped and staffed clinic. The Jones tragedy must happen wherever a panel or club practice exists, or even private G.P. service. I want all you sick people to visit a proper clinic at once. I don't want you to lose your chance like Mr Jones. Give your panel doctors a miss. I want sickness detected, diagnosed, and properly treated at once. Cancer can be cured, like many other diseases, but it can only be done by the clinic method, which is co-operative scientific medicine; an organisation with a machinery adapted to the functions it has to perform.

Now the politicians rationalise to-day their committal to the panel system. (Note: Rationalising, a bastard philosophical technique, making excuses for the beliefs they already hold, is in New Zealand synonymous with debate). This is inevitable with the party system, actually it is partisanship, the antithesis of reason. The difference is very noticeable in England's parliament to-day, where debate has given place to discussion, the only intelligent approach to problems. Our politicians say, 'Yes, I know the panel system is not a complete service, but let us have it first. We will thus get control of the medical profession, get them organised, whatever that is, and then we will develop your polyclinic idea. Why, we have actually started it. What about the out-patient departments of the hospitals (with junior residents, uncontrolled, doing the work . . . . a travesty of the clinic). You are in far too much of a hurry. (They tell me about Rome etc. I refuse to write it.) This is only the first step.' (First, all right, but backwards often, over a precipice like poor Mr Jones.)

They are wrong, hopelessly wrong: listen:

Under the panel system modern scientific medicine can't be practised, for the simple reason that no doctor working alone can possibly know the whole of modern medicine, its possibilities and its probabilities. His large front brain is not large enough, be he ever so nice and kind. Nor does he possess in his consulting room the necessary aids to diagnosis, to enable him to give in a very large number of cases, good advice.

To this contention the politicians reply: 'Yes, true enough, but if the panel doctor is in doubt, under our completed service he will be able to send his patient to a special-

ist, before long.' My reply to that is: (swift, and I hope devastating) But the panel doctor is not in doubt, that is the whole trouble, he thinks he knows, just like the politicians. But he does not, he does not, he *can't* know all the probabilities. Besides, even if it does work out the way you say, why bother about the G.P. panel doctor at all, working unaided and uncontrolled from his inconvenient private consulting room. The G.P. should be working in the polyclinic from where all domiciliary work can be regulated and carried out, easily and expeditiously. Here he can see his patients and arrange easily that they be examined properly, and see not only one specialist, but if necessary all specialists, so that the possibilities of the case are investigated as well as the probabilities. In the clinic the specialists co-operate with one another, and do not play the ' lone wolf ' as they so often do to-day, and will under the government scheme. This is the only way to detect early cancer—that is, the cancer that can be cured—and the same is true of hosts of other diseases. It can be done at less cost (this has been carefully gone into) and with greater convenience to the patient and the doctor than the government domiciliary general practitioner service. It is a complete service, domiciliary, specialist, and nursing. The government's conception of a specialist service is a non-co-operative specialist service, a branch of the panel. (A rotten branch, I think.)

The polyclinic assures that all doctors will be at ' school ' all their professional lives. They will be taught and supervised by the outstanding men of their own profession; a free association with internal control but compulsory co-operation. They will have sufficient leisure and an assured and adequate income. The young doctors would at last get their opportunity, the timocrats of the profession would be hurled from their pedestals. Young New Zealand doctors of outstanding ability who have left their Homeland simply because of the power and rapacity of these timocrats, would return. (Plato described the timocrats as the ' dictators of a degenerate state.' Their behaviour has a remarkable resemblance to that of Nazi man.)

Why does the government not adopt the polyclinic plan? The best of the doctors, the young ones, would agree with joy to staff the clinics, and we only want the best ones. The old specialists are nearly useless, they won't co-operate, they have played the lone wolf too long. I believe this is the reason why the politicians won't seize the opportunity to do the right thing. Politicians never acknowledge fault, they boast that they ' never change their minds,' but I notice that

they don't always ' keep their word.' I suppose there is an ethical difference, but I don't know it, and they don't explain. They don't seem to know that if they don't change their minds they can't learn anything new, or rather the electors don't appreciate this truth, which in effect is the same thing.

They believe that a panel system will satisfy the people (and it might to begin with till they knew better). Besides, they said they were going to have the panel, so they must go on. ' Men of their Word.' Stupid.

I suppose ' parliament house would tumble down,' if the government spokesmen got up and said, ' Mr Speaker, we have been all wrong, we have talked rot about the medical service; we have changed our minds; we have listened to the advice of men who do know how to do it, and we intend to act on their advice.' The whole of New Zealand would rejoice. (It might, by the way, be rather difficult to get them to believe their ears and their eyes.) For it would mean the dawn of a new political era, ' the era of reason,' and what would it matter if we had to build a new House of Representatives? I am sure no one would grumble.

To-day in England (see the current medical literature, *The New Statesman and Nation,* etc.) after 30 years' trial of the panel system, they have at last discovered that the panel is incompatible with modern medicine. The panel is going, and a whole time state medical service, working in and from the clinics, will be started soon.

To-day in New Zealand the government is doing its very best to ' panelise ' the whole medical profession, establishing the very type of medical service our Mother Country, having tried it for 30 years, found wanting, and now discards. Progress in reverse. I suppose they call it. It is terribly wrong.

Organised political medicine (the British Medical Association of New Zealand) as distinct from scientific medicine, is more to blame, much more, than the politicians. ' They are not the doctors, they are the disease,' is true. If they had given good advice to the government in the first place, I am certain that the government, in spite of their silly preconceived ideas, would have recognised it as good and accepted it. Instead, the B.M.A. were, and still are, quite determined that there should be no change of any consequence. ' We are getting on very well indeed, thank you, so leave us alone. But if you like you can pay our bad debts.' I blush for my profession. I am ashamed of their ' union.' They are worse than the wharfies. True, they

are right in refusing the panel, but they have no excuse, except that of selfishness or maybe stupidity, for not suggesting to the government as an alternative the correct conception of a modern medical service.

Is the psychology of co-operation so weak, or so absent that medical men cannot agree to co-operate in their work for the good of humanity, including, of course, their own good?

I have always believed that doctors who know the job of modern medicine must know how to arrange an efficient medical service, not a perfect one (flawlessly inhuman), but a vastly better one than that which exists to-day or that suggested by the government or the British Medical Association.

Have we to 'parrot' forever down the ages that terrible phrase of Thucydides (400 B.C., or thereabouts)?—A cliche of great antiquity even at that date, I am sure. 'So long as human nature remains what it is,' it *can't* be done. The philosophy of hopelessness, the creed of conservatism.

I acknowledge that I don't believe it can be done by the British Medical Association, the doctor's trade union, a political, not a scientific or cultural association; but I believe it can be done in spite of them. By the true elite of our profession. For I know that all progress of great importance has been and can only be, brought about by the elite. The B.M.A. is certainly not the elite, it is the very antithesis, it it but a mob, led by timocrats. I hasten to add, however, that there must be a synthesis of the various representative elites, a 'haggis' of brains and guts. Otherwise an elite may be but a tyranny. That synthesis of elites is the scientific method of solving the problems of man in society. It is quite impartial, inhuman, if you like, believing only in the truth and prepared to follow the truth wherever it leads and whatever the consequences to its protagonists.

I want the people of New Zealand to form 'a partisan army' and attack furiously the enemies of scientific medicine . . . . the politicians (all parties), for their refusal to change their minds and accept advice, and the British Medical Association for their selfishness and callousness, or just plain stupidity. My own sympathy (it is getting a bit thin lately) was with the government, but I hope and hope that they will fail to panelise (or is it penalise?) New Zealand; for if they fail, then there is no alternative for them (if they don't capitulate entirely to the B.M.A.) but the clinic system with a salaried staff. It is my belief that the clinic system is bound to come sooner or later, in spite of the enemies of progress. But I want it quickly.

For all that I take up my stand in the ' cathedral of what is good '; there will be ' Murder in the Cathedral,' none the less, for I fight both the politicians and the British Medical Association. Between two fires? What though?

A Molotoff Cocktail, the favourite weapon of partisan armies, a humble weapon, but full of potential fire and destruction. It has been known sometimes to prevail against tanks and huns, and such-like, if it hits just the right spot. I am content in my fight and offer no apology for my offensiveness. I trust to the accuracy of my aim to hit the right spot and so win. I am not alone; I am in good company. My belief is the belief (private always, but only sometimes public) of those interested in scientific medicine all over the world. ' Oh turn not pale beloved snail, but come and join the dance.' But somehow I want more (acutely) than most. Besides I hate the timocrats far far more than I fear them. and anyway, ' you can't take the breeks off a Hielander.'

'Three Lone Wolves,' discussing the chase
Scene: Sitting one night by the fireside.

Pile Surgeon: 'By the way, Tom, you remember that patient of yours, Jones, whose prostate you removed. I removed his piles and he has had no more trouble with his prostate.

Urologist: 'By the way, John, you remember that patient of yours, Brown, whose piles you removed. I removed his prostate and he has had no more trouble with his piles.'

G.P. Rouseabout: Said nothing; he needed time to think it out.

Chapter 28

A NEW PILE OPERATION

The bowel is prepared in the usual way, patient in the lithotomy position. Local anaesthesia is used. This is the method I have used (recommended by Lockhart Mummery in the latest edition of his book): With an ordinary hypodermic syringe and a very fine needle and using 2% novocain (adrenalin should on no account be added; it is really dangerous in rectal surgery Mummery says), a small blister is made in the skin about one inch behind the anal margin, and the same in front. A self-filling Pitkin syringe is used with a lock on needle, and a rather stouter needle is now passed through the blister behind the anus and guided by the finger in the rectum, is passed up to the level of the sphincter until the point of the needle is lying in or just behind, the sphincter muscle. The solution is then gently injected, the point of the needle being moved about so as to infiltrate the whole of the area posterior to the anal canal. The needle is then almost withdrawn and re-inserted so as to infiltrate first one and then the other ischio-rectal fossa, and all from the one skin puncture. The needle is then withdrawn and the same procedure carried out in the front of the anal canal. After a period of five to ten minutes there should be complete anaesthesia of the whole anal region and anal canal, and relaxation of the sphincter. There must be complete anaesthesia and this can be demonstrated by the fact that the sphincter relaxes. You can't proceed until this has been attained. I find the Pitkin syringe with a lock-on needle a great advantage. You have only one hand and using an ordinary syringe with a push-on needle is apt to be troublesome. The needle comes off so easily and to replace it necessitates removing the dirty finger from the rectum, with subsequent possible soiling of the needle. It is better to put on a double glove on the left hand. Mummery uses

ordinary syringes. I use only the Pitkin and just change the needle for the deep injection.

The sphincter now being completely relaxed is slightly stretched. On no account should the old method of 'hook thumbs' and stretching till everything gives, be used. (This is I think responsible for much of the post-operative discomfort of pile operations which we used to see, but which we now never see.) Then catch the three pile areas with artery forceps just as in the ordinary excision and ligature operation. Pull number one pile area down and outwards. With a fully curved needle on a needle holder and either silk or number 2 chromic catgut, insert a ligature right up as far as you can round the pedicle of the pile and tie tightly with a double knot. Cut the ligature long so that the ends protrude about three inches out of the rectum. I take a good bite and make certain to penetrate sufficiently deeply to include all the vessels. The same procedure is used with the two other areas.

I claim the following advantages:

(1) It is simple and easy; easier and much more accurate than the injection method.

(2) One sitting completes the operation, rather than three as with the injections. Also there is no wound.

(4) No pain.

(5) Quick return to normal.

There is good reason to believe that this operation does all that the ordinary pile operation of excision and ligature does that is required for cure. I believe that this operation is founded on correct principles and based on a pathological understanding of the condition.

We find that although there has been no removal of pile tissue the external pile atrophies. When examined a few weeks later only loose skin folds can be detected where previously there were large masses. Apart from this 'cosmetic' failure my results are so far excellent. I have used this for all degrees of piles. The ligatures come away about the third, fourth, or fifth day. No discomfort has been experienced. There is no need for the patient to stay in hospital. Very light diet, and then on the third day large doses of paraffin followed next day with an injection if necessary. When the bowels have moved the patient can return to work.

One case with very extensive prolapse has been completely cured.

As far as I know this method has not been described be-

fore. Although I have done a fair number of cases, only by re-examination after twelve months can the true value of the operation be estimated. It is reasonable to claim that it should be fully as efficacious as the injection method, but whether it will be as permanent as the usual excision and ligature, time only can decide. I might mention that in the pile excision operation I have done for many years with excellent results, I never cut the pile off, just strip it up and ligature with catgut cut long, as described in the new operation. I don't attempt to cover the raw area by stitching. Stitches are unnecessary, and are responsible for the remaining percentage of the total pain not caused by the absurd, useless, and damaging stretching of the sphincter by the thumb method.

Although I have always instructed our nurses to watch for the ligatures and the masses of strangulated tissue in the ordinary excision operation, they invariably report that they have 'disappeared' and are never seen when the bowels move on the fifth or sixth day. I hope the result of the new operation may be as satisfactory in the long run as in the short run.

I don't claim priority as I have reason to believe that the same operation has been done by the Trobriand Islanders (although not reported by Malinowski) for many thousands of years, using a flax ligature and a fish bone needle, maybe.

AN AFRICAN DOCTOR

A description of a distinguished woman doctor is lifted from an article in *Time and Tide* dated November 30, 1935. It has I think considerable educational value and it is topical. It was written by Mrs S. Leith-Ross, enjoying a Lever Fellowship to carry on sociological studies in south-eastern Nigeria. Its interest lies in the similarity of medical practice in most countries except of course in certain of the more advanced European countries, Finland for example.

Here is the sketch referred to:

'The fact that she was wearing narrow leather anklets bound with brass showed that she was a qualified medical practitioner. Had she not had them, she would have been "something like a chemist," useful in her way as knowing the properties of leaves and herbs and powdered snail shells, but not to be run after and begged and cajoled to attend a delivery, or to examine a pregnant woman or, most important of all, to obtain conception in a sterile wife.

'But she had to pay for her present position. The proud wearing of the leather anklets could not be had for nothing. They denoted that she had specially dedicated herself to the god of medicine. This had implied various ceremonies, all costing money.

'Now that she had built up her practice, she would be asked to attend cases twenty miles away, travelling by forest paths. She might be absent all day and all night, and would come back to find a row of patients waiting for her, and all her routine visits to be paid. She would swallow a great lump of yam dipped in peppery sauce, pour some water over her right hand, give a twitch to the yard of red cotton round her waist, cram her extraordinary velvet hat a little further over her eyes, and go forth, full of zest and shrewdness.

'Her drugs and instruments were kept in dusty gourds packed in long wicker baskets that hung from the roof of her tiny hut, black with age and wood smoke. She would tell her audience a few of her secrets in a genial, free and easy way which hid, one knew, her profound store of deeper mysteries. Should a pregnant woman have her child in a bad position, she would massage the woman, having first put a concoction of hot leaves that "stung like pepper" over the place where she had felt the baby's head to be. The child, feeling the discomfort of the pepper, would wriggle

round in its efforts to get away from it, and perchance put itself in a right position.

'She would give no idea of what methods she used to induce conception. That was evidently the most lucrative side of her practice, but when asked discreetly whether she were ever asked to procur abortion, she drew herslf up with sudden dignity: "Never never would I do such a thing. It is a bad thing. Not for any money would I do it." She would say nothing about her colleagues but, telling of the day before, when she had been called in as consultant to a dying mother, the way she made the gesture of taking a gulp of water and spitting it out again, gave the measure of her contempt for such bunglers.

'She must have been a woman of some wealth, for her fees ranged from a sixpenny bit to a £5 bagful of shilling pieces. Had she not just received notice that a native policeman was coming thirty miles to consult her as to the reason why his three wives had not borne him any children? She gave the information casually, with a careless and deprecatory smile, but already in her eyes one could see the reflection of the large and shining fee she could get out of such a highly placed government official. And certainly nothing in her costume denoted wealth. The velvet hat, the red kirtle, were all she had.

'"But doctors, they never care how they dress!" said Salome, interpreter.'

'She might be absent all day and all night and would come back to find a row of patients waiting for her and all her routine visits to be paid' sounds like an echo of a description of G.P. practice in New Zealand to-day, and is indicative of the same stage of civilisation.

The massage of the abdomen in a case of malpresentation should interest some of our obstetricians. The technique for correcting the malpresentation is ingenious and should have a wide appeal. It is a very ancient method and dates, I would imagine, with the Murphy's Inhaler as used in St. Helen's to-day to relieve the pains of childbirth. Her intensive work on sterility should appeal to others, especially in view of the recent interest taken in this branch of medicine by some of her confreres in this and other countries. I am sure her results are equally good. It would appear however that she can claim priority over our fashionable 'hormonists.' It would be very interesting to know what form of biological tonic she used for the policeman. (I confess to being distressed and very surprised about the policeman.)

Her indignation at the very suggestion of procuring abor-

tion was in keeping with the high moral standard of our profession. That her professional etiquette was beyond reproach is shown by her protection of a fellow practitioner who had been responsible for the death of a woman in childbirth. (She herself of course had been called in too late, or . . . . .) This protection of a member of a closed association by all other members of that association, in a case of bungling as suggested in the story, is an interesting example of what might be described as private ethics, a line of conduct conducive only to the welfare of its own association and its members, in contradistinction to public ethics (pro bono publico) which are concerned with the welfare of the whole community. Actually of course these two ethical standards may be, and often are, diametrically opposed to one another, The expression ' Honour among thieves ' (for thieves is only of course inferred) describes this relationship, but that cliche is not used in professional circles. ' Must not tell tales out of school ' would be more to their taste (but what about a tale of murder?) It must be very gratifying to the B.M.A. to know how widely diffused their ethical standards are, even into darkest Africa. This lady doctor's fee technique also appears to be very sound and in complete accord with the views of the B.M.A. in New Zealand (from him who hath take all you can, all he has maybe). If the £5 was an ordinary consultation fee it would appear that we in New Zealand are actually behind darkest Africa. It certainly is a much better fee than I ever got from a policeman.

Whether this distinguished lady is a member of the B.M.A. or not I do not know, but her views on medical ethics and politics are apparently identical with those of that association. It would be very exciting indeed if the B.M.A. of New Zealand, in view of the pending crisis in the profession, could secure the services of this distinguished lady to assist them in their struggle to maintain the status quo. I am sure she would be even more impressive than the previous advocate engaged from Home, and far more picturesque. (Anyway, judging from recent medical political literature the B.M.A. will have to go to darkest Africa for professional support of their ideas.)

By the way, Mrs Leith-Ross is inclined to be rather superior about this eminent lady doctor's hat (pure prejudice). Personally I would rather wear it (not it, I hasten to add but one like it) than the ' hard knocker ' worn by many of New Zealand's best medical practitioners to-day.

'They can't leave their cakes long enough in the oven and sometimes have to leave their baking to boil up some tripe; that is a doctor's life.'

Chapter 30

SINCE 1937

Undoubtedly the most important advance is the corroboration of the importance of the Sulphanilamide group of drugs, and in the rapidly extending range of its usefulness in almost all fields of medicine. What I wrote in 1937 seemed almost fantatstic, but it wasn't.

The closed treatment and excision of wounds has become practically universal, and has revolutionised hospital practice in many ways. The use of cod liver oil and vaseline has also spread rapidly all over the world, and is only limited by the scarcity of fish oils owing to the war. The ambulatory treatment of leg fractures by plaster methods has also increased. The tannic acid treatment of burns has got into bad repute, and what I wrote in 1937 has been confirmed. Cod liver oil and vaseline, with the addition of various antiseptics, is rapidly replacing it.

Faults in surgical technique which by some surgeons have been known, and remedied in their practice, for years, have quite recently become generally realised and acknowledged by the Association of Master Surgeons in Great Britain and America.

First aid to the wounded has begun to be rationalised, and the extreme importance of delay in removal and active surgical intervention, until the patient has recovered from shock, has at last been realised.

In New Zealand the demand for painless midwifery has increased tremendously, but the methods adopted in many cases are rather futile. The failure of our St. Helen's hospitals to respond is significant.

Advances in anaesthetics have apparently not been accepted, or maybe not noticed, in New Zealand. I regret very much that our semi-closed bag method with vinyl-ether ether sequence, or even ether alone, has not appealed to New Zealand anaesthetists. Its rapid induction and rapid recovery, safety and simplicity of equipment, make it specially suitable for war surgery. The use of local anaesthesia in major and minor surgery is increasing. For example, local anaesthesia by the St. Mark's technique for pile operations, I have found most satisfactory, simpler and easier

than the low spinals, and preferable in every way to general anaesthesia. The local injection of 1% novocain in large quantities for spasmodic conditions of the muscles, as seen in lumbago and other parts of the body, a method we have used for many years, has become widespread. Local painful areas around the joints, which doctors are in the habit of calling ' rheumatics,' are often cured by the mass injection of novocain.

The use of nembutal in shock has also begun to be appreciated.

Hormones, which are available in abundance—over-abundance, I think—have not yielded the anticipated practical results. Personally I have stopped using them. The knowledge necessary for simplification in application is not yet available. The role of the adrenal glands seems to be the missing link. The problem is to 'hormone'-more-'hormone'-less-'hormone' different and not hormone tabloids. Still some doctors—I hope not many—in catering badly for old fools in search of their youth cater for themselves very well indeed. There is one exception: the use of stillboestrol for stopping lactation. This we have found very efficient.

There are of course other advances in medicine, but I write only of those I am specially interested in.

In the sphere of the actual practice of modern scientific medicine, at least a realisation of the hopelessness of our present methods has at last been made by most authorities and associations all over the world, and it has in some cases been acted upon with magnificent results. The medical associations of New Zealand, on the contrary, don't even acknowledge fault, let alone try to rectify it; in that respect they are distinguished.

I have not joined the B.M.A. in New Zealand. If I did I might melt in their affability, good fellows all, and become mixed up with them. I don't want to. ' I would sooner be dead than mixed into them,' Wyndham Lewis said of a similar association. Thomas A. Kempis, in *The Imitation,* said much the same thing: ' As oft time as I was among men, I came back a less man; that is to say, less holy.' The B.M.A. is conservative in all things; I am conservative in but one thing: I want to be myself, think for myself, and be ' whole.' I would like to liquidate their association because of their desire to conserve all things; they would liquidate me because of my desire to conserve one thing—myself. Their ideas have become as nails driven so hard into their coffins, and so punched in, that the very heads are deeply buried and can't be withdrawn. In effect they have lost

their heads. They don't realise what they are doing, they are helpless, hopeless, and for them as an association there can be no resurrection; they can never break loose those nails. A true association of medical men—of whole men—in New Zealand, can only be consummated when they associate in their work (and not only in politics, which consists of protecting their status and demanding the best of terms), and practise co-operative medicine for the good of humanity, instead of practising as lone brigands for the good of themselves, as now. Such a new association of medical men must be formed; it will be formed. It has already been done in Great Britain, so why not here?

> 'I'd hand them happiness on a plate
> If only the fools would co-operate,
> But blind with Celtic mist and phlegm
> They cannot see what is good for them.'
>
> —Louis Macneice.

There was, however, one really important advance made in New Zealand, unique for us, but almost universal elsewhere. We greeted it with triumph as the dawn of a new era in the practice of medicine in New Zealand. I refer to the appointment to the Auckland Hospital staff of two eminent men as directors of medicine and surgery. We failed, however, in our innocence, to appreciate the power and cunning of a timocracy who, fearful of their own reputations, adopt methods suggestive of a nazi organisation. To our amazement and horror, these two men were ignominiously sacked, and the excuse offered was also suggestive of a nazi organisation. Even during the short time these men held office at the Auckland Hospital, although faced with persistent opposition both open and concealed, they instituted changes which in time would have brought Auckland Hospital up to the minimum standard rightly demanded in a base hospital. For the first time an attempt was made to introduce co-operative and scientific medicine. The special clinics which are essential for the modern treatment of many diseases are now mostly closed, a much greater loss than the public realises. Medical students, residents, and nurses, for the first time in the history of the hospital, were able to avail themselves of at least some of the advantages that are available in training schools overseas, and their appreciation has been widely expressed. Now that is gone, and the old regime is again triumphant; but, I hasten to say, not for long, not for long. Our hospitals must advance; selfish and vested interests can't keep them back forever. I believe in its very failure it succeeded. No wonder our best young medical

men refuse to return to their own country; they stay overseas where their abilities are recognised and rewarded, rather than return to their own country and be subjected to hostility, frustration and humiliation. This disgraceful story of Auckland Hospital will make them more and more determined than ever to stay where they are, and they are right.

THE TEACHING AND STAFFING OF NURSES

Advances have undoubtedly been made since the article printed in our previous book was written. Young nurses leaving the training schools today are mostly very capable. A great deal has been done to improve their lot. Many old tyrannies have disappeared—I suppose with the disappearance of the old tyrants (I know a better name). The hours of work have been greatly reduced. I still think that their training should be exactly the same as that of school teachers. They should, whenever they leave their high school, enter a nurses' training college, and study there until they are old enough to undertake the practical part of their training. This is essential for the nurse of the new medical era. Having to wait until they are eighteen or nineteen years of age prevents many of the really clever girls becoming nurses. We don't get the best. They also should be taught far more clinical medicine and surgery at the bedside, and have fewer theoretical lectures. Actually they should be trained in the same way as medical students, if they are ever really going to understand their job. The appointment of sister-tutors is excellent, but they are quite incapable of teaching clinically. That should be done by the younger medical men on the staff—the assistant physicians and surgeons—and in some cases the senior resident staff, could assist. Nurses are taught too much systematic anatomy and physiology by lectures and from their text-books. The anatomy a nurse should know is surface anatomy, and that is just the anatomy she is not taught. I notice this extraordinary omission in a recent and otherwise very excellent anatomy text-book especially written for nurses.

When a co-operative service of scientific medicine is introduced, a great deal of domiciliary visiting done at present by doctors will be done by nurses. To attain maximum efficiency, I consider that they must be specially trained. We are going to see quite a different type of nurse evolve before long. Under the present system of medical practice nurses have to be kept very much in their place by doctors; the new medical service will make that unnecessary. Then, the more

the nurses know the better, the doctors will agree. District nurses attending the post-graduate course should be trained for the work they actually do, and not for the work they are supposed to do, but don't. The responsibility on the shoulders of the district nurse seems to me greater than that in any other class of nursing. At present the special training required is not available. Nurses have just got to pick up their medical knowledge as best they can; that is, at the expense of their patients, which somehow does not seem quite right.

Hylas: 'Nothing now remains to be overcome but a sort of unaccountable backwardness that I find in myself towards your notions.'

Philonous: 'When a man is swayed, he knows not why to one side of a question, can this, think you be anything else but the effect of prejudice, which never fails to attend old and rooted notions.'

—Bishop Berkeley, The Third Dialogue.

MORE NOTES FROM A BACKBLOCK HOSPITAL

Dr Smith believes that the public should know more about medical ' mysteries ' than it does. In this, his second book, he records further observations and deductions of many years' experience as superintendent of Hokianga Hospital.

But this is more than a record book. Dr Smith is an impatient man—impatient for better health, better medical methods, a proper state clinical service—and he expounds his ideas with uncommon sense and penetration. This is decidedly a book for the layman to read and learn from, and it will be no less valuable to the surgeon and G.P.

Sterilization, anaesthesia, midwifery, first aid, infant feeding and the state medical service are but a few of his subjects—glance through the book for yourself.

This book contains none of the material of NOTES FROM A BACKBLOCK HOSPITAL, and concerns itself less with the technical side of medicine and surgery. NOTES FROM A BACKBLOCK HOSPITAL has proved a very successful seller; and it is a tribute to Dr Smith's work and writing to record that a great number of copies of that book were sold in his own district of North Auckland.

6/-

G. M. SMITH

MORE NOTES FROM A BACKBLOCK HOSPITAL