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GENERAL INDEX

VOLUME 55, 1976

ABBREVIATIONS

Ed — Editorial; DL — The doctor and his leisure; AWT — Around the Willow Tree; C — Correspondence.

Alcohol and Other Drugs Influence Safety on Our Highways, How the Use of, (Power), 181

Alcoholism — A Plea for an Effective Treatment Program in Industry (Prossin), 133

Aldous, J. G.: To Comply — Or Not To Comply? 109

Anaesthetic Drugs, Local, — Some Pharmacology and Physiology (Smith), 9

Appreciation: Dr. J. Douglas Wallace, 56

Dr. Charles L. Gass, 57

Dr. Thaddeus M. Sieniewicz, 57

Dr. Paul Cudmore, 169

Dr. Edith Kovacs, 197

Around the Willow Tree — Lust Among the Turnips (Burnstein), 60

Arthritis, Drug Therapy, in, — A Rational Approach (Huskisson), 117

Arsenic Hazards in Nova Scotia (Hindmarsh), 60

Beck, G. R.: The Follow-up of Routine Urinalyses (Clark), 182

Boxing, A Look at Amateur (Smith), 142

Brand, A. A.: Breast and Cervical Cancer, 107

Brown, A. Garnet.: Letter to the Editor, 200

Buhr, A. J.: Fucidin and Osteomyelitis (vanRooyen)

(Petrie) (Grogono) (Haldane), 4

Your New Skipper (Ed), 33

Burnstein, M. E.: Lust Among the Turnips (AWT), 60

Cancer, Breast and Cervical (Brand), 107

Cancer, Uterine Detection Program — A 15-Year Experience (Robinson), 174

Child Abuse, How to Handle a Case of, 181

Clark, M. L.: The Follow-up of Routine Urinalyses (Beck), 182

Colostomies and Ileostomies, The Social Implication of, (Rohland), 114

Cook Michael W.: Recognition and Early Treatment of Diving Injuries, 153

Correspondence: (Kelly), 29

(Kini), 59

(Maxwell), 59

(Tompkins), 59

(MacLeod), 200

(Brown), 200

(Stewart), 200

(Hyler), 201

Dalhousie Medical Students, Letter to all, (Irwin), 183

Diving Injuries, Recognition and Early Treatment of, (Cook), 153

D'Intino, Yolanda: Hyperalimentation in a Regional Hospital (Naqvi) (MacAskill), 128

Doctor and his leisure, The, — "A Car for All Seasons" (Grogono), 198

Drugs: New Drug Evaluations (Parker), 28

To Comply — Or Not To Comply? 109

Drug Therapy in Arthritis — A Rational

Approach (Huskisson), 117

Dysplastic Lesions of the Uterine Cervix (Maxwell), 24

Editorials: The Scalpel and the Pen — Equal Partners, 1

Your New Skipper (Buhr), 33

Four Years Before the Mast, 34

Editorial Enthusiasm (Grogono), 34

Perspectives in Medicine (Grogono), 65

A Mid-Summer Trail (Grogono), 101

Medicine and Sport — Ecstasy Versus Agony

(Grogono), 137

Building for a Healthy Community (Ellis), 138

Our Culture Medium — Our Responsibility

(Grogono), 173

Ellis, M. J.: Building for a Healthy Community (Ed), 138

Fraser, R. C.: Hydatidiform Mole — "Benign" — Beware, 178

Fucidin and Osteomyelitis (vanRooyen) (Petrie) (Grogono) (Buhr) (Haldane), 4

Gemini felices — Chen and Ang — The Brothers (Grogono), 90

Goomer, J. S.: "Unhappy Hooker", 55

Gordon, P.C.: The Impact of Changing Population Structure on Hospital Utilization in Nova Scotia, 77

Gray J. D.: Interaction with Warfarin — A Clinical Study (Hogan), 184

Grogono, B.J.S.: Fucidin and Osteomyelitis (vanRooyen)

(Petrie) (Buhr) (Haldane), 4

Editorial Enthusiasm (Ed), 34

Perspectives in Medicine (Ed), 65

Gemini felices — Chen and Ang — The

Brothers, 90

A Mid-Summer Trail (Ed), 101

Medicine and Sport — Ecstasy Versus Agony

(Ed), 137

Games for the Physically Disabled — An

Outstanding Stimulus for Rehabilitation, 158

Our Culture Medium — Our Responsibility,

173

"A Car For All Seasons" (DL), 198

Haldane, E. V.: Fucidin and Osteomyelitis (vanRooyen) (Petrie) (Grogono) (Buhr), 4

Hatcher, J.D.: Address to the Faculty of Medicine, Dalhousie University, Feb. 18, 1976, 66

The Dean Talks to the Bulletin, 69

Hindmarsh, J. T.: Parenteral Nutrition, 53

Arsenic Hazards in Nova Scotia, 60

Historical Review — Nova Scotia Sanatorium 1904-1975 (Quintan), 72

Hogan, D.: Interaction with Warfarin — A Clinical Study (Gray), 184

Holness, R.O.: Treatment of Trigeminal Neuralgia — The Role of Percutaneous Electrocoagulation of the Gasserian Ganglion (Howes), 48

Hospital Utilization in Nova Scotia, The Impact of Changing Population Structure on (Gordon), 77

Howes, W. J.: Treatment of Trigeminal Neuralgia — The Role of Percutaneous Electrocoagulation of the Gasserian Gagliion (Holness), 48

Huskisson, E. C.: Drug Therapy in Arthritis — A Rational Approach, 117

Hydatidiform Mole — "Benign" — Beware (Fraser), 178

Hydrocephalus, Normal Pressure, (Murray) (Malik), 123

Hyperalimentation in a Regional Hospital (Naqvi) (MacAskill) (D'Intino), 128

Hyler, S. E.: Letter to the Editor, 201

Influenza — Background of Recent Developments (Roze), 166

Irwin, A. C.: Letter to all Dalhousie Medical Students, 183

Josenhans, W. T.: The Prevention of Tracheal Stenosis Following Endotracheal Intubation (Leighton), 187

- Kelly, A.D.: Letter to the Editor, 29
 Kini, G. K.: Letter to the Editor, 59
 Kinley, C. E.: Surgery for Myocardial Infarction (Murphy) (Scott), 44
 Knee in Athletics, Disorders of the, (Stanish), 148
- Laryngectomy, Vocal Rehabilitation Following Total, — Experience in Nova Scotia (Yousuf) (Novotny), 191
 LeBlanc, Francine: Co-ordinated Public Health Nursing and Physician Services in Nova Scotia — It Works (Schultz), 196
 Leighton, Ross: The Prevention of Tracheal Stenosis Following Endotracheal Intubation (Josenhans), 187
- Magee, David J.: The Role of the Physiotherapist in Athletics, 146
 Malignant Lumps in the Neck — A Five Year Review in Nova Scotia (Yousuf) (Novotny), 19
 Malik, H.: Normal Pressure Hydrocephalus (Murray), 123
 Matheson, Wayne: On the Need for a Treatment Philosophy in Psychiatry (Mian), 111
 Maxwell, Ian: Dysplastic Lesions of the Uterine Cervix, 24
 Letter to the Editor, 59
 Medi-Care: Out-of-Province Billings, 95
 Medical Education: Family Medicine and Internal Medicine (Murray), 194
 Medical Society of Nova Scotia: Dr. Thomas J. McKeough — President 1975-1976, 2
 New Members 29, 52, 99, 171, 207
 Page of Officers 32, 62, 100, 136, 172, 208
 Guidelines for Authors, 18
 Insurance Program 7, 8
 Some Pictorial Highlights of the 123 rd Annual Meeting, 203
 Proceeding of the 12th Meeting of Council (1976) and 123 rd Annual Meeting, 190-1
 Presidential Valedictory Address 1976 — Dr. T. J. McKeough, 190-VIII
 Micheli, Lyle J.: The Function of a Sports Medicine Clinic, 139
 Missri, Jose C.: Metabolic Acidosis Differential Diagnosis, Clinical Manifestations and Treatment, 50
 Murphy, D. A.: Surgery for Myocardial Infarction (Kinley) (Scott), 44
 Murray, T. J.: 43rd Annual Report of the Medical Superintendent of The Nova Scotia Hospital for the Insane 1899-1900, 75
 Normal Pressure Hydrocephalus (Malik), 123
 Family Medicine and Internal Medicine, 194
 MacAskill, Marilyn: Hyperalimentation in a Regional Hospital (Naqvi) (D'Intino), 128
 MacDonald, J. M.: Prenatal Diagnosis in the Maritimes (Welsh), 103
 MacIntosh, O.C.: Vanadium Poisoning from Fuel Oil Ash (Steeves), 85
 McKeough, T.J.: Some Thoughts on Referral, 94
 Presidential Valedictory Address, 1976, 190-VIII
 MacLeod, M. Isobel: Letter to the Editor, 200
- Naqvi, M.A.: Hyperalimentation in a Regional Hospital, (MacAskill) (D'Intino), 128 1899-1900,
 Nova Scotia Hospital for the Insane 1899-1900, 43rd Annual Report of the Medical Superintendent of the (Murray), 75
 Nova Scotia Sanatorium 1904-1975, Historical Review (Quinlan), 72
 Novotny, G.M.: Malignant Lumps in the Neck — A Five Year Review in Nova Scotia (Yousuf), 19
 Vocal Rehabilitation Following Total Laryngectomy — Experience in Nova Scotia (Yousuf), 191
 Operating Room, Rules for the, 41
- Osteomyelitis, Fucidin and, (vanRooyen) (Petrie) (Grogono) (Buhr) (Haldane), 4
 Parenteral Nutrition (Hindmarsh), 53
 Parker, W. A.: New Drug Evaluations, 28
 Personal Interest Notes: 30, 61, 98, 170, 204
 Petrie, D.: Fucidin and Osteomyelitis (vanRooyen) (Grogono) (Buhr) (Haldane), 4
 Physically Disabled, Games for the, — An Outstanding Stimulus for Rehabilitation (Grogono), 158
 Physiotherapist in Athletics, The Role of the (Magee), 146
 Power, R. Joseph: How the Use of Alcohol and Other Drugs Influence Safety on Our Highways, 181
 Prenatal Diagnosis in the Maritimes (Welsh) (MacDonald), 103
 Prossin, Albert: Alcoholism — A Plea for an Effective Treatment Program in Industry, 133
 Psychiatry, On the Need For a Treatment Philosophy in, (Matheson) (Mian), 111
 Public Health Nursing and Physician Services in Nova Scotia, Co-ordinated, — It Works (LeBlanc) (Schultz), 196
- Quinlan, J. J.: Historical Review — Nova Scotia Sanatorium 1904-1975, 72
- Referral, Some Thoughts on, (McKeough), 94
 Robinson, S.C.: Uterine Cancer Detection Program — A 15-Year Experience, 174
 Rohland, Terry: The Social Implication of Colostomies and Ileostomies, 114
 Rozee, K.R.: Influenza — Background of Recent Developments, 166
- Schultz, Anne: Co-ordinated Public Health Nursing and Physician Services in Nova Scotia — It Works (LeBlanc), 196
 Scott, J.S.: Surgery for Myocardial Infarction (Murphy) (Kinley), 44
 Smith, J. A.: Local Anaesthetic Drugs — Some Pharmacology and Physiology, 9
 A Look at Amateur Boxing, 142
 Sports Medicine Clinic, The Function of a, (Micheli), 139
 Stanish, William D.: Disorders of the Knee in Athletics, 148
 Steeves, Brian: Vanadium Poisoning from Fuel Oil Ash (MacIntosh), 85
 Stewart, C.B.: Letter to the Editor, 200
 Sullivan, Hon. Allen E.: Talks to the Bulletin, 35
 Surgery for Myocardial Infarction (Murphy) (Kinley) (Scott), 44
- Tompkins, M.G.: Letter to the Editor, 59
 Tracheal Stenosis Following Endotracheal Intubation, The Prevention of, (Leighton) (Josenhans), 187
 Trigeminal Neuralgia, Treatment of — The Role of Percutaneous Electrocoagulation of the Gasserian Ganglion (Holness) (Howes), 48
- "Unhappy Hooker", (Goomer), 55
 Urinalyses, The Follow-up of Routine, (Clark) (Beck), 182
- Vanadium Poisoning from Fuel Oil Ash, (MacIntosh) (Steeves), 85
 vanRooyen, C.E.: Fucidin and Osteomyelitis (Petrie) (Grogono) (Buhr) (Haldane), 4
- Warfarin, Interaction with, — A Clinical Study (Hogan) (Gray), 184
 Welsh, J.P.: Prenatal Diagnosis in the Maritimes (MacDonald), 103
- Yousuf, Mohammad: Malignant Lumps in the Neck — A Five Year Review in Nova Scotia, (Novotny), 19
 Vocal Rehabilitation Following Total Laryngectomy — Experience in Nova Scotia (Novotny), 191

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A Tribute to Dedicated Pioneers of Medical Care

This issue is pleased to present a collection of articles by staff members of the Halifax Infirmary. An outline of the history of this institution emphasizes the extraordinary devotion and enthusiasm of the Sisters and staff in establishing a high level of care for all patients, including the very poor.

It is not possible to mention every individual concerned, but amongst the striking personalities two remain outstanding. Dr. Farrell, a founder of the hospital, began his practice in the hotels and boarding houses of Halifax. Dr. Slayter succumbed to the cholera epidemic on McNab's Island, where the Sisters of Charity met their first challenge in 1866.

In later years, Sister Catherine Gerrard gave forty years of her life to the Infirmary, as did Dr. Judson Graham. The former directed many new developments of the hospital, and the latter as Chief of Surgery performed a phenomenally wide variety of operations.

The Infirmary is just one of the institutions in Nova Scotia with a surprisingly long history in the provision of medical care. It is hoped that further contributions will be forthcoming.

Dr. Mason, President of The Medical Society has asked that this issue include Dr. E. W. Barootes' address to the Manitoba Medical Association. Dr. Barootes departs from tradition and talks about a subject of immense importance to us all — Canada. Dr. Mason felt that there was no reason that Manitoban physicians should be the sole beneficiaries of his wisdom.

Also in this issue are excellent papers on Alcoholism and the Management of Tuberculosis, bringing us up to date with current developments in medicine. □

B.J.S.G.

Official Opening

Nova Scotia Rehabilitation Centre

The new Nova Scotia Rehabilitation Centre, at University Avenue and Summer Street in Halifax, will be opened formally on Thursday afternoon, June 30, 1977. It will be open for public inspection on the following day, from 10:00 a.m. to 3:00 p.m.

In subsequent issues of the *Bulletin* the Medical Director, Dr. Arthur H. Shears, and members of his staff will describe this new Centre and discuss various problems of rehabilitation.

"Our Lady of All Souls"

Competence and Compassion in an Ever Changing World

B. J. S. Grogono,* M.B., B.S., F.R.C.S.(C), F.A.C.S.,

Halifax, N.S.

The Halifax Infirmary was founded by the Sisters of Charity in a true spirit of dedication for the needs of others. A small band of sisters arrived in Halifax in 1849 at the request of the Most Reverend William Walsh, with orders to "render Christ every temporal and spiritual service in the person of — the sick and invalids —." Shortly after their arrival, they helped to nurse victims of a cholera epidemic which occurred on board *H.M.S. England*, and these patients were isolated on McNab's Island.

The nuns first combined enterprise was the conversion of the Waverly Hotel on Barrington Street into an institute for the elderly. They had to paint, paper and scour the building, free it from rodents and drain the basement. By 1887 it was decided to use these facilities for the care of the sick and so it became the Victoria Infirmary.

Free medical attention was afforded by Dr. Edward Farrell, who had previously cared for many patients in boarding houses, hotels and tenements around the city. The hospital was, therefore, founded in the year of Queen Victoria's Jubilee as the "Victoria Infirmary" but had to be renamed the "Halifax Infirmary," because the Provincial Government chose the name Victoria General for their hospital.

The old ladies stayed on but were subsequently transferred to an establishment called "St. Theresa's Retreat". The hospital work gradually increased, with all nursing by sisters, and a staff of about five attending doctors. The wooden building became over-crowded and a new brick wing was built.



Bedroom, Barrington Street Infirmary. Individual attention as it was in 1903.

*Head of Orthopaedics, Department of Orthopaedics, Halifax Infirmary, Halifax, N.S.

New Hospital's Early Splendour, Barrington Street

1903 saw the opening of the new wing. Facilities included an elaborate pharmacy, operating room and comfortable private wards. During the first year, 198 patients were treated and by 1925 some 10,509 people had been looked after. The first operation was performed in 1905. The operating room was dedicated to Dr. Farrell who contributed so much to the hospital's establishment but who died before the new wing opened.

High Standards: yet Free for the Poor

The latest Victor X-ray Corporation machine and the Universal Roentgen Stand for radiotherapy were installed in 1922 and were as up to date as those in Montreal. A high standard of care was achieved and the hospital was on the approved list of the Clinical Congress of the American College of Surgeons.



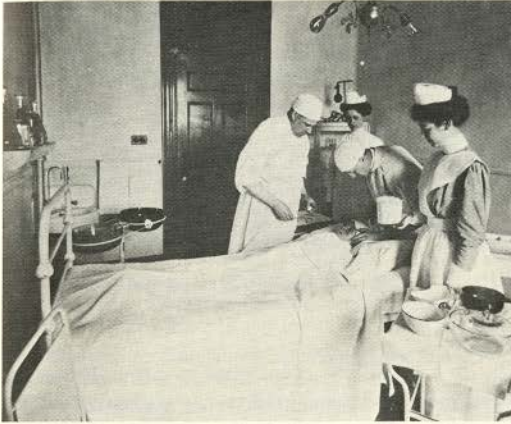
X-ray Dept, Barrington St. Victor Universal Roetgen equipment was installed in November 1922.

The Sisters ensured that even the poorest could be treated by forming the "Ladies Aid Society", and patients applying for free treatment received care. In 1923, 65 patients were treated for a total of 1386 patient days at a cost of \$2.00 per patient per day. Many benefactors ensured the continuing financial support and the hospital continued to grow until it moved to a new site on Queen Street in 1933. The old hospital became St. Mary's Convent which was subsequently demolished in 1960.

Obstetrics: The Coburg Infirmary

In 1926, the Sisters opened another unit with 30 beds for obstetrics and medical patients, as well as consulting rooms for doctors. This was previously Dr. Antony Mader's home

and was affectionately regarded by patients and staff. Seventeen sets of twins were amongst the many babies born during the six years the hospital functioned, before obstetrics was transferred to the new hospital.



Operating Room, Coburg, mainly for obstetrics, circa 1926. "Up to date in every way."

Queen Street Infirmary: "The Crowning Glory of Halifax"

The fine residence of Dr. Thomas Flinn was first acquired by the Sisters of Charity as a nurses' residence. The cornerstone of the new hospital was laid in 1931 by Archbishop O'Donnell and the hospital opened in January 1933. It was impressive, with marble floors and solid brass main doors. The names of many of the Sisters of Charity have become legendary — Sister Mary David, Sister Ann Seaton (who was awarded a King's Jubilee Medal), Sister Damian, Sister Catherine Gerard, Sister Rose Angela and Sister Edward Mary.

The next twenty years saw the continuing expansion and development of the hospital. By arrangement with the Department of National Health and Welfare, special provision was made for sick merchant mariners — Ward 2 north becoming the Marine Ward. The hospital retained a special atmosphere of sincerity and dedication.

The War Years: The Halifax Infirmary's Role was Recognized

During the first World War, many surviving shipwrecked sailors were cared for in the Barrington Street Hospital. King George V gave a special citation for the dedicated work given to the Commonwealth sailors. In the Second World War the new hospital services were fully utilized. Many merchant mariners were treated and King George VI awarded the O.B.E. (Order of the British Empire) to the Sister Superior in recognition of the staff's contribution to the war effort.

Post War Years

In 1940, a private residence at 99 Morris Street was converted into a nurses' home. In 1946 another bigger house was modified to accommodate 60 student nurses and domestic staff. Gradually demands increased. New X-ray equipment was acquired and government grants from the city and province commenced in 1947. The Board of Directors

was reorganized to include a representative from the City Council and one from the province. Admissions increased to over 10,000 in 1950.

The New Wing: First Hospital Expansion Since the Hospital Insurance Program

Planning for the ambitious new wing to the Infirmary began at least five years before completion. A firm of Community Counsellors Incorporated set up an office near the hospital in 1950 and raised pledges. A Federal grant of \$1,245,566 was received and a ceremonial blessing of the ground made on January 12, 1966. Total cost of the building was \$3,900,000.



Archbishop Berry lays the Conerstone of the new hospital wing in 1960.

The Halifax Infirmary Corporation and the University Connection

The Sisters of Charity transferred the Infirmary to the Halifax Infirmary Corporation in 1966. This organization assumed control of the hospital and nursing school, as well as "conducting such institutions and other works of mercy as may be found practical and expedient herewith". In May 1951 a formal agreement was signed between the Dalhousie University and the Infirmary, whereby the hospital became recognized as a teaching centre.

The Infirmary, which had started as an institution operated by a group of dedicated nuns, had become a modern teaching hospital with its own board of management and enthusiastic staff. The nuns continued to play an important role with Sister Gerard as Chief Administrator.

The Sixties: Times of Change

The new hospital wing brought a new spurt of enthusiasm to the staff. New doctors were appointed and fresh impetus given to all work. Amongst the new facilities were Radiosotope Department, and an Intensive Care Ward. Ophthalmology and urology were relocated, a Bioengineering Department established, and orthopedics opened in 1969. An Intensive Care Neonatology unit was added, and soon established an international reputation under Dr. Don Reid's care. Some of the lowest neonatal death rates were recorded. An outstanding paper on necrotising enterocolitis was published.

With a total of 338 beds, including pediatrics and obstetrics, the hospital provided a comprehensive program of community care medical education and specialist consultation for the Maritimes.

Special facilities of the new addition were a fine nurses residence, a large gymnasium, a modern pathological laboratory and a swimming pool. Colour television in the operating room was one of the world's first attempts at vivid surgical instruction.

The School of Nursing

In the early days all nursing was carried out by Sisters without the help of secular nurses. By 1908, the need for additional skilled nursing care led to the foundation of the "Training School for Nurses". The first three students graduated in 1911. Ever since then, the school has kept up with the changing needs and has expanded its facilities. When the Registered Nurses Association was founded in Nova Scotia, the Infirmary Sisters became members and encouraged students to prepare for registration.

The admissions committee required exacting standards for each applicant; "Evidence of serious mindedness, uprightness of character, and Grade XI or XII with a pass in seven subjects." Each student had to pass five months basic introduction before entering the three-year clinical programme. Although the school was a Catholic institution, those with other religious beliefs were admitted. Courses in religion, ethics, and psychology were given to teach Christian principles of nursing, and a three-day retreat for Catholic students was required. A number of nurses took a degree course at Mount St. Vincent.

Practical Nurses: Nursing Assistants School 1961-1971

The need for efficient practical nurses was met by a two-year programme which was incorporated in the nursing education course. It was an excellent practical course and many regretted the transfer to Dartmouth Vocational School, because it severed the closely knit bond between hospital experience and nursing education. The nursing education course (2 year) continues at the Infirmary education wing, and is affiliated with Dalhousie University for the degree course in nursing.

Ancillary Schools

The strong reputation for education continues and programmes are now given for radiological technicians laboratory technicians and dietitians.

The Seventies: The Trial-Transfer of Ownership

Acute financial problems began to plague the hospital, largely because the terms of contract with the government allowed insufficient funds. In January 1973, a letter of intent was received by the Sisters of Charity confirming agreement between the government and the Sisters. On January 24, formal transfer was announced by the Minister of Health. The Sisters received 4.1 million dollars at 4% over 10 years, whilst the Government acquired the assets valued at 19 million dollars and a liability of 3.1 million dollars. There was to be no major change in management policy.



Architects impression of the Infirmary.

Now a Crown Corporation, the Infirmary continues its work amidst a changing medical, financial and social climate. While some departments continue to make heavy demands (medicine, surgery, orthopedics, radiology, pathology), others have diminished. The number of babies delivered in the excellent obstetric unit fell to less than 2000 per year and pressure was eventually applied to consolidate obstetrics in Halifax. Many physicians felt that obstetrics should continue in a general hospital but finally the unit was transferred to the Grace Maternity Hospital. After more than a century, the department closed almost without a murmur. Further closures were the pediatric department and the neonatal unit.

A proposal to establish the Rehabilitation Center in Gerard Hall brought considerable controversy. Plans were prepared to transfer the education wing, gymnasium and swimming pool into a 50-bed autonomous unit. The plan was scrapped at the last minute in favour of the five million dollar, 50-bed hospital on Anderson Square.

Plans, Hopes and Aspirations

Many plans have been proposed to utilize the space left vacant by the pediatric and obstetric beds. A new feeling of optimism has recently spread amongst the staff now that proposals have been submitted to the Council of Teaching Hospitals. No hospital can exist in isolation. The Infirmary has established its reputation as an institution with a dedicated staff and tradition. This is a result of over 100 years of continued struggle.

In an ever changing environment there is still room for "Competence and Compassion".

The Infirmary's tradition will ensure this will continue despite ever changing demands. □

Acknowledgements

J. Sharples, Hi Lites 1970-1973.
Sister Catherine Gerard, Historical Outline of Halifax Infirmary.
Mrs. Ryan, Personal Communication.
C. Creese, Audio Visual Department of Halifax Infirmary.

The Role of the Halifax Infirmary

R. Kenneth McGeorge,* B.Sc., D.H.A.,
Halifax, N.S.

LEADERSHIP IN HOSPITAL SERVICE

During recent years, the Infirmary has undergone many changes. Throughout this period of great change, the Board of Directors and executives have remained committed to high standards of competence, compassion, and high quality health care.

The acquisition of this hospital from the Sisters of Charity by the province undoubtedly left many people — employees, physicians, and public — wondering if the high standards of care achieved by the Sisters would suddenly come to an end. I think it is clearly evident to everyone that this has not been the case, and, in fact, the new owners can be accused of nothing more than overcompensating.

This institution has spent hundreds of collective man-hours in serious review of its programs and role during the last three years and, while some major changes will come about on a regional basis in due course in Halifax, it has been generally concluded that the Infirmary should pursue the role of a general teaching hospital with community, regional, and provincial referral strengths in certain specialties.

Areas in which the Infirmary has developed particular expertise include:

1. General Medicine
2. Cardiology (including a new Stress Testing Laboratory)
3. Orthopaedics
4. Ophthalmology
5. E.N.T.
6. Radiotherapy/Oncology
7. Gynecology
8. Vascular Surgery
9. Chest Surgery

Other features which contribute to the leading role played by the Infirmary include:

1. Pioneering in the development of a Well Woman Clinic
2. Development of Nursing Unit Assignment
3. A comprehensive Utilization Review and Clinical Care Appraisal Program
4. Decentralized Departmental Management
5. Refinement of a sound cost-centre budgeting and cost reporting system
6. Employee Performance Appraisal System (including senior executives)
7. Development of ambulatory services in peripheral suburban areas
8. Development of a successful pre-operative patient teaching program

9. Continual review and research into ethical dimension of health care delivery
10. Group purchasing whereby the hospital purchases I.V. solutions and related items for over 20 hospitals.

The Infirmary plays a large role in the education of health care professionals by participating with other educational institutions in the provision of clinical experience in:

1. Dalhousie Faculty of Medicine — Undergraduates, internes and residents in various specialties
2. Dartmouth Faculty of Nursing — Vocational C.N.A. Program
3. Dalhousie Faculty of Nursing
4. N.S.I.T. — Medical Lab Technology, Nuclear Medicine Technology, food service supervisor

Programs operated in total by the Infirmary include:

1. School of Nursing
2. School of X-Ray Technology
3. Dietetics Internship
4. School for Medical Records Librarians

In addition to the foregoing, the Infirmary is the only hospital in Nova Scotia to participate with the University of Ottawa in provision of a 4-month summer residency in hospital administration.

The operational philosophy of the hospital — aside from the goals of competence and compassion is to respond intelligently to the new pressures of the current health services environment. To do so means that we must continue to critically review all of our programs, being prepared to eliminate those wherein cost/benefit is marginal. As in other areas of society, the leaders are subjected to criticism. Such criticism though infrequent, often comes from within the health system largely because changes which we implement are misinterpreted. Any major change or innovation which we have implemented has been with the ultimate goal of improving the effectiveness of service to our patients. We are prepared to accept legitimate criticism if, in exercising leadership, we continue to hold to the objectives of an improved health system for the citizens of Nova Scotia.

The support of the medical community in Nova Scotia is most appreciated and we look forward to continued harmonious relationships as we attempt to provide excellent referral services for our patients. □

1976 STATISTICS

Beds: 484 set up; 383 in use
Admissions: 10,332
O.P. Visits: 30,769
Operations-in-patient: 7,978
Operations-out-patient: 3,179

*Executive Director, Halifax Infirmary, 1335 Queen Street, Halifax, N.S. B3J 2H6.

Quality Patient Care and the Three R's

(Records, Review and Rapport)

Fred J. Barton,* M.D., F.R.C.S.(C),

Halifax, N.S.

With the socialization of the Health Delivery System over the past 20 years have come major changes in practice patterns, and increasing sophistication in the scientific and administrative aspects of patient care.

Doctors are now serving a more informed public, aware of their rights and privileges; and are working with well-educated and emancipated team members — also aware of their rights and responsibilities.

In terms of total patient care services rendered per capita, one could say that "Canadians have never had it so good". There seems little argument that the graduates from our medical schools are better educated than ever before.

In modern parlance, that's good news! The not-so-good news is that our stock — some would say our image — in the eyes of the public, as practitioners, has not kept pace with medical care. In fact, many would say we have lost ground. The indicators are:

1. A great increase in official and unofficial complaints about doctors — individually, and doctors' services collectively.
2. A great increase in complaints translated into action — litigation or threatened litigation.

While we all know that south of the border, there has been an explosion in medical-legal actions, we take some comfort in the fact, that we are more moderate in Canada and that it won't happen here to the same extent. However, the fact that my malpractice insurance annual dues have risen twenty-fold in the past twenty years — from \$10.00 to \$200.00 annually — speaks for itself.

3. There is a view among our public that we are too money conscious, and more concerned about gross volume than performance. Annual press releases, of where we stand in the three or four highest earning groups in Canada, provides ammunition for our critics in this regard.
4. We are sometimes accused of impersonal care. While improving our way of life by roster systems that afford us time for recreation, study and family life, and allow us to function more efficiently when we do work, we do get criticism for not being available when our patients want us.
5. We are faulted for poor communications with patients and their families, and with referring doctors.
6. The paying agencies that pick up the tab for our services, and pay us back with public funds, are saying that we are over-utilizing the expensive facilities placed at our disposal, sometimes irresponsibly. They add, at the same time, that our claims to quality care as an explanation for the escalating health costs, is not quite good enough. In addition, we hear from them "prove to us you are co-operating in reforms to better use our expensive facilities, by meaningful participation in utilization review procedures".

Replying to our claim to quality care, they say "prove to us that your care is good, by showing evidence of purposeful Peer Review Programs".

7. The Hospital Accreditation Council every three years requires evidence from our hospitals that there are adequate records to prove our claim to quality care.

8. The Royal College announced in 1976, that it will be requiring evidence of Clinical Review Programs in graduate program content, in future surveys.

9. Some United States malpractice insurance companies now require that insured doctors are committed to good records and Medical Audit, as a pre-requisite for insurability.

What is our response to these developments?

It is not enough to reply defensively that we aren't responsible for the undue escalation in health care costs, by explaining that we alone can't stem the tide of public demand and expectations for a more and better service. We should co-operate, however, to curtail abuse and over-utilization in the system, if the guarantors of the programs — the Government and its official agencies — will do something about public education programs, to tell it as it is. The public should be reminded that there must be limits to their expectations. If, for no other reason, it is apparent that the country can't afford the luxury of our present open-ended system.

Our best response, however, is by better attention to the three R's — Records, Review and Rapport.

1. RECORDS

Our medical records must be readable, relevant and adequate. Good records are a must for clinical Peer Reviews or Medical Audit Programs and an important part of our defence in malpractice suits. In addition, the records provide a data base for continuing education which, in turn, serves as a resource for improvement on the standard of medical practice.

One written word at the time of a court action is worth a thousand spoken words, retrospectively from memory, when giving testimony before a court.

2. REVIEW

Review in the quality of our work which, in fact, means a systematic review of abstracts from patient charts, through an organized process, is now a necessary ingredient of good hospital practice. The Hospital Accreditation Surveys insist on it, as does the Royal College in Graduate Program inspections.

Our review must include examination of utilization of the facilities placed at our disposal, if we are to satisfy ourselves and the public that we are, in fact, making the most of what we have.

*Chief of Staff, Halifax Infirmary, Halifax, N.S.

3. RAPPORT

We must try harder to reach out to our patients, explaining better to them and their families what we can and cannot deliver within the system.

Our informed patients know a lot more than we sometimes give them credit for — but, they may harbor many half-truths that only we can put in proper context.

Especially in teaching hospitals, where under-graduate and post-graduate students are involved, we should have the best of rapport with our patients and families, along with our associate health professionals, and certainly with our referring confreres.

Our students, must understand and see in action by us, evidence of good communication at all levels — upwards, downwards and horizontally in the pyramid.

The annual reports of the Canadian Medical Protective Association and our own Provincial Medical Board, indicate that the single, most important factor in malpractice and grievance actions is lack of communication, not incompetence.

We are committed to quality patient care teaching; that is, the sharing of our knowledge with all Health Team members, and continuing education to keep ourselves, our peers and associate health workers up-to-date.

These three R's are the benchmark of good hospital practice.

There are two other R's that should be added to our corporate responsibility as organized professionals — Rehabilitation and Reprimand.

REHABILITATION

To insure that our confreres have rehabilitation available to them when in need for mental, physical or educational reasons.

REPRIMAND

We have a responsibility to call into question, through the proper channels, and to reprimand our confreres for breaches of competence and ethical behavior.

It so happens that our Provincial Medical Board is the responsible agency that is concerned with these subjects and, indeed, the Annual Reports of the Board indicate that it deals with such matters as part of its regular responsibility.

As we terminate this review, some might say "Aren't we setting our sights rather high in these matters?"

Our staunchest supporters, who may still be our most constructive critics, may well reply "To whom much is given, much is expected". □

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Dear Doctor:

Do you know a hemophiliac?

As national president of the Canadian Hemophilia Society, I am writing this letter in the hope that we can locate all persons afflicted with this condition.

Hemophilia can be a crippling, life-threatening disease unless prompt and adequate care can be received. In the last few years, new blood concentrates and methods of treatment have been announced. These treatment methods, if known to hemophiliacs, can lead to a fully productive life. The only barrier is knowledge.

We wish to encourage any hemophiliacs, or anyone knowing a hemophiliac, to contact us.

During the summer of 1977, we will be conducting a nationwide project to ensure that all hemophiliacs are made aware of current threatment methods. All information thus obtained will be confidential.

To help us control this crippling disease, contact us immediately.

Sincerely,

Ronald E. George, President,
Canadian Hemophilia Society,
Chedoke Centre,
P.O. Box 2085,
Hamilton, Ontario. L8N 3R5. □

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Ocular Allergy

A Physician's Guide

Vincent P. Audain,* M.D., F.R.C.S.(C),

Halifax, N.S.

An ocular allergy is a disease of the eye or the adnexae based on the interaction of an antigen and antibodies directed towards the antigen, or specifically sensitized cells directed toward the antigen.

It is important here to distinguish the difference between allergy, immunity and hypersensitivity. Immunity is a state of being able to resist and overcome harmful agents or influences; allergy is said to be present if, in overcoming the agents or influences, sufficient tissue is damaged that signs and symptoms are produced. The term allergy equals the term hypersensitivity.

CLINICAL FEATURES

Allergic diseases of the eye and lids attract a considerable amount of attention because they are obvious. The eyes and their immediate surroundings are cosmetically the most important areas of the body. The skin of the lids is very thin, has almost no subcutaneous fat, is only loosely attached to underlying structures of muscle and collagen, and is an area bounded by the orbital rim. Whereas an insult of a modest degree delivered to the entire face may result in swelling of only the skin around the eyes (for example, a bee sting on the cheek may produce only a red lump of a centimeter or two), a sting on one lid may result in a remarkable swelling of the upper and lower lids to the extent of the eye being swollen shut.

Similarly the eye in its normal state is mostly white, but the slightest insult results in congestion of the vascular bed in the conjunctiva and sclera, and gives rise to an unattractive "red eye".

CLASSIFICATION AND MECHANISM

The types of ocular hypersensitivity are the same as elsewhere in the body and may be divided into: (1) atopic, (2) immune complex and Arthus phenomenon, and (3) delayed hypersensitivity.

The mechanism of the atopic disease in the eye is based upon the combination of an antigen from the air or from the body interior, with a special class of immunoglobulin, IgE, which has the peculiar capacity to adhere to the surface of circulating and tissue granulocytes, and to mast cells. Interaction of the allergen with the fixed IgE antibody results in the release of a variety of pharmacologically active agents, the most important of which are histamine and serotonin. These mediators dilate nearby blood vessels, allowing the escape of plasma into the tissue to produce clinical edema. The antigen is quickly removed so that the reaction lasts only a few minutes, and at most a few hours. An example of this is the puffing of the lids or conjunctiva of some persons on exposure to animal dander.

*Lecturer, Department of Ophthalmology, Dalhousie University and Active Staff, Department of Ophthalmology, Halifax Infirmary, Halifax, N.S.

The immune complex reaction consists of aggregates of antigen and specific antibody being fixed to complement. By a complicated series of interactions and enzymatic processes, a variety of secondary effects occur. These include the release of various vasoactive and chemotactic factors which attract, to the site, large numbers of polymorphonuclear leucocytes whose enzymes contribute additionally to the local tissue damage. This picture is seen clearly in experimental Arthus reactions in the eye, involving severe anterior uveitis with widespread polymorphonuclear infiltration.

The mechanism of delayed hypersensitivity is based on the direct interaction of an antigen with specifically sensitized lymphoid cells. A clinical example of this process in the eye is contact dermatitis to neomycin.

SIGNS AND SYMPTOMS OF ALLERGIC EYE CONDITIONS

1. Atopic Eczema

The symptoms of ocular atopic eczema consist of itching, tearing, irritation and chronically red eyes. Though not particularly severe at any time, the symptoms are annoyingly chronic, usually present all year round, although increased in spring and late summer for some. The signs consist of scaly, thickened, somewhat firm lid skin, with swollen lid margins having erythematous edges, and the lash bases are frequently cluttered with flaky scales giving the appearance of seborrhea. The conjunctiva has dilated blood vessels, and sometimes there is a punctate keratitis. Atopic dermatitis of the lids is virtually always associated with atopic dermatitis elsewhere on the body.

2. Hayfever

The symptoms of hayfever are puffy lids with itching of the margins and mild tearing. The eyes appear red and persons suffering from ocular hayfever complain of looking "bleary-eyed" during the grass pollen seasons of May-June, and the weed pollen seasons of August-September. The red puffy eyes are often accompanied by attacks of sneezing, running nose and a hot feeling to the entire face. The signs are, swelling of the lids and a slight erythema of the lid margins and conjunctiva. The lid edema is secondary to the conjunctival affliction, but the cornea is usually not involved.

3. Vernal Conjunctivitis

The symptoms are tearing, irritation, drooping lids and itching. The itching is severe and constant.

The signs consist of ptosis, thickened lid margins usually without scaling of the lid skin, and the characteristic giant papillary hypertrophy of the upper tarsal conjunctiva resembling flat-topped cobblestones. The disease is bilateral but may be more marked on one side than the other. The disease

occurs twice as often in boys as in girls, the average age being about 7 years with a practical range of three to twenty years.

4. Contact Dermatitis

Contact dermatitis of the eye is a frequent disease presumed to be usually of delayed hypersensitivity in origin. It is most commonly caused by topical application of antibiotic medication or the inadvertent dermal application of medication for glaucoma.

The symptoms are redness, swelling and mild to moderate itching. One sign is a thick appearing, red, puffy skin with accentuation of the wrinkles. The disease may be mild and difficult to diagnose, or fulminating to the point where the skin cracks and weeps. The list of agents suspected of causing an allergic reaction in the lid is long.

Among these are neomycin, sulfa, penicillin, epinephrine, pilocarpine, nail polish, hair dye, face powder, cleansing cream, eye make up removal cream, liquid mascara, eye shadows of any color, the oil of poison oak and ivy plants.

MANAGEMENT

Treatment of ocular allergies is controversial largely because of the very serious complications that cortisone may produce. These include glaucoma, cataract, and susceptibility to overwhelming infections. Any patient who is on prolonged cortisone therapy requires careful regular surveillance and frequent slit lamp examinations in addition to careful monitoring of the intraocular pressures. In most cases careful collaboration between the ophthalmologist and general practitioner is necessary in many cases of persistent allergy.

Some physicians feel justified in giving a short course of cortisone therapy topically or systemically, and then stopping abruptly. Patients and parents may defy the physician to continue this symptom relieving remedy but should be warned against the practice unless ophthalmological advice has been sought.

In general then it is best to make the appropriate diagnosis and seek ophthalmological consultation if prolonged treatment is required.

SUMMARY

Allergic eye conditions are a common problem in practice. They cause considerable unsightliness due to redness of the conjunctiva and swelling around the eyelids.

The allergy may be a result of atopy, immune complex reaction or delayed hypersensitivity. The chief clinical problems are:

1. atopic eczema
2. hayfever
3. vernal conjunctivitis
4. contact dermatitis

Appropriate diagnosis is important and treatment may require expert ophthalmological management. Prolonged cortisone therapy is dangerous.

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Subphrenic Abscess

Review of 20 Cases

C. K. You,* M.D., F.R.C.S.,(C) and
W. M. Henderson,** M.D., F.R.C.S.,

Halifax, N.S.

Subphrenic abscess is still a significant hazard which complicates surgical procedures and certain abdominal catastrophes. We reviewed 20 cases of subphrenic abscess treated at the Halifax Infirmary between 1971-1976. The followings are several significant findings from this study which might be pertinent to the clinical management of a subphrenic abscess.

MATERIAL AND METHODS

This series consists of 20 cases of subphrenic abscess which were treated at the Department of Surgery, Halifax Infirmary. The diagnosis was confirmed by either surgical drainage of the abscess or by autopsy. The patients were all adults over 18 years of age and the age did not appear to have any effect on the incidence.

Location of the Abscess

Sixteen patients had single abscess, three patients had two abscesses, and one patient had three abscesses. Therefore, multiple abscesses were seen in 20%, and is higher than the usual reported proportion.

Abscesses on the right were slightly predominant (52%); and there were two cases of Lesser Sac abscesses. (Table I)

TABLE I
LOCATION OF ABSCESSES

Left Subphrenic	9
Right Subhepatic (ant. and post.)	6
Right Suprahepatic — Anterior	3
Right Suprahepatic — Posterior	3
Lesser Sac	2
TOTAL	23

Etiology

Abscesses complicating procedures performed on the upper abdomen were predominant. Sixteen patients developed subphrenic abscess following abdominal operation, and the majority was after gastric and biliary tract surgery.

In 1938, Ochsner and DeBaKey reported their series of subphrenic abscesses which showed the appendix was the major offender. In 1974, Roberts and Nealon reported their series which showed upper gastrointestinal tract and biliary tract surgery accounted for major cases of subphrenic abscess.

Our series is similar to most of the recent series in that biliary and gastrointestinal tract surgery is the major offender.

*Staff Surgeon, Department of Surgery, Halifax Infirmary and Assistant Professor, Department of Surgery, Dalhousie University, Halifax, N.S.

**Resident — Surgery, Department of Surgery, Dalhousie University.

We did not have any case of primary subphrenic abscess and no trauma case was included.

DIAGNOSIS

Signs and Symptoms

The most common signs and symptoms were upper abdominal pain and/or fever. Eighteen patients out of twenty had abdominal pain and/or fever. Tachycardia was present in seventeen patients and thirteen patients had localized tenderness over the abscess area.

Jaundice was seen in six patients out of twenty and was the worst prognostic sign. (Table II)

TABLE II
SIGNS AND SYMPTOMS IN 20 PATIENTS

Pain (abdomen and chest)	18
Fever	18
Tachycardia	17
Localized Tenderness	13
Nausea, Anorexia, or Vomiting	9
Swelling	9
Tachypnoea	7
Jaundice	6
Chills/Sweating	3

(Jaundice — Worst Prognostic Sign)

Laboratory Investigations

Leukocytosis over 10,500 was shown in fourteen patients and anemia was present in 10% of the cases. Blood cultures were carried out in thirteen patients and only one patient had positive blood cultures.

Radiological Investigations

A pleural effusion was the most common radiological finding and was seen in 75% of the cases. A gas shadow in the abscess was seen in 40% and fluoroscopy of the diaphragm was positive for abscess in 40% of the cases. An Upper G.I. Series was helpful in confirming the diagnosis or locating the abscess in 62% of the cases. These figures are in keeping with most of the reported series. (Table III)

TABLE III
RADIOLOGICAL SIGNS

Pleural Effusion	75%
Gas in Abscess	40%
Elevated Diaphragm	35%
Immobile Diaphragm	4/10

Displacement of abdominal viscera noted in 4/18 cases
(By plain film of abdomen or upper G.I.)

Other Investigations

Lung-Liver Scan was positive in 87% of the cases. This series does not involve Abdominal Ultrasound Study because the study was not available at the Halifax Infirmary before 1975.

BACTERIOLOGY AND ANTIBIOTICS

Organism

According to the culture of the drainage of the abscess, 50% had single organism cultured, and 35% had more than one organism. The most common organisms were coliform (77%), bacteroides (18%), streptococcus fecalis (18%), and staphylococcus pyogenes (12%). (Table IV)

TABLE IV
BACTERIOLOGY

Single Organism in 10	More than one in 7
Coliforms	77%
Bacteroides	18%
Streptococcus	18%
Staphylococcus	12%
Enterococcus	12%
Proteus	6%

These findings are very similar to other series and gram negative bacteria were predominant.

Sensitivity

Most of the organisms were sensitive to Gentamycin (73%), Chloramphenicol (60%), Kanamycin (53%), and Clindamycin (20%). These findings are again similar to other series and it appears to be most logical to use Gentamycin as a drug of choice along with Clindamycin to cover bacteroides. Our series shows that the use of antibiotics was rather poor. Large numbers of patients were treated initially with Ampicillin or Tetracycline. (Table V).

TABLE V

	Sensitivity of Organisms	Antibiotics Given Empirically
Gentamycin	73%	33%
Chloramphenicol	60	—
Kanamycin	53	11
Cephalosporins	40	11
Tetracycline	40	22
Streptomycin	27	—
Ampicillin	26	50
Clindamycin	20	22
Erythromycin	20	—
Penicillin	13	7

TREATMENT AND RESULTS

Antibiotics

Most of the reported series confirm that the best result is obtained by combined therapy of antibiotics and surgical drainage as soon as the diagnosis is confirmed. The disease

when treated by antibiotics alone, of course, has a high mortality. Our series consists of patients treated with antibiotics and surgical drainage. The number of patients treated with Gentamycin and Clindamycin was rather small; however, we did not have any side effects from these antibiotics with the treatment of five-seven days' course.

Surgical Treatment

There have been several classifications of subphrenic spaces. We used the commonly quoted classification as shown in Table VI because it is the most practical one as far as practical surgery is concerned.

TABLE VI
CLINICAL PATHOLOGICAL CLASSIFICATION OF SUBPHRENIC SPACES

Right	
SUPRAHEPATIC-	
	Anterior
	Posterior
INTRAHEPATIC -	
	Anterior
	Posterior
Left	
SUBPHRENIC -	
	Lesser Sac

In our series, six patients had subcostal approach of Clairmont, three patients through the bed of 12th rib following the principles described by Nather and Ochsner. There was no difference in mortality between these groups.

It has been stressed in the past that every effort should be made to drain the abscesses without entering the pleural or peritoneal cavities. However, recently there has been many reports showing that transcelomic approach does not have a higher mortality rate than the extracelomic approach, especially when multiple abscesses are suspected.

Our series show six patients who had transperitoneal approach, there being no difference in mortality between this group and the other group of nine patients treated by extracelomic approach. (Table VII)

TABLE VII

Surgical Approach	No. of Pts.	Deaths
Subcostal	6	1
Transperitoneal	6	1
Bed of 12th Rib	3	—
Transpleural	—	—

Mortality

Our overall mortality rate was 13% in the group of antibiotics and surgical drainage. There was no difference in mortality between the patient groups treated before the eighth post-operative day and after eight days. (Table VIII)

TABLE VIII

MORTALITY

	No. of Pts.	Deaths	Mortality (%)
Surgically Treated	15	2	13
Non Surgically Treated	5	3	60
TOTAL	20	5	25

The interval between the initial operation and drainage of the abscess was 11-45 days with a mean of 28 days. No difference in mortality was seen between patients treated by the transcelomic and extracelomic approach group; and their hospital stay was about the same.

DISCUSSION

The wide-spread use of antibiotics has, by no means, simplified the problem associated with the diagnosis and management of a subphrenic abscess. Antibiotics alone have no place in the treatment of a subphrenic abscess. The best results are obtained by using both antibiotics and surgical drainage. Antibiotics may abort a subphrenic cellulitis before it becomes purulent.

The mortality rate has improved since Clairmont and Ochsner described the technique in 1905 and 1920s. However, it still carried a high mortality and the diagnosis and its management is still a clinical challenge.

Radiological investigation along with clinical suspicion and patient's symptoms and signs is the most productive way to confirm diagnosis. Recently we have been using Lung-Liver Scan, Abdominal Ultrasound, and Gallium Scan with high accuracy.

Gentamycin, Clindamycin, Kanamycin, and Chloramphenicol are able to cover the bacterial spectra found in subphrenic abscess. When a subphrenic purulent collection has been established, early surgical drainage along with antibiotics is the only definitive therapy.

CONCLUSION

A series of 20 cases of subphrenic abscesses were reviewed at the Halifax Infirmary, 1971-1976.

1. The antibiotics of choice are Gentamycin, Chloramphenicol, Kanamycin, and Keflin.
2. The best results are obtained from combined therapy of antibiotics and surgical drainage.
3. Our series shows over-all mortality of 13% and there was no difference between transcelomic and extracelomic approach.
4. Biliary and gastric surgery were the most common cause. □

This paper was presented at the Grand Round of the Department of Surgery, Dalhousie University in 1976.

Acknowledgement

I thank the Department of Medical Records of the Halifax Infirmary and my secretary, Miss Aucoin, for their co-operation and kind help.

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Difficulties with Anaesthesia Apparatus

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The possible causes of difficulties, dangers and disasters associated with anaesthetic apparatus are so numerous as to defy tabulation. This brief review is therefore of necessity somewhat selective, and deals primarily with those problems that most commonly occur, those which are of intrinsic interest, and those which might have seemed to have been impossible had they not already happened.

The different components of the anaesthetic and ancillary apparatus are considered in turn, and a brief preoperative routine check is suggested, together with ways and means of diagnosing and remedying malfunctions should they occur.

CONNECTORS AND ADAPTORS

"Confusion now hath made his masterpiece . . ."

(SHAKESPEARE, *Macbeth*)

A connector is any fitting that joins together two or more components, while an adaptor is a special type of connector that joins together otherwise incompatible components.

The widespread adoption of standard sized, tapered, sequential fittings for rubber tubing and connectors has done much to reduce the former chaos that prevailed in this area, although regrettably at the expense of an increased liability of the anaesthetic apparatus to fall to pieces in the middle of the administration. Similarly, while the introduction of pin-indexing to prevent the connection of wrong gases to the anaesthetic machine has enormously reduced the possibility of accident, it has by no means eliminated it, and there are several recorded cases of cylinders containing the wrong gas being attached to the machine despite the presence of the pin-index equipment.^{1 2}

On more than one occasion, the presence of multiple washers on the yoke has succeeded in providing a gas-tight seal while keeping the cylinder far enough away from the yoke to prevent the pins engaging in the holes. In one instance, a cylinder was so forcibly tightened into an incompatible yoke that the pins were driven solidly back into the yoke from which they projected, almost incredible as this may seem. It has also been found possible to defeat the pin-index system in the case of a pipeline adaptor applied to a cylinder yoke, simply by inserting the adaptor upside down, in which case the pins and holes are completely separated from each other. (By the same token, it should theoretically be possible to insert an entire cylinder upside down in the yoke, although presumably the resulting appearance would be too grotesque to escape the attention of even the most myopic anaesthetist!)

Although it is admittedly rare for patients to succumb to such bizarre manipulations, these cases do serve to make the point that few safety devices are really one hundred per cent safe, and that some potentially dangerous situations are the more so because they were not thought to be possible.

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FLOWMETERS

"Fluttering and dancing in the breeze . . ."

(WORDSWORTH, *The Daffodils*)

Although modern rotameter flowmeters are extremely accurate, they can still be the source of numerous problems. In some types of apparatus it is quite easy to misread the scale, and this is particularly true in some older Heidbrink machines where numerous flowmeter tubes are located close together with scales packed closely between them. In machines with copper kettle type vaporizers, the oxygen flowmeters for the vaporizer and for the main supply can be confused, while in the Ohio 5000 machine the vaporizer flowmeters are calibrated in mls. of vapour rather than in mls. of oxygen, resulting in settings that are unfamiliar to many.

Dirt and static electricity can both cause inaccurate readings on the flowmeter. Rotameter bobbins may also become jammed at the top of the tube by high flows of gas, and in this position may not be readily visible to the anaesthetist. This is usually prevented in modern apparatus by the presence of wire stops at the upper end of the tube, although even these may become detached and fall into the bobbin, causing gross underreading of the true gas flow.

Should a leak occur in an oxygen flowmeter (e.g. a crack in the glass, or a loose seating of the tube at either end), then an anoxic mixture may be delivered if the nitrous oxide is being delivered from a flowmeter downstream to the oxygen flowmeter.³ A similar result will occur even if the defect is in a flowmeter not in use (e.g. cyclopropane) if this is upstream to the nitrous oxide flowmeter. For this reason, it would be better if all machines had the oxygen scale at the extreme right hand of the series, but in fact in many machines it is on the left.

The above is an example of a hypoxic mixture being delivered despite an apparently adequate oxygen setting on the flowmeters. The converse has also been reported — a machine correctly coupled to properly working O₂ and N₂O pipelines, and showing an adequate N₂O concentration on intact flowmeters, was found to be delivering a mixture consisting largely of O₂, with a very low N₂O concentration.⁴ This improbable state of affairs was remedied by switching from the pipelines to the emergency cylinders on the machine. Eventually it was found that a leak had occurred in a diaphragm separating the O₂ and N₂O supplies to the flowmeters in the fail-safe N₂O cut-off device, and this had permitted oxygen to mix with the nitrous oxide, and pass with it through the nitrous oxide flowmeter.

VAPORIZERS

" . . . a foul and pestilent congregation of vapours"

(SHAKESPEARE, *Hamlet*)

The highly undesirable mixing of two different volatile agents in the same vaporizer can occur as the result of transfilling, when two vaporizers are arranged in series with the upstream agent (e.g. halothane) more volatile than the

downstream (e.g. methoxyflurane).⁵ Although it is not common practice to administer two different volatile agents simultaneously, it is possible for the downstream vaporizer to be accidentally left on following a previous administration, in which case its contents may become contaminated with halothane from the upstream vaporizer. Ideally vaporizers should be arranged in parallel rather than in series, although this may involve problems in ensuring equal flow-splitting between the two vaporizers while still leaving them independently controllable.

Obviously, inadvertent mixing of agents can also occur as the result of pouring the wrong anaesthetic into a vaporizer. This is adequately prevented by the use of the non-interchangeable filler-tube system, but there remain many vaporizers in use (notably the Drager and the earlier Fluotec models) which do not feature this equipment.

Free-standing vaporizers pose at least two important hazards. In the first place, they may be overturned, resulting in liquid anaesthetic being delivered into the breathing circuit, with inhalation of excessive vapour concentrations by the patient. Secondly, the vaporizer may be wrongly connected so that the gases pass through it backwards. (Even though the inlet and outlet ports may not be compatible, the wrong rubber tubing can still be attached to the inflow and outflow connectors.) The result of this is the delivery of twice the indicated concentration of vapour.⁷

The majority of mishaps with vaporizers are of a minor nature — letting them run dry, forgetting to turn them on again after refilling, or forgetting to turn them off before refilling (in the latter case, if the gases are still flowing, the proffered anaesthetic is promptly rejected all over the table-top of the machine).

THE BREATHING CIRCUIT

"I wind about, and in and out . . ."

(TENNYSON, *The Brook*)

The most commonly used breathing circuits at the present time are probably the Bain, the circle absorber, various modifications of the T-piece (notably the Jackson-Rees), and non-rebreathing valve systems such as the Ruben.

The Bain Circuit

The principle hazard with this circuit is the separation of the inner concentric tube at its point of entry into the corrugated outer tube. This may occur when the set is being washed after previous use, and it should be noted that, as the sets are nominally disposable and intended for single use only, it is the user's responsibility if any malfunction occurs. The consequence of this detachment is that total rebreathing takes place along the length of the corrugated tubing, while the fresh gas flow passes out through the valve without reaching the patient at all.

Fortunately, a simple test⁹ exists for confirming that the circuit is intact — before connecting it to the patient, press the oxygen flush button and observe the bag. If the circuit is intact, the walls of the bag will be sucked together by the venturi effect of the oxygen emerging from the open end of the inner tube. If the tube has become detached, the walls of the bag will remain static, or even expand slightly, with the pressure of the incoming oxygen.

Accidentally treading on the delivery tube of the Bain circuit while operating the oxygen flush is a common enough occurrence, and while it poses no immediate threat to the patient, the resulting bang as the connector blows off the machine is sometimes disturbing to onlookers of a nervous disposition.

The Circle System

This is subject to leaks, obstruction, and inadvertent rebreathing.

Leaks may be due to a poorly fitting soda-lime canister or valve dome cover. A leak on a more massive scale will occur if the circle system is not connected to the machine at all, when of course the bag will remain collapsed, even with the oxygen flush full on. (There are few situations in which the anaesthetist experiences a more justified sense of personal insufficiency.) With most types of apparatus, a quick glance will reveal disconnected tubes, but this is not so with the Boyle Model 10 apparatus, in which everything may apparently be connected up in proper fashion.¹⁰ With this machine, considerable mental agility may be needed to diagnose and rectify the situation.

Obstruction may occur when a valved Y-piece is inadvertently used in association with a circle absorber which already has built-in unidirectional valves (as most have). So long as both sets of valves are in phase, nothing untoward results, but if the tubes are crossed, or the Y-piece inserted upside down, then the valves become opposed to each other, and absolute obstruction results. This situation is not as rapidly remedied as might be thought, and if the patient is apnoeic it may be quicker to bring in another machine than try and match up often incompatible lengths of rubber tubing to the Y-piece and absorber.

The board-like feel of the bag in the above circumstances can also be experienced if the Ohio 100 inhaler valve is used as the Y-piece. This valve is unique in incorporating a control to isolate the circuit from the atmosphere while changing masks, endotracheal connectors, etc. If this control is operative and the anaesthetist is unaware of its existence, he will experience total obstruction on attempting to inflate the patient, as in the case of crossed valves.

Inadvertent rebreathing will occur if the unidirectional valves are missing or incompetent. Less expectedly, it may also occur if the circuit has been wrongly assembled with badly placed components. For example, should an expiratory valve be placed on the end of the inspiratory hose, next to the inspiratory unidirectional valve, and should this valve be unthinkingly used by the anaesthetist, then rebreathing can occur along the whole length of the hose.

T-piece Circuits

These are used mainly in paediatric practice, where their low resistance makes them attractive. Their main hazard lies in the accidental occlusion of the expiratory limb, which may cause the pressure to rise sufficiently to produce a pneumothorax.

Non-rebreathing Valves

These may also cause the pressure within the system to rise to a dangerous level, either because of obstruction to the expiratory outlet, or because of a rise of pressure within the

system sufficient to hold the inspiratory component open and the expiratory component closed. This can happen, for example, if manual ventilation of an apnoeic patient is temporarily suspended in an attempt to initiate spontaneous respiration.

Accidental pressure rises of the type mentioned above may, of course, happen in any circuit which includes an expiratory valve, if this valve is left closed while fresh gas input continues. The incidence of serious sequelae such as pneumothorax, however, is less than might be expected, and this may be partly due to the fact that, above a certain critical limit, increasing distension of the bag is accompanied by a fall in pressure, despite continuing gas inflow. This is explained by LaPlace's Law (pressure varies inversely with radius).¹¹ The critical limit for a well-used bag with high compliance is little more than half that required to produce a pneumothorax, and therefore a case can be made out for prestretching new bags by deliberately overdistending them in order to increase their compliance.

THE VENTILATOR

“ . . . that divillish yron engine . . . ”
(SPENCER *Faerie Queene*)

Of the various mishaps that may be associated with the use of ventilators, the commonest are probably —

- a) failure to close the expiratory valves in the breathing circuit when the ventilator is already equipped with a spill valve (resulting in underventilation of the patient);
- b) disconnection from the breathing circuit through a hose dropping off (resulting in non-ventilation of the patient);
- c) mechanical failure of the ventilator to operate at all.

More difficult to detect is a leak in the concertina bag, which may be almost invisible and yet be responsible for gross dilution of the anaesthetic mixture by oxygen driven in from the pressure chamber through the leak.¹²

In some types of ventilator, equipped with non-rebreathing circuits, the minute volume is directly set on the controls, and if this exceeds the total fresh gas supply delivered to the ventilator, air is drawn in through a relief valve, and the anaesthetic mixture is again diluted.

ANTI-POLLUTION DEVICES

“And the woodbine spices are wafted abroad . . . ”
(TENNYSON, *Maud*)

The introduction of anti-pollution or scavenging systems has, as with most other safety devices, brought its own set of complications in its train.

Most such devices involve the application of suction to a wide bore tube connected to the expiratory valve on the circuit. The tube often takes the form of a corrugated breathing hose the distal end of which lies on the floor, and has inserted in it the suction tubing. If the end of the tubing is occluded by the pressure of a wheel of the anaesthetic machine, or by someone standing on it, the full suction pressure may be exerted on the expiratory valve, holding it open, and transmitting the negative pressure to the breathing circuit and the patient's airways.

Another not uncommon mishap is the wrong connection of the scavenging tubing to part of the breathing circuit or to the ventilator. Once again, if the apparatus has not been tested

beforehand, quick thinking may be needed to mentally disentangle the mass of interconnected tubing on the front of the anaesthetic machine.

THE LARYNGOSCOPE

“In darkness, and with dangers compass'd round . . . ”
(MILTON, *Paradise Lost*)

Failure of the light bulb is the commonest fault associated with this instrument, and its results may range from minor temporary inconvenience in an elective case, to major disaster in an emergency patient with a full stomach. Needless to say, the laryngoscope should always be tested before use, and a second immediately available if it is considered possible that the patient may vomit or regurgitate.

Unfortunately, laryngoscope bulbs may fail even though tested immediately before use, and in fact it is illogical to assume that they cannot. However, if a flashlight is available it is perfectly feasible to use this as an aid to intubation, by transilluminating the front of the neck in the region of the cricothyroid membrane. With this technique, the glottis and vocal cords (as seen by the unlighted laryngoscope blade) are dramatically illuminated amidst the surrounding darkness, and intubation can be at least as easy as by conventional illumination. Student respiratory technologists currently undergoing training in laryngoscopy at the Halifax Infirmary have been consistently successful in intubating with this technique, and the incidence of inadvertent oesophageal intubation has been reduced to zero.

SUCTION APPARATUS

“So was hir joly whistle wel y-wet . . . ”
(CHAUCER, *The Reeve's Tale*)

Suction is used by the anaesthetist primarily to remove secretions and vomit from the mouth and pharynx. A high flow is desirable to remove large quantities of vomit, while a high vacuum is necessary to remove viscid secretions.

Inadequate suction often bedevils both the surgeon and the anaesthetist, especially if they are attempting to share the same suction source, as for example during a thoracotomy in a patient with endobronchial secretions. The requirements of the surgeon and the anaesthetist are not quite the same, however; the surgeon may be interested in the relatively continuous removal of relatively large volumes of fluid of low viscosity (e.g. irrigating saline), whereas the anaesthetist may be more concerned about his ability to remove rapidly with high suction a relatively small quantity of thick and viscid material from the patient's airways.

The surgeon's needs are best met by having a large suction bottle to minimise frequent changes of bottle and interruption to suction, although this results in a large volume which tends to mitigate against the rapid development of maximum negative pressure. If the anaesthetist anticipates the need for a high degree of suction to remove a small quantity of thick or particulate matter, he may be able to convert a poorly-functioning suction apparatus into an adequate one by partially filling the bottle beforehand, thereby reducing the volume of the system.¹³

Outright failure to suck at all is usually the result of the tubing becoming kinked or disconnected, or the suction bottle becoming full — in the latter case, an automatic floating

cut-off valve comes into operation to prevent the aspiration of fluid into the pipeline system, or the electric motor, as the case may be.

The following procedure is suggested as a test of the efficiency of a suction apparatus — switch it on with the bottle empty, occlude the open end of the suction tubing, and observe the time taken to achieve a vacuum of 300 mm Hg. This should not exceed four seconds, and the apparatus should be capable of producing a maximum negative pressure of 400 mm Hg.¹⁴

PRE-OPERATIVE EQUIPMENT CHECK

As Dorsch and Dorsch¹⁵ have pointed out, it is patently impossible to check for every conceivable malfunction in anything like a reasonable length of time, but nevertheless, a rapid "cockpit drill" taking less than a minute will serve to eliminate most major faults. A typical drill of this kind would include the following:

- a) check that all flowmeters are off to start with, and that none are stuck at the top of the tube.
- b) if using piped gases, check that reserve cylinders of gas are in place on the machine, and that a key is available to open them if necessary. Turn the nitrous oxide and oxygen flowmeters on, and observe for a few seconds to ensure that they maintain a constant reading. A flowmeter bobbin may subside to the bottom of the tube after a few seconds if a cylinder has been turned on and off again. Continuing flow with the reserve cylinders turned off will also ensure that the pipeline hose is properly connected up.
- c) if using cylinder gases, check that running and reserve cylinders of each gas are in place. Check the pressure readings on the gauges, noting that:
 - (i) a full reading on the nitrous oxide gauge is no guide to the remaining contents of the cylinder;
 - (ii) if the oxygen gauge reads full before the cylinder is turned on, open the flowmeter and run the oxygen until the bobbin falls to the bottom of the tube. Then open the cylinder again, when the pressure gauge will now give a valid indication of the cylinder contents.
- d) check that vaporizers are turned off; that those that may be required are adequately filled; and that filling caps are in place.
- e) test for leaks in the circle absorber by inflating the bag with oxygen with the Y-piece occluded. (Note that this will not reveal the presence of crossed valves, nor will it detect leaks in the flowmeters or vaporizers, because of the presence in most machines of a non-return valve between the latter and the breathing circuit, in order to eliminate back-pressure effects on the vaporizers).
- f) check that the soda-lime canister is in circuit, and that the unidirectional valves are present and operative.
- g) using the Bain circuit, apply Pethick's test (see above).
- h) to detect possible leaks in the flowmeters, run a 500 ml/min. oxygen flow with the delivery hose occluded. This should produce a slow sinking of the flowmeter bobbin, which immediately bounces up to its original position when the delivery hose is released. So long as this happens, any leak in the machine is less than 500 mls/min., and therefore unlikely to be significant, unless very low flow rates are to be used.¹⁵

INTRA-OPERATIVE EQUIPMENT MALFUNCTION

The results of acute malfunction of apparatus fall essentially into one or another of the following categories:^{15 16}

- Excess gas pressure
- Major leaks
- Obstruction
- Excess anaesthetic
- Deficient anaesthetic
- Hypercarbia
- Hypoxia

The major causes of most of these have been indicated above, and provided it is realised what is happening, tracking down the source of the trouble and rectifying it should not be too difficult. However, two of these unwanted complications (namely unexpected emergence from anaesthesia, and increasing hypoxia) are sufficiently disconcerting and diverse in their origins to merit separate attention.

UNEXPECTED EMERGENCE FROM ANAESTHESIA¹⁷

"Tears, idle tears! I know not what they mean . . ."
(TENNYSON, *The Princess*)

If a "narcotic" technique is being used, with nitrous oxide as the sole inhalation agent, a deficient concentration of this gas will lead to fairly rapid lightening of anaesthesia, indicated in the paralysed patient by tears, tachycardia, dilatation of pupils, etc.

- a) check the flowmeter, to see that an adequate concentration of nitrous oxide is being given.
- b) check the oxygen flush valve, to ensure that it has not stuck partly open.
- c) check that the desired circuit is in fact connected to the machine, and that the patient is not being ventilated with air.
- d) if a ventilator is being used, switch to manual ventilation to eliminate the effects of a possible leak in the bellows.
- e) if there is still no improvement in the situation, switch to another machine or add a volatile agent.

If a volatile agent is being used, and the concentration of this falls, emergence from anaesthesia tends to be slower than when a narcotic technique is employed.

- a) check that the vaporizer is still turned on (this is sometimes forgotten after topping it up during an anaesthetic).
- b) check that it has not run dry.
- c) check that it contains the right agent (e.g. that methoxyflurane is not being given from a halothane vaporizer).
- d) if a copper kettle vaporizer is in use, check that the control valve is in the "on" position (it is sometimes left "off" after using the oxygen flush, with which it is combined); and also check that the vaporizer oxygen flowmeter setting has been correctly calculated.

INCREASING HYPOXIA

"The darkness deepens . . ."
(LYTE, *Abide With Me*)

- a) check that the patient is being adequately ventilated.
- b) check that the flowmeter indicates an adequate oxygen concentration

- c) check that the endotracheal tube, if present, has not been displaced down into the right main bronchus
- d) if using methoxyflurane in a vernitrol type vaporizer, check that the vaporizer control is not in the "off" position, as with this poorly volatile agent the amount of oxygen passing through the vaporizer represents a significant proportion of the patient's total oxygen intake.
- e) check the circuit to ensure that excessive rebreathing is not taking place.

Oxygen analysers are sometimes included in anaesthetic systems, but like all other apparatus they are subject to malfunction, and contribute to safety only so long as they are regarded with the same dark suspicion that the anaesthetist entertains for the rest of his equipment.

CONCLUSIONS

When one reflects that practically none of the misadventures described above could have occurred in the days when anaesthetic equipment was limited to a pocket-handkerchief and a bottle of ether, one might be tempted to wonder if anaesthesia is really much safer now than it was then. To entertain such gloomy doubts would be to ignore the transformation in surgery that has been made possible by improvements in anaesthetic techniques and equipment over the last hundred years. Perusals of surgical texts of the mid-nineteenth century period indicate that simple production of oblivion was all that could be expected of the administrator of anaesthetics, and should the patient be fortunate enough to wake up again afterwards then it was felt that the art of anaesthesia could scarcely go further. Today the demands of both surgeon and patient far exceed these rather minimal requirements, and can often only be met by the use of complex apparatus, which is inevitably subject to occasional malfunction.

The most important single factor in avoiding trouble with apparatus is to ensure as far as possible that it is in good working order before beginning the anaesthetic. In the middle of a busy operating list, and possibly under pressure from other members of the team, there may be a temptation to start the induction more in the hope than in the conviction that the apparatus is going to function properly. If anaesthetists resist this temptation, even at the cost of causing a small delay, they may be able to avoid situations in which they could subsequently be precipitated unwillingly into the limelight, out of the obscurity in which, by temperament, they would sooner remain.

*"Let not ambition mock their useful toil,
Their homely joys, and destiny obscure . . ."*
(GRAY, *Elegy*)

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Physicians' Ambivalence Toward Alcoholic Patients

The Halifax-Dartmouth Scene

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This study presents results of a 1976 survey of Halifax-Dartmouth physicians on their attitudes toward alcoholics and the treatment of alcoholism. The results indicate that the majority of physicians do not feel adequately trained to treat alcoholism. As well, their attitudes toward alcoholics are ambivalent and multifaceted: some aspects are consistent with a therapeutic approach to alcoholism while others are essentially moralistic.

In the summer of 1976, a sample of physicians representative of all those practising in the Halifax and Dartmouth were surveyed, with a view to analyzing their diagnostic practices and attitudes toward alcoholics. The interview included questions on physicians' background and training, as well as the administration of two previously-used measures of attitudes toward alcoholics. This paper briefly presents the main findings of the survey. Space limitations preclude the presentation of detailed results or methodological points: these are available elsewhere¹.

First, 75% of the physicians said they had received either no training or less than four hours' training on the treatment of alcoholism, and 71% felt their training (or lack of it) left them inadequate to treat alcoholism. These data suggest a reason for common diagnostic practices which are unlikely to detect harmful drinking patterns until middle or late-stage alcoholism had developed. The surveyed physicians used diagnostic criteria concentrating on explicit physical, psychological and social damage, brought about by years of excessive alcohol consumption. In consequence, most physicians "see", or more appropriately, notice very few alcoholics in their practices.

The findings based on the attitude measures indicate that most physicians view alcoholism as a disease. This recognition does not, however, appear to prevent a negative moral stance toward the alcoholic or a somewhat pessimistic prognosis for recovery from alcoholism. Many physicians seem to subscribe to skid row stereotypes of alcoholics as having low socioeconomic status, character defects, weakness, etc. At the same time, it would be quite incorrect to conclude that the attitudes displayed are especially extreme.

The multidimensionality of attitudes toward alcoholics must be emphasized. Common-sense statements such as "physicians have a bad attitude toward alcoholics", are inadequate to describe the phenomenon in question. It would be much more appropriate to characterize the physician's attitudes as highly ambivalent.

The influence of age and length of time in practice suggests that younger doctors generally may be more prepared to work with alcoholics. They are more optimistic about the possibility of favourable treatment outcome and less likely to ascribe character defects to alcoholic patients. However, there is no way of knowing whether, with the passage of time and increased experience, younger doctors will maintain their relatively positive attitudes, or whether these will change in the direction of older doctors. Only longitudinal studies of physicians' attitudes would correct this gap in understanding the situation.

It is interesting to note that those physicians who believe alcoholics have no control over their drinking do not necessarily give favourable prognoses or more favourable views of alcoholics' character and social status. On the contrary, the reverse is the case: those physicians, who think the alcoholic has some degree of control over drinking and fewer emotional difficulties, have a more positive attitude than those who see less control and more emotional difficulties. One might suggest that neither position forms the optimal attitudinal basis for therapy; in other words, it would be desirable to maintain a belief in the likelihood of recovery and the worth of the alcoholic as a human being *alongside* an acceptance of "powerlessness over alcohol" and emotional difficulties.

The ambivalent stance of so many physicians is undoubtedly reinforced by their feeling that medical training to treat alcoholism was inadequate. At the same time, their practice and career are unlikely to encourage large-scale participation in remedial training programs, especially if one considers the availability of alternative training opportunities in more popular diseases. On the other hand, given increased public and governmental concern on the impact of lifestyle-related illness on morbidity, mortality and health care costs, some responsiveness on the part of the medical profession appears warranted. □

Acknowledgements

This research was funded by the Non-Medical Use of Drugs Directorate under their Summer Contributions Fund, 1976. The Department of Preventive Medicine at Dalhousie University provided advice and assistance, while the Nova Scotia Commission on Drug Dependency provided administrative support. The authors extend their thanks to these various organizations, as well as to the physicians participating in the study.

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Certain Aspects of the Management of Alcoholic Recidivists*

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INTRODUCTION

At the invitation of the Nova Scotia Commission on Drug Dependency, the author in October 1976 visited the detoxification centres and rehabilitation facilities established by the Commission in various parts of Nova Scotia. One of the main problems which concerned the staff of these centres and also doctors, social workers etc., met during visits to hospitals and other Centres was that of alcoholic 'recidivism'.

As so often in alcoholism, the semantic question arises as to the *definition* of the alcoholic "recidivist". In some countries he might be equated with the habitual drunken offender, whose problems have been studied in 1967-71 by a Home Office Working Party in England, and in 1976 by a Task Force of the Ontario Addiction Research Foundation (who called him the "Chronic Police Arrestee"). The Nova Scotia Commission on Drug Dependency's definition comprises a much greater segment of alcoholics; i.e., persons who relapse into drinking and require admission because of such relapses more than once a year. This would mean that a relatively high proportion of the alcoholic population would be regarded as "recidivist", since unfortunately alcoholism, like other forms of drug dependency, is essentially a relapsing disorder^{1,2}.

Because of the frequent equation of the term "recidivism" with criminal recidivism, another term with less moral undertone would be preferable. It is well known that the very great majority of alcoholics are not "criminals" and do not fall afoul of the law. Terms such as "repeaters" would be preferable to "recidivists".

The more public and professional education reduces the stigma attached to alcoholism; the earlier the diagnosis; and the better a Detox unit and its reputation; the larger will be the number of people diagnosed and the greater will be then the clamour for admission for a certain proportion of alcoholics (in spite of outpatients, crisis intervention, etc). This of course would have repercussions on the important question how often one should readmit a "recidivist", as preference would be given to a newcomer rather than to a person who has been treated before and has relapsed, if, for example, on a given occasion only one bed were available.

Similarly, the acceptance of alcoholism as basically a relapsing disorder has obvious repercussions on training one's staff. Inexperienced staff often feel that success in treating alcoholics means total abstinence for the "duration",

and they become frustrated, disappointed and dejected if a patient to whom they have given dedicated attention, relapses soon afterwards, and possibly does so again and again. Certainly, majority opinion still strongly feels that the only safe goal for an alcoholic is total abstinence as the condition for a future happy, contented and useful life. On the other hand, probably the great majority of recovered alcoholics, who by now have had no drink for many years, have achieved this happy state of affairs only after a varying number of initial relapses; in spite of the story often heard at AA meetings of the individual who "veni, vidi, vici! I came to my first AA meeting, I saw (or listened), and I won: I never needed another drink!". Such a history, told with the best intentions, unfortunately discourages many a newcomer who may so often have tried hard and failed.

Similarly the newcomer-therapist in the field of alcoholism may take a client's or patient's relapse as evidence of his own (the therapist's) failure, or alternatively that the task of helping alcoholics is beyond his own (or for that matter anybody's) reach. In reality, however, in most cases an initial relapse is no more than a challenge and an opportunity of learning from previous mistakes to try again.

One has to realize that everyone, apart from personality assets, also has a limitation of potentialities; many alcoholics with very inadequate personalities (e.g. some skid row drinkers) will probably never be able to maintain total sobriety for very long. For such very damaged or very unstable personalities the therapists will often have to be satisfied with a much more modest success than lifelong total abstinence; with temporary improvement rather than recovery. All this in such inadequate personalities indicates relative success. After all it means a great deal not only to sufferer himself, but probably much more so to his long-suffering family if instead of being on a more or less persistent chronic bender, he may have a skid "only" every month or so. This holds especially if, in the interval, he has started to work and has become a caring husband and father.

The therapist who has learned emotionally to accept this view of alcoholics will still feel sad about a patient's relapse but will be able to continue working with alcoholics without too much frustration, in the knowledge that ultimately many such initially relapsing alcoholics will finally recover. Others may continue to improve, as evidenced, for example, in the longer interval between relapses, in the lesser duration and intensity of their "skids" and in their improved style of living, e.g., relating at home to their families, at work, etc.

HOW OFTEN TO READMIT?

Such a realistic appreciation of the nature of alcoholism as a relapsing disorder, of the need to appreciate the limitations of a given individual's potential and of keeping in mind the improvement following a previous admission is also important, if it comes to the complex question of how often one

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would readmit a "recidivist". Everyone would surely agree that limiting readmission to say, just one or two occasions, would be unfair; that the question would have to be handled on an individual basis and probably to be decided by a staff discussion; and that the individual who subsequently showed no evidence of trying or of improving would probably hardly at all qualify for readmission. However, one might have to consider also the destructive effect of such a drinker's "acting-out" and drunken behaviour on the family, and therefore perhaps give him one more chance. If an individual cooperated well during his stay, and if subsequently he showed evidence of certain improvement in life style, increasing length of sober episodes, and other criteria referred to above, these would be factors favouring his chances of readmission even though he may have had a number of previous admissions.

On the other hand, one would have to consider also the negative effect which a high number of readmissions may have on the morale of the staff and, perhaps, even more important, of other, new patients. Meeting a large number of patients with many previous admissions may have a detrimental effect on the motivation of newcomers. A too-lax handling of readmission procedure to a "nice" hostel, etc., may also lower the motivation of former residents to try their best not to drink again.

The English Working Party's Report points out that, "The building of an ethic of 'no drinking' on the part of residents will tend to call for a strict attitude to lapses". Considerable experience and flexibility of attitudes on the part of Staff is needed to do justice to all these somewhat conflicting considerations. The assistance of a committee formed by patients elected by their fellow patients to assist in this matter may be of considerable benefit, as they may have often learned more about the real intentions and (lack of) motivation of their former fellow-patients than the staff. Certainly patients must not be allowed to leave the Detox and 28 Days' Facility with the feeling that come what may they would be certain of readmission (Revolving Door).

INDUCING "MOTIVATION"

Detox is of course no more than first aid and all attempts should be made during this time to build up a positive *relationship* with the patient and to induce him to embark on a long-term rehabilitation program, probably at first residential (e.g., Halfway Houses.). Strictly speaking, detox and the risk from physical abstinence symptoms (epileptiform fits, DT's) should be over after a period of up to six days, and during this period such a drinker may have also improved a great deal physically. He probably has started to eat regularly, to sleep, etc., but this period is usually much too short to build up a constructive, helping relationship with such a patient and to induce a motivation in him to work toward a sober, healthy life style in the future. Moreover, discharging an alcoholic immediately after detox will usually mean no more than his having been made physically fit to start drinking again in a physically better state.

The aim of any treatment of alcoholics, who at best are usually ambivalent about giving up drink, is to induce the initially missing *motivation* in them. This takes, as a rule, much longer than the few days necessary for physical detox. To achieve the goal of inducing motivation in alcoholics and to establish the necessary constructive relationship, staff members must themselves have emotionally accepted the alcoholic as a sick person in need of understanding and help,

in a non-rejecting, non-moralizing, non-judgmental manner, and in an absence of an holier-than-thou attitude. Often, regular visits by recovered expatriates or AA may be extremely helpful in this respect as alcoholics often identify most readily with other alcoholics. At the same time, no professional or non-professional rivalry or jealousy must occur. At certain phases and with certain individual patients, the social worker may be the best person to assist him, in other cases the nurse, the G.P., the psychiatrist, a recovered alcoholic and, not infrequently, the clergyman.

THE NEED FOR A COMPREHENSIVE MULTI-DISCIPLINARY TEAM

In view of the multifactorial causation of alcoholism, a *multi-dimensional treatment* combining psychological, social and physical therapies is usually required. Withdrawal therapy usually includes emphasis on a fully-balanced diet, fluids, anticonvulsants, tranquilizers, and possibly non-barbiturate hypnotics. As a rule, this type of drug is required only during the withdrawal phase and should be terminated as soon as possible, because of the very real risk of dependence formation on any drugs affecting the central nervous system. However, this should not become a perfectionist attitude, and in certain episodes of emotional crises, etc., temporary recourse to small doses of tranquilizers may become necessary. Naturally, alcoholics may suffer from other physical or mental abnormalities and complications so that in such cases the help of a G.P. or psychiatrist will become necessary.

In other cases, aggressive or dangerous patients may require transfer to a secure institution. While naturally voluntary treatment is preferable to compulsory therapy, there are very inadequate personalities who are just unable to refrain from alcohol as long as there is any possibility of access, and who may then act out in an aggressive, criminal manner. For such criminal alcoholics the formation of therapeutic communities in prison should be considered.

Group therapy has come to be regarded by many as the most promising form of therapy for alcoholics and, alongside the therapeutic community approach, should probably be regarded as the core of treatment. In many alcoholics, alcohol-deterrent drugs (Disulfiram or the milder Temposil) can be of great help as an aid to treatment within the framework of a comprehensive form of therapy. Various types of Halfway Houses or Day Centres may be required for different types of alcoholics (e.g. homeless alcoholics); suitable occupational therapy, or vocational rehabilitation facilities should be available for them. Some very damaged or inadequate personalities may require Halfway Houses for the rest of their lives.

Introduction of patients to AA, working with the families, and introduction of the families of Al Anon and Alateen are all indispensable, part and parcel of treatment programs for alcoholics.

Finally facilities such as Detox, followed by residential facilities, Halfway Houses etc., lend themselves ideally to use as centres for training of all types of professional, including medical students, and for research. The latter should be built into all therapeutic facilities where possible, in order to assess their efficacy, and to improve the arrangements where indicated.

Last but by no means least, the difficult question of the drinking psychopath: this is the person whose basic problem

is an underlying personality or character disorder with heavy drinking no more than one and not the most important among many problems. Such a person may, in spite of occasional periods where he seems to improve, remain a disruptive influence within any facility and greatly undermine the morale of staff and other patients. If such a patient, despite all attempts by others to help him, remains disruptive and repeats his "acting out" behaviour, he may have to be discharged as soon after detox as possible.* Experienced staff will often soon recognize such patients but nevertheless the diagnosis may often be difficult: This would be one of the situations where the assistance of the psychiatric member of the therapeutic team may be required.

There are various other indications for calling for psychiatric help: not only in the case of people with clear-cut underlying psychiatric abnormalities or psychiatric complications, such as depressions, suicidal tendencies, but also in more vague situations, such as persisting tension and anxiety states. These are however only examples illustrating the need for a multi-disciplinary composition of the therapeutic team and of the need for regular staff meetings.

*Members of the Detox-team in close co-operation with representatives of other regional facilities should also be trained to act as an assessment team to decide which would be the most suitable referral agency for individual patients.

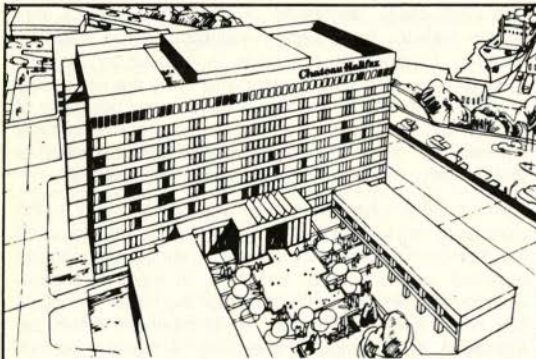
Clearly, there are many reasons for the involvement of physicians, including psychiatrists in the work of facilities for the treatment of alcoholics. Among these reasons are the training of future doctors, the optimum utilization of medical expertise, and increasing acceptance of the disease concept of alcoholism by both the medical profession and the general public. While the medical professional should be an important member of the multi-disciplinary team, it is, of course, not necessary for the physician to be the leadership role. □

Acknowledgements

The author expresses thanks to Mr. Marvin M. Burke, Executive Director of the Nova Scotia Commission on Drug Dependency, and to the members of his staff at centres in Metro, Cape Breton and Pictou, for seeing their Detox and Recovery Facilities and for having the opportunity to discuss the problem of the alcoholic recidivist with them.

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Tuberculosis — Changing Concepts in Management

The Rational Use of Antibiotics PART II — CLINICAL MANAGEMENT

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REVIEW OF 100 CONSECUTIVE PATIENTS

During the period extending from June 15, 1974, to October 4, 1975, 100 patients who had been under treatment for active tuberculosis were discharged from the Nova Scotia Sanatorium. All age groups were represented. There were 61 male and 39 female patients, with a predominance of males in the 60-69 year bracket and a considerable portion of both sexes among the younger age groups (10-39). (Table I)

TABLE I
SEX AND AGE GROUP

AGE GROUP	Male	Female	Both Sexes
0-9	5	4	9
10-19	8	6	14
20-29	4	8	12
30-39	9	8	17
40-49	6	2	8
50-59	7	4	11
60-69	15	4	19
70-79	6	2	8
80 +	1	1	2
ALL AGES	61	39	100

The principal diagnosis of respiratory tuberculosis applied to 98 patients. Nineteen were classified as primary infection, 12 as minimal, 28 as moderately advanced, and 38 as far advanced. There was one case each of miliary tuberculosis, genitourinary tuberculosis and tuberculous spondylitis (Table II). Complications of active pulmonary tuberculosis included pleurisy with effusion, lymphadenitis and meningitis (Table III).

TABLE II
PRINCIPAL DIAGNOSIS ON ADMISSION

Respiratory Tuberculosis		98
Primary Infection	19	
Minimal	12	
Moderately Advanced	28	
Far Advanced	38	
Miliary	1	
Non Respiratory Tuberculosis		2
Genitourinary	1	
Spondylitis	1	
ALL CASES		100

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TABLE III

COMPLICATIONS OF ACTIVE PULMONARY TUBERCULOSIS

Pleurisy with Effusion	3
Tuberculosis of Hip	2
Cervical Lymphadenitis	1
Genitourinary Tuberculosis	1
Meningitis	1

The antituberculous drugs were prescribed in varying combinations, all of which included isoniazid: The commonest regimens at the start of treatment consisted of SM/INH/RFM (37); SM/INH/PAS (26); SM/INH/EMB (9); and SM/INH (9). (Table IV). In this series of 100 patients, 100% received isoniazid, 86% streptomycin, 60% rifampin, 49% ethambutol and 34% PAS. Had it not been for the relatively high proportion of children in this group, the ethambutol figure would have been higher with a decrease in the number receiving PAS.

TABLE IV
DRUG REGIMEN AT START OF TREATMENT

Regimen	Number of Patients
INH/SM/RMP	37
INH/SM/PAS	26
INH/SM/EMB	9
INH/SM	9
INH/RMP	7
INH/EMB	4
INH/PAS	3
INH/EMB/RMP	2
INH	2
SM/RMP	1
	100

In preparation for continuation of treatment at home, self-administration of drugs formed an important part of the hospital routine, the patients being provided with oral drugs on a weekly basis. At the same time, instruction and supervision by the nursing staff emphasized the importance of maintaining the treatment routine well into the future along with regular follow-up examinations by family physician and/or clinic.

Ninety-five patients were discharged to continue treatment at home. There were four deaths, three of which were attributed to tuberculosis and one to a malignant lymphoma. One elderly patient was discharged without drugs owing to multiple adverse reactions. The commonest drug combinations on discharge to home treatment were those of INH/EMB (32%); INH/PAS (18%); and INH/RFM (12%). (Table V). Smaller numbers received various other combinations.

TABLE V
DRUG REGIMEN TO BE CONTINUED AFTER DISCHARGE

Regimen	Number of Patients
INH/EMB	32
INH/PAS	18
INH/RMP	12
INH/RMP/EMB	8
INH	7
SM/INH/RMP	5
SM/INH/EMB	3
SM/INH	3
EMB/RMP	2
Other Combinations	5
No Drugs	5
	100

Adverse Reactions — may occur early or many weeks following the start of treatment. In this series of 100 patients significant reactions in order of frequency were as follows: Isoniazid — 5 of 100 cases (5%); Ethambutol — 5 of 49 (10%); Rifampin — 8 of 60 (13%); Streptomycin — 17 of 86 (20%); and PAS — 12 of 34 (45%).

Isoniazid reactions occurred from six weeks to eight months following the start of treatment and consisted of hepatotoxicity in two cases, one case each of nausea and itching, psychosis, and confusion.

Ethambutol reactions occurred from seven days or less to two months following the start of treatment and consisted of personality change, duodenal ulcer, disturbance of vision, "fluttering in the chest", and alopecia.

Rifampin reactions occurred from seven days or less to more than six months following the start of therapy and consisted in three cases each of hepatotoxicity and gastrointestinal distress, one case of nausea with vertigo and one case of mental confusion. Not included in this series was one extremely severe case of thrombocytopenic purpura.

Adverse reactions to streptomycin occurred from seven days or less to more than three months following the start of treatment. There were three cases in which dermatitis was the main manifestation. There were three vestibular disturbances, three cases of arthralgia, two of hyperpyrexia, and there was one case of hepatotoxicity.

TABLE VI
SUMMARY OF ADVERSE REACTIONS — 100 PATIENTS

	SM	PAS	INH	EMB	RPM
1. Hepatotoxicity	1		2		3
2. Gastrointestinal		7	1	1	3
3. Dermatitis	6	1			
4. Dermatitis + Hyperpyrexia		3			
5. Hyperpyrexia	2	1			
6. Vestibular	5				1
7. Mental			2	1	1
8. Arthralgia	3				
9. Visual				1	
10. Alopecia				1	
11. "Fluttering in chest"				1	
	17	12	5	5	8

PAS was responsible for 12 adverse reactions occurring from seven days or less to more than 90 days following the start of treatment. Seven of these were gastrointestinal. There were four cases of hyperpyrexia, one of which was associated with a rash, and there was one example of a rash with no other symptoms (Table VI).

Similar reactions can be expected among patients who commence therapy at home as well as among those who have been discharged to home treatment following an initial period of hospitalization. In particular, the isoniazid patient should be observed with regard to the possible development of symptoms or signs similar to those of viral hepatitis. As mentioned previously, the ethambutol patient should undergo visual assessment at monthly intervals at the start of treatment, later increasing to five or six weeks and each check-up should include visual acuity, a rough test of peripheral fields, ophthalmoscopic examination and color vision. In addition, the patient should be warned to stop the drug immediately should there be any deterioration of vision from a subjective standpoint.

The Rifampin patient should undergo haematological assessment together with measurement of SGOT and SGPT levels and a urinalysis at monthly intervals, once treatment is established. During the first month of therapy, the haematocrit, W.B.C., and differential should be checked weekly.

Should the Streptomycin patient develop vestibular disturbances, the drug should be discontinued and it may be necessary to discontinue PAS owing to gastrointestinal complaints. However, it is noted that there is a wide spectrum of adverse reactions in the case of all the drugs.

Antituberculous drugs may be obtained free of charge to the patient through the local Health Units, but it is well to remember that there is a wide variation in cost which is always a consideration. It costs \$4.12 to treat a patient for one year with isoniazid as compared to \$455 for a similar supply of Rifampin.

It would be remiss to end this discussion concerning antituberculous treatment without mentioning the fact that prednisone is an extremely valuable adjunct to therapy not only in the adult patient with miliary tuberculosis, tuberculous meningitis and certain cases of fulminating disease, but also in the child with severe hilar adenopathy. High dose prednisone is commenced together with the antituberculous drug combination, and then tapered off in gradual stages depending on the treatment response. This measure can be life-saving on occasions.

Sputum status — In this series of 100 patients, 59% were positive for acid fast bacilli on concentration and 81% on culture for *M. tuberculosis* at the start of treatment. (Table VII)

TABLE VII
BACILLARY STATUS

	At start of treatment	
	Microscopy	Culture
<i>M. Tuberculosis</i> demonstrated	59	81
<i>M. Tuberculosis</i> not demonstrated	32	17
Not done	9	2
	100	100

Microscopic studies proved negative by the end of the third month in 28 of these patients, 10 were still positive after six months treatment and, in at least two cases, sputum was still positive on concentration after a year had elapsed. Sputum cultures had converted to negative by the end of the third month in 46 of 81 patients but two patients were still positive on culture more than a year after the start of treatment. (Table VIII). In the case of Rifampin treated patients, it is not rare for sputum to remain positive on microscopic examination for some length of time after cultures have been reported as negative for *M. tuberculosis*.

**TABLE VIII
BACILLARY STATUS**

Time of Conversion	Microscopy	Culture
By end of 1st month	10	22
By end of 2nd month	7	17
By end of 3rd month	11	7
By end of 4th month	3	8
By end of 5th month	4	3
By end of 6th month	1	0
Between 6th month and one year	6	3
More than one year	1	2
*Not yet converted	3	—
Time not known	12	17
Died before conversion	—	2
	58	81

*Under treatment for 8, 10, & 13 months

Tuberculin Status — In this series of 100 patients, there were seven of 91 so tested who failed to react to the intradermal tuberculin test at the 5 unit PPD level. However, all seven cases reacted to 250 units PPD. It should be em-

phasized that these patients did not suffer from concurrent infections, sarcoidosis, miliary tuberculosis, or other conditions to which tuberculin anergy is at times attributable. In other words, failure to react to the tuberculin test (5 unit PPD — stabilized Tween 80) does not exclude a diagnosis of active tuberculosis. (Table IX).

**TABLE IX
REACTIONS TO MANTOUX TEST**

Strength T.V.	Reaction size in mm.			all cases
	10-19	20-39	40 or over	
1	1	6	1	8
5	7	35	34	76
250	2	3	2	7
All Strengths	10	44	37	91

THE FUTURE


There is some promise that certain short term (6 months) treatment programs may prove effective, and this matter is under study. In the meantime, it is impossible to overstress the importance of uninterrupted long term (18 - 24 months) therapy in the management of the patient with tuberculosis. □

This paper was prepared originally for Continuing Medical Education program, Dalhousie University, "Doctor's Dilemma — The Rational Use of Antibiotics" October 30-31, 1975.)

Acknowledgement

I would like to add a special note of appreciation to A. H. McKean, R.R.L., for his assistance in compiling the statistical data for this paper.

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Address to the Manitoba Medical Association

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E. W. Barootes,* M.D., F.R.C.S.,(C),

Regina, Sask.

Mr. President, Honoured Guests, Ladies and Gentlemen:

This is our return or second visit to your Annual Meeting as Betty and I were privileged to be here last year — and once more we are most grateful to the Manitoba Medical Association and its officers and staff for the kindness of your hospitality and the excellence of your arrangements.

I'm always astonished at the wealth of talent and genius that Manitoba produces for Canadian Medicine. I refer to people like Dr. Bruce Chown, recipient of the FNG Starr Award a few years ago. People with leadership qualities exhibited by such as Dr. Gordon Fahrni, our oldest living past President of the C.M.A., of Duncan Kippen, M. R. McCharles, Ken Wiley and Bob Myers seem to abound. Canadian Physicians recognize and openly acknowledge the Manitoba Progenitors of Group and Clinical practice in Canada — Bigelow, Thorlaksons, Hollenbergs, Abbotts and others to whom we are continually grateful for their contributions to health care and medical organization in Canada. And so, although we have a better football team in Saskatchewan, I salute and take my hat off to you, medically.

There are a host of problems and issues facing our profession on an individual, a local, provincial and a national basis. It has been customary for the C.M.A. President to review such matters of national significance and to outline to you what the C.M.A. thinks and has been doing about them in this speech. I'm not unmindful of that precedent and the important issues we face but with your permission, I would like to address myself to very different — yes, more important issues on this occasion.

My comments will be very personal, but I will not attempt to hide behind the porous veil provided by saying they represent only personal opinions. I stand before you as the Deputy-President of The Canadian Medical Association — with the emphasis on the word **Canadian**. I cannot and will not try to alter the position or the podium from which I speak. The C.M.A. is a national association — a national institution — an institution that has made many contributions to our country. It is not, has not been, and cannot be simply an instrument for professional concerns — with an exclusive purpose of Furthering the interests of its members. It is first Canadian, second medical and thirdly an association. I want to talk to you today about our country — Canada.

A great and tumultuous social transformation in the past four decades has led us to "the new Jerusalem" of a welfare state in Canada. In that procession my generation of Canadians has lived through the extremity of one crisis to another with only brief periods of tranquility. What has saved us from paranoid insanity, I don't know, unless it is the blindness of our faith and the thickness of our skulls.

We have survived everything from major wars and threats of extinction; from withering depression to the heights of unprecedented prosperity, to economic chaos, inflation and unemployment. We have witnessed Canadians deteriorating from self-fulfillment to self-interest; from followers of the ethics of work and duty to those of personal pleasure and self-satisfaction; from hegemony to hedonism; from rule to revolution. As substitution therapy, our governments advertise and dole out wholesale doses of material assistance without a touch of human compassion. The state — in the generic sense of the word, federal, provincial and local has virtually destroyed the voluntarism of our communities which along with Christian — Judaic principles of charity are now regarded as the futile labour of fools — a tranquilizer for a sorrowed conscience.

Crisis feeds upon crisis, and social unrest rages while every type of crazy cult flourishes. We pass from beatniks and flower children to the hippy phenomenon amidst the deafening din of rock and roll. The Dionysiac Philosophy escapism through pleasure and frenzied ecstasy brings the drug culture with its worship of immorality, promiscuity and idolatry to substitute for moderation, modesty, restraint and good manners. We literally ridicule love and the consideration of others. Rationality and reason are profaned. Continence and self-control are replaced by state legislated abortions which has become, for the careless, the 20th century form of planned parenthood.

All this and more is an acceptable norm for an increasing portion of a so-called enlightened society which has reversed the reasoned logic of centuries of civilization. Right is now wrong. Police are criminals and criminals are victims of society which is the cause of their criminality. Violent gangsters and murderers are not to be punished but protected from the society that made them what they are — if not lionized and deified in the mass media. Everybody expects more or everything pleasurable at the expense and sweat of somebody else.

Economic crisis — yes! Threatened bankruptcy builds on the profligate spending and expectations in both our personal lives and in government. Inflation thrives as a consequence, corroding the fruits of labour of the thrifty and destroying the work incentive of the disenchanted who are forced to work even harder to feed the hungry monster of social security and its unfortunate off-spring — the disadvantaged, the unfit as well as those to whom is unavailable, unfound, unwanted or sometimes, distasteful. Meanwhile, a few become at least paper rich during inflation . . . and others, despairing or earned comfort, delude themselves with dreams of winning lotteries which flourish like the numbers rackets operated by our notorious gangsters of the 1930's. Only this time — the modern gangsters are governments who seek to delude us, who pander to our weaknesses and thereby impoverish us by the same painless means used by the racketeers a few short years ago.

*Deputy President, The Canadian Medical Association.

We are plagued with serious unemployment but paradoxically it results in rapidly rising wages, and thanks to Keynesian policies it produces inflation rather than deflation. Worse still, our productivity drops in the face of rising wage scales. In the absence of productive jobs, we substitute higher education almost as a career until some of our youth reach levels of erudition and education that surpass all job opportunities. They must start at the top, and that position is already occupied by others. This is the poverty of plenty, economic crises become a way of life and with each threatened failure we appeal and cry for redress and subsidy from our government — adding to their deficits which we then condemn. Seldom, if ever, do we consider correcting our own mistakes, disciplining ourselves or suffering the consequences of our own bad decisions.

Wide economic disparities and cultural — language differences threaten our country leading us to calamitous political instability with sections of Canada — note the word I used was plural — sections, threatening secession. Where one would expect a re-affirmation of purpose and unity — a concord of thought, a cohesion of effort on a national basis to meet such crises, we see regional selfishness and distrust.

We require and yearn for strong leadership and direction from our elected helmsmen. Yet, when it is offered, many people cynically reject or defy the advice, perhaps suspecting selfish or political motivation.

We have seen my profession and the services that it provides nationalized and served up as a political plum, a sacrifice, a burnt offering, to the restless public and so we, as physicians, join the disenchanting.

In all the frenetic rush to a new and better — and just society, I am astonished that you have maintained your equilibrium and sanity.

What is our future? Are we going down the tubes? Are we headed for cultural bankruptcy and national foreclosure — for civic destruction?

In my humble opinion, we are — **unless** we are able to alter our ways socially, culturally, philosophically, economically and politically. Our individual and collective national attitudes must be reversed. We cannot wait like the alcoholic to descend to the lowest gutter before we realize what we must do. That will be too late. We cannot wait until Canada is a heap of ashes and hope to see it rise again like a phoenix — to rebuild it from scratch. History has proven that those who build on the rubble of a destroyed society are either fascist military dictators or revolutionary communists or both. If you wait for that eventuality hoping to escape you will be lost. I ask you to recognize that not too many have escaped the world's major national revolutions with anything other than their skin and what they can carry on their backs. Is that what we are waiting for — the catastrophe, the deluge?

The solution to avoiding national catastrophe in Canada exists but it will not be easy. The disease cannot be wished or legislated away by political parties, by governments, because the prescription required for a cure inevitably produces political death for the inventor — banishment to the seats of the opposition. The solution will not arrive courtesy of some heaven-sent miracle or by some easy slick legerdemain introduced by a modern Houdini. The solution requires sacrifice and dedication by all Canadians. Germany and Japan did it after the havoc of World War II and we must do

the same. We must disabuse ourselves of selfish, personal expectations and rededicate ourselves and our efforts as Canadians to rebuild this country — to repair the damage that we have done to our economy — to develop, regain and maintain a feeling of national pride and accomplishment as Canadians.

I was born in Winnipeg and lived nearly all of my life in Western Canada in Saskatoon and Regina. I am a doctor and my family roots are Greek. But, I am not a Winnipegger, nor a Reginian (apart from the football season), nor am I a westerner — nor am I primarily a doctor. I am not a Greek or an Anglican, or a New Democrat, nor a Liberal or a Conservative. Ladies and Gentlemen, I am, and you are too, first and foremost a Canadian. If we neglect or forget that fact, then we and this country are dead. I care not whether you express it in French, English, Ukrainian or Yiddish. If we cannot acknowledge, and be governed by that fact, we had better pack up our money and belongings, before it is too late, and ship out to where happiness will be restored.

If we wish to remain — to survive as a nation, then each of us must with real deep and truly patriotic conviction rededicate ourselves to Canada. This does not mean that we must deny our rightful personal ambitions and desires — indeed the re-orientation is in our personal self-interests. But we must be prepared to make the concrete contribution necessary to put this country back on its feet. It means we must work harder for less personal gain for a few years — just as Germany, Japan and France did after World War II. It may mean donating an hour or two of free work or extra effort for your country — without pay. It will mean smaller profits for industry and business; less wages for workers, smaller salaries and earnings for management and the self-employed. Yes, even less pleasure travelling and vacations. Just the cancellation of coffee breaks could mean 10% - 12% increase in productivity for Canada. I am not suggesting a permanent sack cloth and ashes existence, but a temporary sacrifice for a few years — time to realize a re-orientation of national will and attitude until this country is strong again — spiritually and economically.

Without blame, or petulance, we must acknowledge and pay for our errors of the past 30 years; repay our debts and our debtors which our old way of life has accumulated. Emancipated and with real patriotic pride, Canadians will then be able to face the world and each other without individual envy and suspicion.

God made this country rich with resources to the extent that people from all over the world have envied us. My forebears and yours knew this and migrated here to build one of the finest places in the world in which to live. The question is, are we going to let their dream be destroyed by individual greed, by group selfishness or regional self-interest . . . or are we going to rebuild that dream into actuality for Canada by individual and collective self-discipline and productive effort.

I anticipate criticism for this small "P" political address. I don't apologize for its political overtones — although I would point out as clearly as possible that it is not a partisan speech — it applies to all provinces, to all governments and to all Canadians. I will also accept the comment or criticism that it is flagrantly patriotic — even flag waving in nature. I'm not going to apologize for being a Canadian and wanting the best possible for my country. I would point out that without a Canada there will be no need or place for a Canadian Medical Association.

I ask you, not as a physicians — not as members of the Manitoba or The Canadian Medical Association, but as individual Canadians — who will be the first to volunteer? Or, will we all stand idly by waiting for government to be the first — or our neighbour — or some other professional group — or your competitor — and so the day will never come when we have the individual and national commitment that, in my opinion, is essential. If we do — if we idly stand by and watch, we can await with impatience the inevitable end — which surely will come.

It is in our power to either chant a mournful elegy or a promising prophecy for our country.

Almost a century ago, when his country faced an impending national crisis, one of the greatest leaders in the history of the country to the south of us said it best and said it all. It is as true in Canada today as it was in the United States over a hundred years ago.

"We may nobly win or meanly lose the last best hope on earth".

Thank you. □



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PHYSICIAN REQUIRED

Metro Area Family Planning Association requires a physician interested in Family Planning to work part-time in Family Planning & Pap Smear Clinics in Sackville, Dartmouth, and Halifax County.

Resumes may be directed by May 15th to:
 (The Personnel Committee,
 Metro Area Family Planning Assoc.
 5239 Young Street,
 Halifax, N.S. B3K 5L4

For further information call 455-9656



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NOTICE

The next *Bulletin* will combine the August and October issues in a special September *Bulletin* featuring Geriatrics.

ADVERTISERS' INDEX

Air Page	101
Atlantic Bookbinding Limited	85
Bank of Montreal	83
Chateau Halifax	98
Gardner Realty Ltd	85
Isnor Motors Limited	©BC
Manufacturers Life Insurance Company, Ltd.	104
Manuge Galleries	104
Maritime Telegraph and Telephone Co. Ltd.	IFC
Medical Estate Planning Services	93
Medical Society Insurance Program	IBC
Robins, A. H., Company of Canada Ltd.	94
Royal Trust	98
Classified	83, 104

Canada Pension Plan

News Bulletin

Perhaps you are not aware that the Canada Pension Plan pays benefits in the form of Retirement, Survivors' and Disability Pensions. To ensure our readers are aware of their entitlements under the Plan, **and aware of their patients' rights**, this series of frequently-asked questions and answers is being presented.

If additional details are required, contact your Canada Pension Plan District Office, Suite 740, Barrington Tower, Scotia Square, Halifax, N.S. (telephone 426-3720).

QUESTIONS AND ANSWERS

Group A

1. (Q) Are benefits paid automatically?
(A) No. Benefits under the Canada Pension Plan must be applied for and approved before payment can be made.
2. (Q) Where can I get an application for Canada Pension Plan benefits?
(A) At your nearest Canada Pension Plan District Office. The office is located in St. John's at Room 605, Sir Humphrey Gilbert Building, Duckworth Street, and in Corner Brook at the Millbrook Mall. The telephone number of the St. John's District Office is 737-4930 and the number for the Corner Brook District Office is 634-7053.
3. (Q) Who is eligible for a retirement pension under the Canada Pension Plan and how long would one receive such a pension?
(A) If you have made valid contributions to the Plan and will be 65 years of age within 2 months, you are eligible to apply for your benefit. Upon approval, your pension would be payable for life.
4. (Q) I have been employed in Canada for the past two years and will be returning to England this year. Will I maintain my rights to a retirement pension under the Canada Pension Plan?
(A) Yes, if you leave Canada you retain your right at age 65 to the retirement pension you earned based on those years of contributions. The same rule applies to other types of benefits, provided you meet the minimum qualifying conditions.

Group B

1. (Q) I have contributed at the maximum rate since the Plan started in January, 1966. I will be 65 in 1976 but hope to continue working for an indefinite period. Am I eligible to receive my benefit even if I still work?
(A) Yes. Recent changes in the legislation now allow for the payment of the retirement pension at age 65

even though a person may not be retired from regular employment. Once your pension becomes payable, you are no longer eligible to make contributions to the Plan.

It is also important to note that an application must be made before any benefit can become payable.

2. (Q) I will be retiring at the age of 65 this year. When should I apply for my retirement pension?
(A) You are permitted to apply for a retirement pension three months prior to the month your pension is due to become payable. If, for example, you are 65 in June, 1976, your retirement application must be received in the District Office in June or earlier, if you wish your pension to start in July, 1976.
3. (Q) I do not live near a Canada Pension Plan district office. Do I personally have to attend in order to make my application for a retirement pension?
(A) No. You can write or phone your nearest Canada Pension Plan district office and an application kit will be sent to you.

Group C

1. (Q) I retired last year at the age of 65 but have not yet applied for my retirement pension under the Canada Pension Plan. Will my pension be retroactive to my 65th birthday?
(A) No. Your Retirement Pension will be payable for the month following the date of your application.
2. (Q) I will be 65 on June 10, 1976. I have made maximum contributions to the Plan since it started. How much will I receive, when will it start, and when can I apply for the pension?
(A) The maximum retirement benefit payable in 1976 is \$154.85 per month. Your pension could start the month after your 65th birthday, July, 1976, provided a signed application is filled with your nearest District Office on or before June 30, 1976. Applications can be accepted up to three months in advance of your commencement month. It is important to apply before your commencement date as failure to do so could result in one or more months' benefit being lost.
3. (Q) I would like to know how much I have contributed to the Plan in each year since 1966. Can you give me this information?
(A) The record of your earnings is maintained in our official Record of Earnings under your surname and social Insurance number. This information is readily available by completing an Application for Statement of Earnings form which can be obtained from your nearest Canada Pension Plan District Office.

Group D

1. (Q) My husband made contributions to the Plan from 1966 to 1972. He died this year. Am I eligible for any benefit under the Canada Pension Plan? I am 42 years of age.
 - (A) Yes. Upon application, you may be eligible to receive a Lump Sum Death Benefit and a monthly spouse's allowance. Any dependent children may also be eligible for a monthly orphan's benefit.
2. (Q) My husband passed away last month. He was a self-employed merchant and earned over \$1,000.00 net each year. He always filed his Income Tax Returns and always contributed to the Canada Pension Plan. I am a 63 year old widow. Am I eligible for a monthly widow's benefit under the Plan as well as the Lump Sum Death Benefit? When could my widow's benefit start and how long will it continue?
 - (A) Yes. You could be eligible upon application to receive both the Lump Sum Death Benefit and the monthly widow's benefit. The amount of the benefit would be calculated according to the earnings and contributions of your late husband. Your widow's pension could start the month following the death of your husband and it would continue for the rest of your life provided you did not re-marry.
3. (Q) My husband died two years ago and I have not re-married. He had been contributing to the Canada Pension Plan since 1966. I have two dependent children but have not applied for Canada Pension Plan benefits. If I apply now, will I receive benefits?
 - (a) Yes. If you apply now and your application is approved, you will receive benefits, retroactive for one year from the date of your application.
4. (Q) Can a widow continue work if she is in receipt of a Widow's Pension?
 - (A) Yes. A widow may continue to work and to contribute to the Canada Pension Plan. This would entitle her to a retirement pension or a disability pension in her own right.

Group E

1. (Q) My wife died last month and was contributing to the Canada Pension Plan since it started. I have three dependent children under the age of 18, living with me. However, I work and earn over \$10,000.00 per year. Would I be eligible for any benefit under the Plan?
 - (A) Yes. You may qualify for the monthly spouse's pension, upon application, as well as the Lump Sum Death Benefit. You will also be entitled to receive a monthly benefit on behalf of your three dependent children. The fact that you are working and contributing to the Plan has no bearing on your eligibility to Survivor's Benefits.
2. (Q) I am a widow receiving the widow's benefits under the Canada Pension Plan. If I should remarry, will I continue to receive these benefits?
 - (A) When a widow remarries, her widow's pension is

discontinued and is not payable beyond the month of remarriage. However, any orphans' benefits that were payable will continue to be paid as long as the dependent children qualify.

3. (Q) If a widow is under age 35 at the time of her husband's death and has no dependent or disabled children and is not disabled herself, is she eligible for a widow's benefit?
 - (A) No. She is not eligible for a widow's pension until she reaches the age of 65 unless she becomes disabled within the terms of the Canada Pension Plan before reaching the age of 65.

Group F

1. (Q) My twenty-three year old son was accidentally killed in an automobile accident. He was single and living at home with me. He has contributed to the Plan for the past four years. Will I be eligible to apply for any benefit under the Plan?
 - (A) Yes. You can apply for the Lump Sum Death Benefit. The maximum amount payable in 1976 is \$830.00. The amount payable would be based upon your son's earnings and contributions to the Plan. If there is an executor or administrator of your son's estate, this money would be paid to that person or agency. If not, it would be paid directly to you.
2. (Q) I am a forty year old widower. My wife was working and she contributed to the Plan since 1966. I am employed and do not have any independent children. Can I qualify for any benefit other than the Lump Sum Death Benefit?
 - (A) Yes. You may be entitled to a monthly Survivor's Benefit. However, since you are under the age of 45 years and are not disabled and do not have any dependent children, your benefit would be reduced by 1/20 of the full widower's benefit for each month that you are under age 45. In your case, you may receive approximately half the full widower's pension.
3. (Q) Under what conditions will a widow receive a reduced pension?
 - (A) If she is widowed, between the ages of 35 and 45, and has no dependent or disabled children in her care, and is not disabled herself, or is if she is between 35 and 45 and ceases to have such dependent or disabled children in her care, or ceases to be disabled herself.

Group G

1. (Q) Briefly, what are the eligibility requirements for a Disability Pension payable under the Plan?
 - (A) Contributors may qualify for benefits if they:
 - (a) are under the age of 65.
 - (b) are determined to be disabled within the meaning of the legislation governing the Plan.
 - (c) Have made valid contributions to the Plan in the required number of years. The requirement now is five years of valid contributions.

2. (Q) What do you mean by an impairment being "severe and prolonged"?
- (A) "Severe" means that you are incapable regularly of pursuing any substantially gainful occupation "Prolonged" means that the disability is likely to be long continued and of indefinite duration, or is likely to result in death.
3. (Q) I became disabled this year and have been advised by my doctor that it is doubtful I will be able to return to work. Is there a benefit under the Canada Pension Plan for which I can apply?
- (A) Yes. There is a disability pension payable to those who meet the requirements. There are also benefits payable to the dependent children of a disabled contributor who meets the requirements.
4. (Q) I am receiving a disability pension under the Canada Pension Plan. My wife and I are considering adopting a child. Would this child be entitled to benefits?

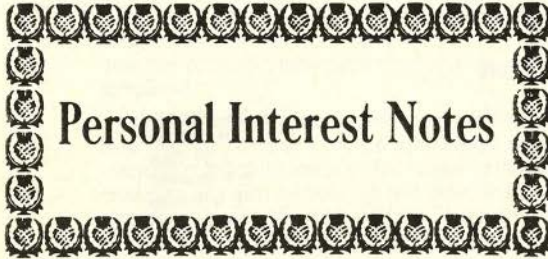
- (A) Yes, a benefit is now paid for a child conceived or legally adopted after it is determined under the Act that a contributor became disabled.

NOTE:

First and most important, it is suggested that if you feel a patient could qualify for the Canada Pension Plan Disability Pension you should mention to him that these pensions are available and supply him with the address and phone number of the Halifax District Office. Some W.C.B. cases of a prolonged nature are examples of when a patient could qualify for a disability pension under the Canada Pension Plan.

If you complete the medical report for the Canada Pension Plan you should make sure you cover the severe and prolonged aspect as explained above in Group "G" question 2.

W. F. Mason, M.D.



Personal Interest Notes

The 1977 Convocation of Dalhousie University Medical School was held in the Rebecca Cohn Auditorium on May 20. The graduating class numbered 90, of whom 47 were Nova Scotian, 27 from New Brunswick, 5 from Prince Edward Island, 5 from other parts of Canada, 1 each from Australia, Bermuda and Hong Kong, and 3 American Students.

Co-winners of the Dr. C. B. Stewart Gold Medal were Dr. Roy Aubrey Harding and Dr. David Wade Marsters.

Dr. Roy Harding completed his R.N. course at St. Joseph's Hospital School of Nursing, Victoria, B.C., and his diploma in nursing service administration from Dalhousie University in 1967. Until he entered medicine in 1973 he was engaged in nursing at the Victoria General Hospital. Since that time he ranked 1st in his class in first and fourth years, and 2nd in second and third years. He was winner of numerous medals and awards including the A. B. Wisewell Bursary, the Dr. Clara Olding Prize and the Andrew James Cowie medal. His citation paid tribute to his wide participation in student-faculty committees, his contribution to the welfare of his fellow students and to the medical school as a whole.

Dr. David Marsters entered Dalhousie Medical School after pre-medical training at McGill University. He was 4th in his class in first year, 1st in second and third years, and 2nd in fourth year. He has held a number of prizes and awards

including the Dr. John F. Black Prize in Surgery and shared the Dr. W. H. Hattie prize with Dr. Edward Stalker.

Dr. Frank Louis Lo was awarded the Dr. G. B. Wiswell Prize in Paediatrics and the Department of Psychiatry Award for highest standing in fourth year.

Dr. Robert S. Tonks has been appointed Dean of the Faculty of Health Professions succeeding Dr. R. M. MacDonald.

Dr. Tonks, a native of Aberystwyth Wales, holds a Bachelor of Pharmacy and Ph.D., has held appointments in the Welsh National School of Medicine and University of Wales Hospital, Cardiff. He has served as a resource person to the W.H.O. in areas of pharmacy and pharmacology, and will be involved in the development of pharmacy programs in Botswana and the Caribbean.

The *Bulletin* congratulates Dalhousie on this fortunate appointment and wishes Dr. Tonks every success in his new enterprise.

Dr. C. B. Stewart, retired Dean of Dalhousie Medical School and Vice-President of Health Sciences, was honored at the recent convocation at St. Francis Xavier University. Dr. Stewart, a pioneer in aviation medicine, a professor in epidemiology and preventive medicine has become very expert in advising in the delivery of health care. Dr. Stewart has been highly skeptical of the data collected by the National Manpower studies, and has made several presentations to Atlantic and National groups urging them to amend their ways of collecting data.

At a reception for the graduating class, the Dalhousie Medical Alumni Association presented a portrait of Dr. C. B. Stewart to Dalhousie.