

# Vocational Training: National and International Perspectives

## The American Experience\*

— Frank Dornfest



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### Curriculum vitae

Dr Stuart Murray is Senior Lecturer in General Practice at the University of Glasgow and is Regional Advisor in General Practice for the West of Scotland. He is heavily involved in both undergraduate and postgraduate teaching and administration and has been involved in research for many years. His PhD thesis was on the different training packages in vocational training. He studied at the University of Glasgow and after graduating MChB in 1969, he went on to obtain an MRCP, MRCGP and FRCGP and PhD. He maintains an interest in general medicine and in cardiology. His current interest include continuing evaluation of undergraduate teaching, computer assisted learning, training techniques and assessment methods for vocational trainees and trainers. He has 62 publications to his credit.

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The development of residency training programs has been as much a logical extension of the development of an academic discipline, as a strategy to deal with some of the issues with which family practice has wrestled.

Some of the developmental issues have been:

Decline in the number of doctors and disproportionate decline of Family Doctors.

Protecting the interest of Family Doctors in a

### Summary

*The doctor shortage during the previous four decades caused a phenomenal growth in residency training programs in Family Practice in the USA. The author reviews its history, its current status and explains some of the specific issues which these programs currently face.*

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subspecialty world, both relatively and absolutely during the 1930's and 1940's.

Keeping up with the international renaissance of general practice.

Increased technology, the need for increased access to care for inner city and rural areas, minority groups, and indigent patients.

The publicly felt need for a generalist physician who would provide personalised and comprehensive primary care.

Family Practice coupled with residencies has had a spectacular ascendancy in numbers and incorporation of its values into mainstream medicine. It has beaten a pathway through which medicine and pediatrics now follow. Essentially, family practice established the credibility of primary care. Through its training, it has sensitised the medical family to the neglected areas of the care. An emphasis on the whole patient, ambulatory medicine, humanism, care of the elderly and chronically ill. Both pediatrics and internal medicine have imitated Family Practice in establishing general and primary care divisions.

In looking at the American experience of vocational training in Family Practice, three things stand out:



The phenomenal exponential growth in residency training programs from 1969, when there were 23 programs, to 1980 when there were just over 375.

The extraordinary diversity of training program sites.  
The dissimilar determinants for site of a program.

To understand these factors, I need to reference the phenomenal growth of the discipline of family practice in the United States.

If I were to name a single factor explaining the burgeoning of this movement, it would be the doctor shortage during the previous four decades.

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### *... the phenomenal growth of the discipline of family practice in USA.*

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I would like to cover the historical perspective and chronology; the current status of residency programs and their surrounding discipline, and lastly look at some of the specific issues that Family Practice Residency Programs currently face.

The profound shortage of physicians before 1960, was both absolute and relative. The relative insufficiency was due to a geographic and specialty mal-distribution.

Our focus today is on the shortage of general practitioners. Their numbers were declining markedly during the 1930's and 1940's. This was also relative to other specialties. A contributing factor was the phenomenal postwar development of technology and science in general, with its attendant romance with specialisation.

Most training programs, in all specialties were clustered around the cities. Their graduates tended to settle near the area of their training. So that was an important factor in the relative rural shortage of doctors.

At this time American society perceived a need to restore:

- increased access to health care,
- a better and more equitable distribution of medical care, especially for rural areas and minority groups,
- access to a more comprehensive from one provider, and
- care at a lower cost.

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### *Graduates tend to settle near the area of their training.*

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At the same time, general practice needed to protect its own interests. Specialist medicine was threatening to limit the scope of operations of the general practitioner — particularly in obstetrics and surgery.

Preliminary to addressing the problem, the American Academy of General Practice was formed in 1947. In 1951, general practice residencies were created. These were two-year residencies, but as applies now, they were not mandatory.

During the 1960's, social consciousness was sweeping the country. It was in the crucible of that counter-culture spirit that family practice imploded into the family of medicine.

As Gayle Stephens pointed out, Family Practice attracted "a motley crowd of physicians and fellow travellers", who also wanted to reform medical education and practice. General practice wanted opportunistically to incorporate the ideas of its fellow travelers — the social and behavioral scientists as well as experts in family dynamics and systems theory. They wanted to neutralize the reductionistic and technological bias of mainstream medicine. They thrust the movement along the same vector as the mood in America at the time. The openness, experimentation, and social conscience sensitivity of the times invited action.

The voices of patients, and the public at large joined General Practice and its friends. Politically active students of the 1960s espoused the cause. The students were hoping to find socially relevant roles. They were concerned about the medical schools' role models. They found them to be much more technician than care-givers. They deplored their disregard of the needs of patients at large, and especially their neighbourhood communities.

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### *Students found the medical schools' role models more like technicians than care-givers.*

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In 1960 an eager public, with goals informed by the mettle of social consciousness, combined with the savvy of some rural politicians, to create a mandate, for the return of the generalist physician. This greatly facilitated the birth of the family practice movement. As has been pointed out by others, this was less a natural birth than a Caesarian section performed with the financial assistance of federal and state governments.

So, family practice had a very good time and to move in parallel with a generation's passion for equity in medical care and its desire to be more humanistic, Government being concerned with these issues, commissioned three reports in 1966. These articulated the need of every individual to have a generalistic personal physician to interface between the subspecialists and patients — especially in the inpatient areas, to provide comprehensive health care.

Concurrently in the 1960's, American medicine saw the renaissance of general practice.



In 1969, the American Board of Family Practice was formed as the twentieth medical specialty.

Family Practice wished to compete for medical students, whom, after training would practice in medically underserved areas. They insisted that the shape of residency training would be more concerned with practical and experiential aspects of practice. The would-be teachers were striving for "real world" ambulatory care training. They leaned more toward incorporating an apprenticeship model. They hoped to induce in their graduates a patient-care attitude that was personal, accessible, affordable, and sensitive to psycho-social factors.

To be competitive with internal medicine, they decided the training would be three years. For the same reason they insisted that it be hospital-based. However, they emphasized continuing care in the ambulatory setting. The inpatient component was to be patterned after the rotating internships. Trainees were to learn from the specialists in each of the traditional domains of medicine.

Ambulatory care was to be mastered in a "model family practice unit". This was to be a new "classroom". It would resemble a physician's office (surgery) as much as possible. The teaching was to be conducted primarily by family physicians:

the founding fathers imposed three additional ideals in launching the discipline and residency training,

that all family physicians take the same examination, there be no grandfathering, for the first time in medicine,

another new principle in medicine was that recertification occur every seventh year,

and also new, voting membership on the board of family practice would include representation from internal medicine, surgery, pediatrics, obstetrics and gynecology, as well as psychiatry.

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### *American medicine saw the renaissance of general practice in 1960.*

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US family practice has shown a phenomenal growth. It was assisted by an increase in medical schools which, between 1969 and 1982, increased from 108 to 126, with 103 departments of family practice.

The burgeoning number of residencies and departments of family practice paralleled each other, from 23 residency programs in 1969 to 200 in 1974 and 382 in 1980.

By 1984 there were 1972 budgeted full time faculty positions in Departments of Family Practice. Family Practice became eighth amongst 16 clinical departments.

The numbers of residents increased from 290 in 1970, to the current 7419.

In a brief ten years, family practice grew to the third largest discipline — second in size only to Internal Medicine and Surgery. By 1985 it had produced 35 000 diplomates, and now attracts about 13% of graduating medical students, with an impressively high 90% rate of filling of its now 2 607 residency positions.

The nature of the individual programs is influenced and shaped by a number of issues. They include:

- public policy concerns locally, in local government,
- ability to attract funding,
- characteristics of the site which is available,
- local definition of needs,
- and the nature of local leadership.

This, so that residency programs in different sites have palpably different configurations and atmospheres.

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### *Family practice grew to the third largest discipline.*

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The American Academy of Family Physicians categorizes programs, depending on their site and relationship to medical schools; 55% are based in community hospitals. The local equivalent would be provincial or cottage hospitals which are not based in medical schools; 15% are based in community hospitals, but tied fiscally and administratively to their associated medical school; 8,1% are based in a community hospital with no link to a university; 63 are based entirely in medical schools, which considerably alters their structure and ethos.

Real and substantive differences between programs are not addressed by this taxonomy. Amongst these dissimilarities are:

A number of community hospitals have family practice centers (the ambulatory care teaching unit) formed around the practice of faculty members recruited to the programs' faculty.

Other programs use public hospital outpatient departments. For this reason they care primarily for a minority and indigent population.

The inpatient training showed equally wide differences.

Urban public hospitals — emphasised community health and health care administration, with less surgery and obstetrics. They targeted training for inner city work. /This also formed the basis for their funding and the support of politicians.

Eighty percent of graduates settle within 80 miles of their training program. Rural training programs have been most successful in retaining graduates in rural areas.

These rural programs emphasized procedural skills.

In some, the service needs of the environment cause the program to run serious risk of an imbalance



between service needs and the training needs of their residents. My own program is an example of this situation. As a rural public hospital, there has always been inadequate hospital staff to care for indigent patients. Educational exposure, until recently, was driven by the service needs of the hospital patients.

Residents in university settings learn by rotations through the services of other specialties. Those in community hospitals learn primarily in an apprenticeship model participating in the admission of hospitalised private patients of both Family Physicians and other specialists.

Developmentally, family medicine has reached adolescence. As such, it is locked into an identity struggle very characteristic of adolescence.

The first pole of the conflict: the need to battle for prestige and credibility and the associated need to secure financial support. Mainstream academic medicine of course holds the beachhead of academic respectability. Credibility is also in the eye of the beholder. Departments of family practice and therefore residencies find themselves struggling to compete with other disciplines on *their terms*.

The other pole of this conflict: the inheritance by family practice of its general practice work-horse roots. In striving to self-actualise and separate from its non-academic parents, it has exaggerated its uniqueness. This on the one hand increases its self pride. On the other hand this uniqueness tends to sit awkwardly with

the rest of the medical establishment. It gets in the way of acceptance.

Despite that conundrum, family practice can look back with some pride at the achievements of its childhood growth spurts. Through stubborn perseverance and the vision of the discipline, family practice has become recognised as an important dimension of medical care.

## *Rural training programs have been most successful in retaining graduates in rural areas.*

Forging ahead in its counterculture role with its newfound nonmedical colleagues, the discipline has made some of *their* precepts synonymous with its own ideology. They have included as a core of residency training, psychotherapy, family therapy, sociology. Their academicians bring to residency training anthropology, educational methodology, and teamwork with nurse practitioners and physicians assistants.

This has not helped family medicine in medical school politics. With its "motley crew", family medicine looks yet stranger to the rest of medicine.

These are basic to daily conflicts for family practice residents. They are struggling through their own

Reg. Nos.: (100) - H/3.1/73 - (200) - H/3.1/74, CLINORIL B3

## CLINORIL\* 100 Tablet      CLINORIL\* 200 Tablet

### COMPOSITION

Each CLINORIL 100 tablet contains 100 mg sulindac, MSD. Each CLINORIL 200 tablet contains 200 mg sulindac, MSD.

### PHARMACOLOGICAL CLASSIFICATION

A.3.1 Anti-inflammatories (anti-inflammatory agents)

### INDICATIONS

CLINORIL is indicated for acute or long-term use in the treatment of the following:

1. Osteoarthritis
2. Rheumatoid arthritis
3. Ankylosing spondylitis
4. Periarthritic diseases and tenosynovitis
5. Acute gouty arthritis

### CONTRA-INDICATIONS

The use of CLINORIL is contra-indicated in patients known to be allergic to the drug.

CLINORIL should not be used in patients in whom acute asthmatic attacks have been precipitated by aspirin or other non-steroidal anti-inflammatory agents.

The drug should not be administered to patients with a history of or active gastrointestinal bleeding or peptic ulceration.

Since paediatric indications and dosage have not yet been established, CLINORIL should not be given to children.

CLINORIL should not be given to pregnant or lactating women, since safety for its use has not been established.

### DOSEAGE AND DIRECTIONS FOR USE

CLINORIL should be taken once or twice a day and dosage should be adjusted to the severity of the disease.

The recommended daily dosage of CLINORIL is 400 mg per day. However, the dosage may be lowered depending on the response. Doses above 400 mg per day are not recommended. (See **SIDE EFFECTS AND SPECIAL PRECAUTIONS**)

In gouty arthritis, therapy for 7 days is usually adequate. CLINORIL should be taken with fluids or food.

### SIDE EFFECTS AND SPECIAL PRECAUTIONS

#### Digestive System

Gastrointestinal pain, dyspepsia, nausea, vomiting, diarrhoea, constipation, flatulence, anorexia, gastrointestinal cramps, gastritis or gastroenteritis.

Peptic ulcer, gastrointestinal bleeding and GI perforations have been reported. Liver function abnormalities, jaundice, sometimes with fever, cholestasis, hepatitis, pancreatitis. Occasional variations have occurred with routine liver function tests.

#### Hypersensitivity Reactions

Anaphylaxis and angioneurotic oedema. An apparent hypersensitivity syndrome has been reported. This has consisted of some or all of the following findings: fever, chills, pruritus, skin rash, angio-oedema, changes in liver function, jaundice, leukopenia, eosinophilia, anaemia, adenitis and renal impairment. Fatalities have been reported.

#### Dermatologic

Rash, pruritus, stomatitis, sore or dry mucous membranes and alopecia have occurred. Erythema multiforme, toxic epidermal necrolysis, Stevens-Johnson syndrome.

#### Haematologic

Thrombocytopenia, ecchymosis, purpura, leukopenia, increased prothrombin time in patients on oral anticoagulants, bone marrow depression, including aplastic anaemia and haemolytic anaemia.

#### Central Nervous System

Dizziness, vertigo, headache, somnolence, insomnia, sweating, nervousness, asthenia.

#### Nervous System

Paresthesias, neuritis.

#### Genito-urinary

Vaginal bleeding, haematuria, renal impairment, interstitial nephritis, nephrotic syndrome and urine discoloration.

#### Special Senses

Tinnitus, blurred vision, transient visual disturbances, decreased hearing.

#### Cardiovascular

Hypertension, congestive heart failure in patients with marginal cardiac function, palpitation.

#### Psychiatric

Depression, psychic disturbances including acute psychosis.

#### Respiratory

Epiataxia.

#### Miscellaneous

Oedema.

CLINORIL should be used with caution in patients having a history of gastrointestinal haemorrhage or ulcers. In a drug interaction study, an antacid (magnesium and aluminum hydroxide, in suspension, 30 ml) was administered with CLINORIL with no significant difference in absorption.

Significant elevations of SGPT (ALAT) or SGOT (ASAT) occurred in patients receiving this therapy. A patient with symptoms and/or signs suggesting liver dysfunction, or in whom an abnormal liver test has occurred, should be evaluated for evidence of the development of more severe hepatic reaction while on therapy.

Cases of hepatitis, jaundice, or both, with or without fever, may occur within the first three months of therapy. In some patients, the findings are consistent with those of cholestatic hepatitis.

Fever and other evidence of hypersensitivity, including abnormalities in one or more liver function tests and skin reactions, have occurred during therapy with CLINORIL. Fatalities have occurred in some of these patients.

Determinations of liver function should be considered whenever a patient on therapy with CLINORIL develops unexplained fever, rash or other dermatologic reactions or constitutional symptoms. If unexplained fever or other evidence of hypersensitivity occurs, therapy with CLINORIL should be discontinued. Administration of CLINORIL should not be reinstated in such patients.

#### Drug Interactions

Dimethyl sulfoxide should not be used with sulindac. Concomitant administration has been reported to reduce the plasma levels of the active sulphide metabolite and potentially

reduce efficacy. In addition, this combination has been reported to cause peripheral neuropathy.

Sulindac and its sulphide metabolite are highly bound to protein. Patients should be monitored carefully until it is certain that no change in their anticoagulant or hypoglycaemic dosage is required.

The concomitant administration of aspirin with sulindac significantly depressed the plasma levels of the active sulphide metabolite.

Neither propoxyphene-hydrochloride nor acetaminophen had any effect on the plasma levels of sulindac or its sulphide metabolite.

Probenecid given concurrently with sulindac had a slight effect on plasma sulphide levels while plasma levels of sulindac and sulphone were increased. Sulindac was shown to produce a modest reduction in the in vivo action of probenecid.

### KNOWN SYMPTOMS OF OVERDOSAGE AND PARTICULARS OF ITS TREATMENT

In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage, and the patient carefully observed and given symptomatic and supportive treatment.

### IDENTIFICATION

The CLINORIL 100 tablet is a 7.92 mm hexagonal, bi-concave compressed tablet, bright yellow in colour. One side is scored and the other side is engraved "MSD 942".

The CLINORIL 200 tablet is a 10.67 mm hexagonal, bi-concave compressed tablet, bright yellow in colour. Both sides are scored and one side is engraved "MSD 942".

### PRESENTATION

CLINORIL 100 tablets are available in packs of 100 and 1000.  
CLINORIL 200 tablets are available in packs of 60.

### STORAGE INSTRUCTIONS

Store in a dry place below 25 °C. Protect from light. KEEP OUT OF REACH OF CHILDREN.

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adolescence, suspended by virtue of training. They struggle through this along with their adolescent parents. They do so in an atmosphere surrounded by subspecialists who feel secure in the narrowness of their own specialties.

Family medicine is experiencing increasing competition from other specialties in the changing climate of the 1980's. The revolutionary 60's have turned into the more conservative 80's. The doctor shortage has turned into a doctor glut. Family Practice is having to rely increasingly on its own resources to carve out its future. Government has withdrawn its favorite child policy. Family Practice is having to find ways to consolidate its training programs to develop social, political, and financial support and to respond to the consumer-driven marketplace that is transforming American medicine. Change produces its own strain on residency programs.

Pragmatic funding issues tend to sap its energies. Tiring of rejection by mainstream medicine, because of its unconventional approach, it is forced to pursue some traditional, rationalistic, biomedical research. In addition to this ennui, it also tends to be hoist with its own petard, in pursuing family as its focus of attention. The contextual relevance of *family* in the care of patients, has been an important contribution. However, it is tending to constrict its generalist vision. As it fights for respectability, there is risk that the family will become its subspecialty organ.

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### *Training Family Practice residents in the USA is more expensive than any other discipline.*

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Early on in the 1970's, accrediting bodies accepted the necessary diversity of residency programs and so did federal and state governments in their grant funding preferences. This funding was contingent on relevance of the program to the surrounding population.

More recently an elite group within the accrediting bodies emerged, which "thought it knew how to do it". They prescribed this pattern of training in granting a national imprimatur. Conformity has imposed risk of losing individual strengths, local funding and political support.

Carefully prescribed national standards require on the one hand classical rotations in inpatient units in the domains of internal medicine, surgery, and so on. On the other hand, residencies feel the need to retain their individual strengths and relevance to practice in such pertinent specific areas as well-person care, preventive care, episodic care, home care, nursing home care (old age home), counselling, and skills in integrating care by various subspecialties. These needs mesh clumsily with university values. Residents in university sites struggle to remain identified with their contextual,

lateral-thinking family practice faculty, while exposed constantly to other specialty role models secure in their tunnel-vision.

The malpractice crisis has caused residents increasingly to question why they should be trained in obstetrical care. This is not surprising — about half of family physicians in my area cannot afford \$16000 a year malpractice premium to practice low-risk obstetrics when the cover for basic practice is only \$7000. This makes it a financial loss to do less than three to four deliveries per month. (Rates for obstetrics in Family Practice are up to \$160000 in Florida.)

In choosing to use an ambulatory care center as a large classroom for its residents, Family Practice has loaded itself with an albatross.

At \$250000 per graduate, training of Family Practice residents in the United States is considerably more expensive than any other discipline. One third of this is intrinsic to the Family Practice Centre. Physicians in private practice are paid one third less for publicly funded indigent patients. As a result, they refer them to Family Practice Centres. This homogenizes the patient population seen by residents, concentrating particular pathologies and issues of the culture of poverty, within the Family Practice Centre.

On the other hand, the Family Practice Centre is a wonderful learning laboratory. It offers opportunity for residents to encounter multiple role-models. It also provides opportunity for frequent cross-fertilization of ideas between residents. This seems a distinct advantage over the preceptorship configuration in Britain.

With upward mobility of American society, faculty are encouraged to leave their practices, to join a faculty at some distance — leaving behind their most treasured teaching context — their practice and patients.

Family Practice Faculty in tandem with their adolescent discipline, confront the classical academic three legged stool (practice, research and teaching). In this they suffer from numerous developmental conflicts and difficulties.

Being used to being generalists and doing a bit of everything, family practice faculty — like no other discipline attempt to:

- practice — to retain their clinical knowledge base
  - research — to develop their own academic credibility and that of the discipline, and
  - teach
- and are surprised at the weight of the unexpected fourth leg of clinical academia — the administrative millstone which goes with each of those areas.

What of the future? There is a charge to equip future graduates to respond to increased competition from the other specialties; the challenge of consolidating training programs to maintain social relevance and develop social, political and financial support; and contemporaneously responding to the new consumer-driven marketplace that is transforming American medicine.