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TABLE 19—Study practice: analysis by cost of prescriptions (£), November 1982

	(1) Generic preparations	(2) Generic alternatives		(3a) Cost-reducing substitution available (£)		(3b) Cost-reducing substitution actual (£)		Percentage contribution to overall potential (%)	Proprietary (1) preparation only	Total cost of all prescriptions (1+2+3) (£)	Total cost of all prescriptions (1+2+3) (%)
		(2a) Potentially available	(2b) Actually available	(3a) Potentially available	(3b) Actually available						
01-02	Preparations acting on the nervous system	566	498.82	214.43	285.39	70.38	215.01 (16.8)	24.3	777.96	1 282.54	
03	Preparations acting on the gastrointestinal system	930	108.35	20.43	87.72	32.20	55.52 (4.4)	6.3	113.99	1 253.24	
04	Preparations acting on the cardiovascular system and related	295	764.58	93.16	671.42	300.92	370.50 (15.2)	41.9	1660.87	2 428.40	
05	Preparations acting on the respiratory system	546	1.91	0	1.91	0.31	1.60 (0.2)	0.2	663.14	670.51	
06	Preparations prescribed for immunisation	0	232.90	36.99	196.01	116.16	79.85 (8.5)	9.0	704.66	937.56	
07	Preparations acting on the venous and the arterial system	2.04	0	0	0	0	0	0	63.29	65.33	
08	Preparations acting on the endocrine system	49.79	288.92	74.13	214.79	100.65	114.14 (20.4)	12.9	221.74	560.45	
09	Preparations acting on the musculoskeletal system	75.23	128.28	58.97	69.29	52.73	16.56 (2.7)	1.9	401.87	605.36	
10	Preparations affecting haemopoiesis and the blood	2.64	27.76	21.76	6.00	6.24	-0.24 (-0.2)	-0.03	86.53	116.93	
11	Preparations for the treatment of malignant diseases	0	0	0	0	0	0	0	56.52	56.52	
12	Preparations for immunisation	4.28	54.84	0	54.84	33.01	21.83 (15.7)	2.5	79.91	139.03	
13	Preparations affecting allergic reactions	0	6.36	0.36	0	0	0	0	92.95	99.31	
14	Preparations acting locally on the skin and mucous membranes	9.49	43.10	3.01	40.09	41.18	-1.09 (0.2)	-0.1	660.20	512.79	
15	Preparations acting on the eye	7.75	11.74	0	11.74	9.20	9.54 (4.7)	1.1	174.96	201.47	
16, 17, 18, 19, 20, 21	Preparations for chemotherapy	0	155.00	155.00	0	0	0	0	0	155.00	
22 and 23	Preparations used in diagnosis, research, and speciality	0	0	0	0	0	0	0	0	0	326.52 (3)
24 and 25	Preparations used in diagnosis, research, and speciality, and other drugs and preparations	6.41	0	0	0	0	0	0	9.27	15.68	
Unclassified										686.56 (7)	
Total No. (%)		181 62 (2)	2330 54 (23)	664 34	1646 20	762 08	883 22		6587 96 (65)	10 093 00 (100)	

Discussion

We investigated the potential saving of generic substitution as proposed in the Greenfield report. By adhering to strict criteria for generic alternatives the clinical judgment of the prescribing general practitioners was not questioned. In the study practice only 7% of prescriptions were for generic preparations. This is substantially less than the figure in the Greenfield report of 20%, for 1980, though the source of this figure is obscure. As far as can be accurately estimated it is greater than the Northern Ireland figure of 4.6%, for November 1982 (personal communication, Central Services Agency, Northern Ireland). There seems to be a downward trend in the level of generic prescribing. Dunlop, Henderson, and Inch, after a survey of 17 301 prescriptions in 1949, inferred that a 7% level of generic prescribing was becoming unsatisfactory.¹ Other reported levels of generic prescribing include Wade and McDevitt 13%, to 24% in 1965,² Parish and Austin 20.4% in 1970,³ Department of Health 15% for England in 1977,⁴ while Marsh's exemplary level of 29%, in 1980 could hardly be considered typical.⁵

Almost a third of all the prescriptions had generic alternatives potentially available but only 72% of these generic alternatives were actually available at the time of this study. Generic alternatives were readily available in all the therapeutic classes except preparations acting on the respiratory system, preparations affecting allergic reactions, and preparations for immunology. At present, generic prescribing and generic substitution seem to be limited options in some therapeutic classes. Within the therapeutic classes the option is limited too—for example, 41% of those generic alternatives not available are preparations acting on the nervous system and include such medications as chlorazepoxide and temazepam.

We believe that commercial factors have emerged in response to the low level of generic prescribing and now limit the availability of generic preparations. Wholesalers respond to commercial pressures by maintaining only a limited range of preparations.

Despite the low level of generic prescribing, interest continues because it is considered desirable and there are obvious potential savings. These savings are particularly apparent in certain

therapeutic classes such as preparations acting on the nervous system and preparations acting on the cardiovascular system and diuretics.

The potential saving from generic substitution for the study practice in November 1982 was 8.8% of the total net cost of ingredients. The prescribing costs of the study practice are high (table II). Nevertheless, an overall saving of this order would decrease the cost of general practice prescribing in Northern Ireland by up to £2m a month or £3m a year. The results of this study support the contention in the Greenfield report that substitution by pharmacists of alternative generic versions could result in savings to the National Health Service. No incursion on doctor's clinical freedom would occur.

We thank Dr H McGavock of the Department of Health and Social Security Prescribing Unit and Mr R McMullan and staff at the Central Services Agency for their help in providing and printing the information used in this study.

References

1. Parliamentary debates. Drug promotion. *House of Commons Official Report (Hansard)*: 1983 January 27 col 1130.
2. Informal Working Group on Effective Prescribing. *Report to the Secretary of State for Social Services*. London: DHSS, 1983. (Greenfield report.)
3. Synopsis of the report of a departmental working party on general practice prescribing in Northern Ireland. Northern Ireland: DHSS, 1983.
4. Hall MS. Prescribing frequency and costs related to patient age and sex. *Prescriber* 1981;228:271-3.
5. Murdoch JC. The epidemiology of prescribing in an urban general practice. *J R Coll Gen Pract* 1980;30:593-602.
6. Stevenson BG. The cost of prescribing. *J R Coll Gen Pract* 1981;31:123.
7. Wade OL, McDevitt GD. Prescribing and the British National Formulary. *Br Med J* 1966;1:635.
8. Dunlop DM, Henderson TL, Inch RS. A survey of 17 301 prescriptions on form EC10. *Br Med J* 1952;2:292-5.
9. Parish P, Austin G. Prescribing in general practice. *J R Coll Gen Pract* 1970;20 (suppl 1):24-31.
10. Department of Health and Social Security. *Health and Personal Social and Service Statistics for England, London: HMSO, 1978.*
11. Marsh GN. Stringent prescribing in general practice. *Br Med J* 1981; 283:1159-60.

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Interesting GPs of the Past

Archibald Cleland: c1700-71

ROGER ROLLS

Archibald Cleland was born at the beginning of the eighteenth century, being a descendant of an old established Lanarkshire family. There is still a town of Cleland, nowadays an industrial community but at one time a picturesque country village. Archibald's father, Alexander, who owned the Cleland estate, was married to Margaret, half sister of William Hamilton, a King's Counsellor at Lincoln's Inn, whom Walpole described as "the first Scot who ever played at the English bar and, as it was said of him, should have been the last."¹

Medical education

Archibald began his medical career as an apprentice to an Edinburgh surgeon, James Robinson, with whom he stayed for five years.² In 1720 he set out for London, a slow and hazardous journey along highways whose surfaces were as treacherous as the highwaymen who frequented them. He enrolled as a dresser at St Thomas's Hospital and must have met William Cheselden (1688-1752) whose skills as a lithotomist still gain the admiration of today's urologists.

For aspiring surgeons it was Paris, not London, which was the greatest centre of surgical tuition in the early eighteenth century, and Cleland left St Thomas's to spend two years there, attending courses in anatomy, surgery, and midwifery. He gained clinical experience in the huge charitable hospitals of Paris, including the Hôtel Dieu with its 1200 beds. These hospitals had several purposes, young surgical students who worked at the hospital during the day but did not live in. Ward rounds occurred daily and began at 5.30 am. The main task of the externs was to help their seniors (at various levels in the hospital hierarchy), dress wounds, let blood, and perform minor surgery on the hundreds of sick patients.

Surgeon in the south seas

In 1723 Cleland returned to London and applied for a job with the South Sea Company. Each year the company sent a 600 ton trading ship between England and the West Indies which carried a cargo of spices, cocoa, cinchona bark, sugar, and slaves. The company required a surgeon for its ship and Cleland secured the post after having been required to satisfy the examining surgeons at St Bartholomew's Hospital of his competence.³

The company employed several surgeons of whom some were stationed at their factories in Caribbean ports. Cleland was dispatched to Vera Cruz. Factory surgeons were expected

to act as general practitioners to the company's employees. They had to visit the black slaves each day "taking particular care of the sick and preserving them in the best manner."⁴ Each surgeon was expected to keep notes of his practice and submit them periodically to the company. He was also expected to be on his best behaviour, to avoid gambling and excesses of drink, and on no account to offend Roman Catholics.

In 1726 Cleland was transferred to Cartagena (Colombia) where he fell foul of a skirmish between the British and Spaniards and was taken prisoner. Somehow he escaped to Jamaica, where he established himself as a general practitioner and obstetrician.

From regiment to Royal Society

Whether on account of ill health or a desire to return home Cleland left Jamaica in 1732 and sailed for England. On his return he visited Bath to take the waters⁵ and secured a job as surgeon to General Wade's regiment, the 3rd Dragoon Guards.⁶ During his eight years with the regiment it never once engaged in fighting,⁷ and Cleland found time to develop several novel instruments which he demonstrated before members of the Royal Society. These included a catheter facilitating suprapubic lithotomy, a candle-powered illuminator for inspecting ear drums, instruments for eye surgery, and a vacuum tube for correcting the retracted tympanic membranes of soldiers whose drums had been blown inwards by the force of nearby explosions (see figure 1).⁸ The most sophisticated hydro-therapy gadget that Bath could muster was a hand pump used to douche particular parts of a patient's body.

While he was still with Wade's regiment, Cleland worked out a detailed plan to modernise the bathing facilities in Bath and went as far as obtaining the patronage of the Prince of Wales before submitting his designs to the city corporation.⁹ Despite this, they were turned down even though Cleland offered to build at his own expense. The Scots physician George Cheyne, who was residing in Bath at this time, later wrote to Cleland suggesting that his plans had not been approved because of jealousy and mean spiritiveness on the part of city councillors, most of whom were apothecaries and surgeons.¹⁰ But Cleland was not to be daunted that easily and in 1741 he resigned from the army and set up practice in the city.

Opportunities at Bath

Cleland's first experience of Bath had been as a patient and he was not impressed by what he encountered. The baths had changed little since Elizabethan times and "discreet persons of all ages, sexes, and conditions were promiscuously admitted into an open bath affording little or no shelter from the inclemencies of the weather."¹¹ The most sophisticated hydro-therapy gadget that Bath could muster was a hand pump used to douche particular parts of a patient's body.

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Above the shoulders, below the neckline

When the Bath General Hospital opened in May 1742 Cleland applied to become one of the assistant surgeons. Despite his considerable experience, the rules of the hospital required that surgeons should have served seven years apprenticeship, whereas he had served only five.¹¹ Fortunately for Cleland, the poet Alexander Pope sent a glowing testimonial to the chairman of the selection committee, Ralph Allen, describing the surgeon as "careful, diligent, and able" and, despite objections by Jerry Pierce the senior surgeon, Cleland secured the post on 24 June 1742.

Cleland had been on the staff of the hospital little over a year when he was shocked to learn that an inquiry would be held to investigate charges of indecent practice brought against him by two women patients at the hospital.¹²

The inquiry took place on 21 September 1743 when Cleland appeared before a court of 17 governors. He was accused of professional misconduct on account of evidence brought against him by two women patients at the hospital, Mary Hudson and Mary Hook. They claimed that he had performed repeated vaginal examinations and had looked the door of the room to prevent any nursing staff entering while he was performing these "dubious" operations. Cleland did not deny that he had performed the examinations and justified them on clinical grounds. Hudson was suffering from hysteria and he wished to confirm that the uterus was "the seat and cause of this and her other complaints." Things did not go well for Cleland. Witnesses told of another patient, Sarah Appleby, who had received similar treatment from Cleland, including vaginal lavage with mineral water and had subsequently died.

(a) Catheter for suprapubic lithotomy developed by Dr Cleland. (b) Illuminator powered by a candle for inspecting ear drums. (c) Three instruments for eye surgery. (d) Vacuum tube for correcting retracted tympanic membranes. (e) Instrument for catheterising the eustachian tube.

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Cleland tried to defend himself by maintaining that the complaints had been trumped up by women who were little more than common prostitutes. He produced a statement from a physician who knew of Mary Hook, testifying she was of ill repute. The governors suggested that Cleland had tried to bribe Mary Hook's mother into persuading her daughter to retract the accusations against him.¹³ After considering all the evidence the 17 governors were unanimous in their judgments. Cleland's actions amounted to "indecent practice" and the majority (13 to 4) voted for his dismissal from the staff of the hospital. Despite this smear on his career, Archibald Cleland remained in private practice in Bath at least until 1754. He attempted to clear his name by publishing various pamphlets and letters attesting his worth and integrity and his case was championed by the novelist Tobias Smollett, himself a medical practitioner.

At some point after 1754 Cleland, who by now had bought himself an MD degree from Aberdeen University,¹⁴ left Bath for London. He died abroad in 1771, though his whereabouts at this time are not recorded.¹⁵ His wife died three years later in Westminster.¹⁶ Archibald Cleland seems to have been a man of considerable ingenuity with a flair for design. Unhappily his talents became overshadowed by the smears and accusations which surrounded his dismissal from hospital. Was Cleland genuinely guilty of improper behaviour or was he the victim of professional jealousy which exaggerated some indiscretions yet well intentioned clinical examinations? We shall never know. But the case illustrates the vulnerability of men doctors then, as now, to accusations levelled by women patients undergoing vaginal examinations. After Cleland's trial one of the governors said that if he were a

surgeon he would demur examining any lady "above the shoulders and below the neckline."

References

1. Cleland JB. *The ancient family of Cleland*. London: Hicks, Wilkinson and Sears, 1905:30-1.
2. Walpole R. *Memories of the last 10 years of the reign of George II*. Vol. 1. London: John Murray, 1822:402.
3. Cleland A. *An Appeal to the Public*. Bath: 1743.
4. Cleland T. "Gestation of the Clinic" in *Medical History* 25 (April 1981), p 173.
5. *Letters of South Sea Company* 1717/27, British Library Ad MSS25566, p 16.
6. MSS notes preceding a copy of "An Appeal to the Public" (1743) in Cambridge University Library, Add 433.
7. Johnstone W. "Roll of Commissioned Officers in the Medical Service of the British Army", Aberdeen, 1917.
8. Cannon R. "Historical Record of the 3rd Dragoon Guards." London: HMSO, 1938, p 49-50.
9. Philosophical Transactions of the Royal Soc. 41, (1740-41), p 844-7.
10. *Bath General Hospital Committee Minutes Book 1*, p 199 (in possession of the Royal Nat. Hosp for Rheumatic Diseases, Bath).
11. See Sherburn G. "The Correspondence of Alexander Pope", Oxford UP (1956), p 401.
12. "A Short Vindication of the Proceedings of the Governors of the General Hospital, etc." Bath and London, 1744.
13. East, Marcelline. *Aberdeenensis*. Entry for June 30 1752, Aberdeen Univ. Archives.
14. Commissioner of Edinburgh. *Testament Daive* entered 3.1.1772 (in possession of Register House, Edinburgh).
15. *Bath Chronicle*, 6 March 1771. Obit notice.

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Diary of Urban Marks: 1880-1949

Then I heard that John had obtained a man called Jarvis who was said to be on leave from the army for six months. This man was obtained through the British Medical Association. I heard a good deal of Jarvis when I returned home. It appears that he walked into the BMA offices at London and said that he was a captain in the Canadian Medical Corps. He had been invalided from France and had been given leave of absence for the above stated period. He thought that he would like to do locum work in the country since he was not so incapacitated as to be useless and would be helping the country in replacing another medical man. This happened just as Groves was leaving and as Puntun had applied to the headquarters for a locum, Jarvis was sent down here. No questions were asked by the BMA, nor were any credentials asked for. On the Canadian army list appeared the name of Captain Jarvis, and it was not until a good deal later that it was found that our Jarvis was impersonating the original. It was then discovered that our Jarvis was a private in the medical corps and had no qualification whatever except what he knew of medical matters from his travels.

Once located here, Jarvis as I must call him although I never knew his real name, proceeded to bluff things out. He was a captain in the army most of the time. On the surgery couch he spread a white cloth on which were displayed all the instruments I possessed among which were numerous dental forceps. On one occasion Mr Filcrofts, a dentist, came in to see him and remarked on the goodly collection of dental instruments. Jarvis denied that they were such and said that they were bone forceps. Filcrofts merely smiled and wondered what sort of a man Puntun had managed to get hold of.

On the first night he was here he told May that he never kept his bedroom door locked and suggested that he should do the same.

Poor May was terrified out of her wits and complained to John about this. But John thought May was very hysterical and took no notice. But in fair play to John, I must remark that he had justification for his attitude. May was very highly strung naturally and had several brothers with John about money matters while John was trying to save money for me. Furthermore, he had gone to a lot of trouble in trying to keep my practice together and he was not therefore anxious to keep on changing the men in charge. John himself was working very hard since there was a lot of legal work in connection with men who were in the army or had been killed while on active service. I cannot blame John, but when the facts were known he was the first to take the blame to himself. Jarvis went merely on quacking his way through the medical work and making May's life a hell. She was terrified of him. He could eat a portulacae soup for his meal at midday. He never held a morning surgery and went out about two in the afternoon on his rounds. Even then he did only a few visits. If people sent on Monday morning Jarvis might visit them on the following Friday. In the circumstances it was perhaps a good thing for the patients since they had more chance of living than if Jarvis attended to them. In the surgery he had an open book of prescriptions from which he copied. He did actually attend a confinement and after the baby was born kissed the mother while under chloroform. I suppose that even his conscience pricked him at such a serious time, and this was his method of expressing his relief at the mother's safety. On another occasion he tried to carnally assault a woman patient who simply kicked him in the crutch. Jarvis promptly collapsed against the bookcase in the surgery and the lady walked out. It was with great grief that she told me the story some years afterwards.