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Dangerous Yardstick? Early Cost Estimates and the Politics of Financial Management in the First Decade of the National Health Service

TONY CUTLER*

The object of this paper is to throw light on an apparent paradox in the financial history of the British National Health Service (NHS) in, broadly, its first decade. After the first two fiscal years of the Service a regime of tight expenditure restraint was imposed. This reflected a perception of NHS spending as excessive and subject to insufficient control.[1] In the first volume of his official history of the Service, Charles Webster has referred to the "atmosphere of retrenchment" dominant in the 1950s;[2] but the first authoritative investigation of expenditure trends in the NHS, that of the Guillebaud Committee (1956), came to a quite different conclusion. It stated that it could not recommend any means which would "reduce in a substantial degree the annual cost of the Service".[3]

This raises the question of how such different judgements could be arrived at. The thesis advanced here builds on an observation by Webster, referring to expenditure restraint on the Service in its first decade, that "the NHS struggled along in an atmosphere of suspicion in government quarters, the main objective foundations for which were the unrealistically low speculative estimates for the cost of the new service made before its inception".[4] Webster does not specify any particular estimates nor does he develop his characterization of them as flawed. I believe that he was correct to stress both the influence of early cost estimates and their weakness. Such estimates served as pervasive but also dangerous expenditure yardsticks which sustained an unrealistic conception of NHS expenditure as actually or potentially out of control.

* Tony Cutler, PhD, School of Management, Royal Holloway, University of London, Egham, Surrey TW20 0EX.

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[1] Charles Webster, *The health services since the war. Volume II, Government and health care: the National Health Service 1958–1979*, London, The Stationery Office, 1996, p. 5.

[2] Charles Webster, *The health services since the war. Volume I, Problems of health care: the National Health Service before 1957*, London, HMSO, 1988, p. 399.

[3] *Report of the Committee of Enquiry into the Cost of the National Health Service*, Guillebaud Committee, Cmd. 9663, 1956, Parliamentary Papers (PP) 1955–56, XX, paras. 720–1.

[4] Webster, op. cit., note 1 above, p. 5.

This paper is divided into four parts: the first looks at how the politics of NHS finance has been discussed in the historical literature on the period, and examines the questions which this literature has inadequately addressed; the second considers a key early estimate, that given in the 1944 White Paper, *A national health service*,[5] and traces its relationship to the first key post-war estimate, that contained in the Financial Memorandum to the NHS Bill of 1946;[6] the third shows how these early estimates functioned as de facto yardsticks in debates on NHS expenditure under both Labour and Conservative governments; the fourth examines some crucial flaws in the two early estimates and seeks to establish that they could not serve as a realistic basis for judging expenditure trends in the post-war Service. The conclusion discusses some of the implications of the use of this problematic yardstick.

Historians and the (Early) Politics of NHS Expenditure

In the first two fiscal years of the NHS, expenditure was well in excess of estimates. In 1948/9 NHS gross expenditure for Great Britain exceeded the estimate by 39 per cent; and in 1949/50 it was 27.5 per cent higher than the estimate.[7] These cost overruns triggered what Webster has termed "the crisis of expenditure", and the first volume of his official history of the Service charts in detail the conflicts over both the interpretation of NHS spending trends and what response should be made to them under the 1945 to 1951 Labour administrations.[8] However, historians have also pointed to restraint on NHS expenditure extending throughout the first decade of the Service.

This emphasis on financial control was manifested in a perceived need closely to monitor expenditure trends. Under Labour this role was assumed by a Cabinet Committee, which first met in April 1950.[9] Under the Conservatives it was the responsibility of the Guillebaud Committee set up in 1953.[10] Concern with the control of expenditure is, of course, not synonymous with restraint of expenditure. However, Webster's reference to retrenchment during the 1950s is supported by analysis of NHS expenditure trends which set them in a broader historical context. Thus an expenditure series in constant (1985) prices constructed by John Appleby indicates an increase in out-goings in real terms of 20.2 per cent over the period 1950/1 to 1959/60.[11] To put these figures in longer-term perspective, they are broadly comparable with those under the Thatcher governments of the 1980s. Thus Appleby's series indicates that, from 1979/80 to 1988/9, real NHS spending in the UK rose by 18 per cent.[12]

[5] Ministry of Health/Department of Health for Scotland, *A national health service*, Cmd. 6502, PP 1943–44, VIII.

[6] 'Financial memorandum' to the *National Health Service Bill* (1946), PP 1945–46, III.

[7] Both figures calculated from Webster, op. cit., note 2 above, p. 135.

[8] Webster, op. cit., note 2 above, ch. 5.

[9] See ibid., pp. 157–66.

[10] On the political background to the appointment of the Committee, see P Bridgen and R Lowe, *Welfare policy under the Conservatives 1951–1964: a guide to documents in the Public Record Office*, London, Public Record Office, 1998, pp. 46–7.

[11] Calculated from J Appleby, 'Government funding of the UK National Health Service: what does the historical record reveal?', *J. Health Service Res. Policy*, 1999, **4** (2): 79–89, p. 84.

[12] Calculated from ibid.

However, while the historical literature has pointed to both the aim and the achievement of restraint in NHS expenditure from 1950 to 1960, it has also questioned the need for such restraint. In this respect it has echoed the finding of the Guillebaud Committee. The Committee decided to contract out its investigation to the National Institute for Economic and Social Research.[13] The work was undertaken by Brian Abel-Smith, then at the National Institute, with Richard Titmuss acting as "consultant",[14] and the resulting monograph was published as *The cost of the National Health Service in England and Wales*. This research, which was crucial in informing the findings of the Committee, showed a picture of modest expenditure growth and that the NHS was absorbing a falling share of national income during the years 1949/50 to 1953/4.[15] Later historical work has pointed to similar conclusions. Thus, for example, Jim Tomlinson has shown how limited were the demands of the NHS on key materials and labour in the early years of the Service.[16] Nevertheless, while the literature has suggested that anxiety over the rate of growth of NHS expenditure in this period was misplaced, it has not addressed how such concerns were created and sustained. In this respect, aside from Webster's reference to the influence of early cost estimates discussed above, there has been no attempt to account for this pervasive concern with expenditure control. To examine the implications of Webster's argument it is necessary to begin by analysing a key expenditure estimate made before the beginning of the NHS, that in the 1944 White Paper and its relation to the estimate given in the Financial Memorandum to the NHS Bill of 1946.

The 1944 White Paper and Financial Memorandum Estimates

In the third section it will be argued that the 1946 Financial Memorandum estimate for NHS expenditure operated as a yardstick for critics of the level of NHS spending under both Labour and Conservative governments in the first decade of the Service. Here I examine this estimate and its relation to the earlier one in the 1944 White Paper, *A national health service*. It has generally been agreed that a major impetus to wartime planning of a national health service stemmed from the Beveridge Report.[17] Beveridge elaborated three "assumptions" which were seen as underpinning the proposals for the reform of social security. One of these, "assumption B", was for "comprehensive health and re-habilitation services for prevention and cure of disease" to be "available to all members of the community".[18]

Although this "assumption" provided a stimulus to wartime health planning, the Report contained no detailed proposals on the anticipated structure of a future

[13] PRO MH 137/26, 'Committee of Enquiry into the Cost of the National Health Service', GC 1953), 1st meeting, 13 May 1953.

[14] Webster, op. cit., note 2 above, p. 207.

[15] See B Abel-Smith and R Titmuss, *The cost of the National Health Service in England and Wales*, Cambridge University Press, 1956, pp. 60, 63.

[16] See J Tomlinson, 'Welfare and the economy: the economic impact of the welfare state 1945–1951', *Twentieth Century Br. Hist.*, 1995, **6** (2): 194–219, pp. 200, 205–6.

[17] F Honigsbaum, *Health, happiness and security: the creation of the National Health Service*, London and New York, Routledge, 1989, ch. 4.

[18] *Social insurance and allied services*, Beveridge Report, Cmd. 6404, PP 1942–43, VI, para. 301.

Table 1

Comparison of expected cost of a National Health Service in the 1944 White Paper and the Financial Memorandum to the National Health Service Bill, 1946, estimate for England and Wales*

Service area	1944 White Paper estimate	1946 Financial Memorandum estimate
Hospitals	£80m	£87m
General medical; pharmaceutical; dental and ophthalmic	£41m	£45m
Local authority services	£10m	£12m
Superannuation/compensation	—	£8m
Total	£132m	£152m

Sources: Ministry of Health/Department of Health for Scotland, *A national health service*, Cmd. 6502, 1944, PP 1943–44, VIII; and Financial Memorandum to the *National Health Service Bill* (1946), PP 1945–46, III.

* The 1944 White Paper assumed that a significant part of the funding for a national health service would come from local taxation, £48 million or 36 per cent in the case of England and Wales; and £5.4 million or 34 per cent in the case of Scotland. The overall figure given in the White Paper was, however, the anticipated total public funding for the future service, see Ministry of Health/Department of Health for Scotland, *A national health service*, Cmd. 6502, 1944, PP 1943–44, VIII, pp. 84–5.

health service. Wartime planning was thus designed to elaborate this structure and this resulted in the 1944 White Paper. As part of this exercise a cost estimate was prepared and included in the White Paper.[19] Table 1 shows the White Paper estimate for England and Wales broadly disaggregated by the major service areas and this is set alongside the corresponding figure given in the Financial Memorandum to the NHS Bill of 1946, the first public post-war estimate of the expected cost of the NHS. A comparison of the two aggregate figures shows that the Financial Memorandum estimate was 15 per cent higher than that given in the White Paper. However, this exaggerates the increase in financial resources for the Service anticipated in the later estimate. As the table indicates, the White Paper figure was understated because it included no estimate for superannuation or compensation, but such a figure was included in the later estimate. There was, however, an anticipated increase in public funding of hospitals of £7 million. But this has to be set in the context of a key change in the policy on hospitals. In the White Paper it had been envisaged that voluntary hospitals would remain independent from the state but would receive payments for the provision of beds.[20] In October 1945, however, Aneurin Bevan proposed to take the voluntary hospitals into public ownership[21] and this policy was

[19] Ministry of Health/Department of Health for Scotland, op. cit., note 5 above Appendix E.

[20] Ibid., p. 23.

[21] Bevan's memorandum 'The future of hospital services', is reprinted in C Webster (ed.), *Aneurin Bevan on the National Health Service*, Oxford, Wellcome Unit for the History of Medicine, 1991, pp. 31–9.

Table 2
Gross and net expenditure estimates for the NHS in the Financial Memorandum to the NHS Bill and the NHS (Scotland) Bill, 1946

	Gross expenditure estimate	Non-exchequer funding sources estimate	Net expenditure estimate
England and Wales	£152.0m	£42.0m	£110.0m
Scotland	£22.0m	£5.5m	£16.5m
Great Britain	£174.0m	£47.5m	£126.5m

Sources: Financial Memorandum to the *National Health Service Bill* (1946), PP 1945–46, III; Financial Memorandum to the *National Health Service Bill (Scotland)* (1946), PP, 1945–46, III.

approved by the Cabinet.[22] In the structure recommended in the White Paper it was assumed that, in addition to public funding, voluntary hospitals would continue to have a source of income from voluntary contributions.[23] Yet, nationalization presupposed a shift to public funding, and the "additional" £7 million was seen as replacing such voluntary funding. In a discussion of the difference between the two figures, this was made clear by H H George, the official principally responsible for preparing the health estimates for England and Wales, who indicated that the increase of £7 million in public funding was to be explained by the "cessation of voluntary contributions to voluntary hospitals".[24] This meant that the *total* resources anticipated for hospitals would be the sum estimated in the 1944 White Paper. Thus, if an adjustment is made for both these aspects, the difference between the two estimates is only £5 million or 6 per cent of the original White Paper figure. In effect, the Financial Memorandum estimate was a minor incremental adjustment to the White Paper figure.

Two further points need to be made. Table 1 gives the 1946 estimate for England and Wales but the Financial Memorandum to the NHS (Scotland) Bill contained a parallel estimate of £22 million,[25] thus the Great Britain estimate was £174 million. The Financial Memorandum also presented expenditure in "gross" and "net" terms. The former referred to total expected expenditure on the Service whereas the latter deducted contributions to its funding from non-exchequer sources, principally the part of National Insurance Contributions that was allocated to the funding of the NHS. These non-exchequer sources were estimated to contribute £47.5 million, hence the "net" figure of £126.5 million. The overall "gross" and "net" figures for Great Britain are presented in Table 2. These figures were to be significant as the yardsticks used by critics concerned with trends in NHS expenditure.

[22] PRO CAB 128/1, 'National Health Service', 18 Oct. 1945.
[23] Honigsbaum, op. cit., note 17 above, ch. 14.
[24] PRO T 161/1243, H H George to E Hale, 7 Dec. 1945.
[25] 'Financial memorandum' to the *National Health Service (Scotland) Bill*, (1946), PP 1945–46, III.

The Financial Memorandum Yardstick

The links between the White Paper and the Financial Memorandum estimates being established, the aim of this section is to show how the similar expenditure figures that they generated operated as an important yardstick in constituting a "problem" of NHS expenditure in the first decade of the Service. Two different periods are considered: the first two fiscal years of the Service; and the end of its first decade, when the Guillebaud Report triggered a new debate on NHS expenditure.

Labour and the Crisis of Expenditure

The cost overruns prompted an important debate within the Labour Cabinet and one of Bevan's principal opponents was Herbert Morrison, the Lord President of the Council. His hostility to Bevan was fuelled by earlier disagreements over the appropriate structure for a future health service. Morrison had favoured the retention of local authority control of the hospital service, whereas Bevan, as pointed out above, had successfully pressed for its "nationalization".[26]

Morrison expressed his *a priori* suspicion of Bevan by urging the need for an inquiry into the NHS as early as January 1949.[27] In addressing the issue of the appropriate level of NHS expenditure, Morrison's advisers in the Lord President's office had regular recourse to the Financial Memorandum figures as a standard. Bevan's estimate for NHS gross outlay for England and Wales for 1949/50 was £312 million.[28] This was regarded as excessive on, *inter alia*, the following grounds: "the cost for 1949/50 is ... expected to be more than twice the figure given [to] the public with the Bill (£152 million)".[29] As previously indicated, the £152 million figure was the gross expenditure estimate for England and Wales cited in the Financial Memorandum.

The Financial Memorandum yardstick also figured significantly in proposals for cuts in NHS spending during this period. A proposed response to the cost overruns was to impose a limit on NHS expenditure, and this raised the question of what this should be. In debates on an expenditure limit for 1950/51, Morrison was advised that "if a ceiling is to be proposed ... it is difficult to see how on national economic grounds anything above £300 millions can possibly be regarded as tolerable".[30] The £300 million referred to here was a "net" figure for Great Britain and its significance can be grasped if it is related to the net figure proposed by the Minister of Health. This was £393 million,[31] so the logic of the proposed ceiling was a cut of around one-third in proposed expenditure levels. In justifying such a substantial reduction the argument used was that "this would still give the Health Services well over

[26] On this debate, 'National Health Service', op. cit., note 22 above.

[27] Webster, op. cit., note 2 above, p. 134.

[28] Ibid., p. 136.

[29] PRO CAB 21/2035, J A R Pimlott to Herbert Morrison, 'National Health Service', 6 Jan. 1949.

[30] PRO CAB 124/1188, E M Nicholson to Herbert Morrison, 'National Health Service', 11 March 1950; K Laybourn, *The evolution of British social policy and the welfare state: c. 1800–1993*, Keele University Press, 1995, p. 232.

[31] Webster, op. cit., note 2 above, p. 136.

double the figure (£126 millions) on the basis of which the Government decided to go forward with the Service in 1946". The reference was, again, to the Financial Memorandum, as the £126 million was the expected "net" expenditure figure for the health services in Great Britain given in that document.[32]

The Post-Guillebaud Debate

The use of early expenditure estimates as yardsticks can also be discerned at the end of the first decade of the Service. Following the Suez crisis, new pressures for cuts in social services and in NHS expenditure operated. However, a distinctive feature of this period was that the Guillebaud Report allowed for arguments which set NHS spending in a broader macro-economic context. Thus, in January 1957, Dennis Vosper, the Minister of Health, sought to temper proposed cuts by pointing out that NHS expenditure was falling as a share of national income.[33] However, such an approach was strongly resisted by the Treasury, and in a draft statement for the Chancellor (Lord Thorneycroft) of February 1957 the yardstick of the Financial Memorandum was again used: "we have given anxious consideration to the growing cost of the National Health Service. When it was established it was expected to cost [a total of] £175m a year. By 1949/50 the cost had risen to £450m ... in 1957/8 the gross cost of the Service will be £690m".[34] Here the £175 million refers to a rounding of the Great Britain gross expenditure estimate in the two Financial Memoranda as indicated in Table 2. Right through the first decade of the Service, therefore, the estimate in the Financial Memorandum to the NHS Bill for England and Wales (itself substantially derived from the 1944 White Paper) was given a quasi-contractual status.[35] To use Webster's term, "suspicion" derived from the fact that the health ministers had signally failed to keep to this initial estimate. Naturally, this involved an implicit assumption that the estimate was reasonable, and that the fact that it had been exceeded to such a degree was an indicator of the failure properly to control health expenditure. However, as shown above, Webster characterized early estimates as "speculative" and "low". If this were the case, then

[32] The emphasis in this article is on the importance of the earliest official estimates of the cost of a national health service. The estimates for fiscal year 1948–9 *were* revised upwards from those given in the Financial Memorandum so the 1948/9 estimate for England and Wales was £198.4 million or £264.5 million on an annualized basis. The cost overruns relative to this estimate and that in 1949/50 were, of course, highly significant in the "crisis of expenditure" but, as the article seeks to demonstrate, the (lower) original estimates served as a pervasive and even more exacting yardstick.

[33] PRO CAB 129/85, C (57), 'National Health Service', memorandum by the Minister of Health, 30 Jan. 1957.

[34] PRO T 227/485, unsigned, 'Draft statement on the estimates', 19 Feb. 1957.

[35] The emphasis on initial estimates as a yardstick point to two weaknesses in the Treasury's approach to the control of public expenditure in this period. Firstly, there was no effective scrutiny of the *basis* of the estimates because of the limited research capacity of the Treasury, see, for example, H Heclo and A Wildavsky, *The private government of public money*, Basingstoke, Macmillan, 1981, p. 42. Secondly, there was a bias to "economy" which engendered resistance to setting public spending in a macro-economic context and to seeing positive benefits for such spending. On the latter see R Lowe, 'The core executive, modernisation and the creation of PESC 1960–64', *Public Administration*, 1997, **75** (4): 601–15.

the "problem" lay not so much in the divergence between actual expenditure and the early estimates, but rather in the estimates themselves. If they had seriously miscalculated likely NHS spending they had created a yardstick to which it was impossible to conform. The next section evaluates this standard.

The Flawed Yardstick: The 1944 White Paper Estimate

Evaluation of the cost estimate in the 1944 White Paper focuses on three areas: the dental and ophthalmic estimates; the pharmaceutical cost estimates; and the cost estimates for the hospital service. These were selected because of their significance for differences between the service costs estimated in the 1944 White Paper and the expenditure out-turns in the first fiscal year of the Service.

The dental and ophthalmic services are grouped together because public sector provision for adults in these areas came through the National Health Insurance (NHI) system. In the White Paper, dental expenditure was expected to be £10 million per annum and ophthalmic expenditure £1 million per annum.[36] As the NHS started in July 1948, figures for the first fiscal year have to be annualized to achieve comparability with the White Paper figures. If this is done, the (annualized) out-turn for 1948/9 for the dental service in England and Wales was £29 million, and for the ophthalmic service £19.9 million,[37] sums far exceeding the White Paper estimates.

In the case of pharmaceuticals, the 1944 White Paper did not give a separate figure for expected costs under the new service. However, such a breakdown was given in draft versions of the Financial Appendix to the White Paper. These indicate that the annual cost of pharmaceuticals in England and Wales was expected to be £6 million per annum.[38] The Hinchcliffe Committee, which investigated the costs of the pharmaceutical service in England and Wales and reported in 1959, did not give a cost figure for the first fiscal year of the Service. However, a Public Record Office (PRO) file gives an estimate of £19.5 million for that part-year or £26 million on an annualized basis,[39] and by 1949/50 annual expenditure had increased to £31.7 million.[40]

Hospitals were expected to be the most expensive part of the future service. The White Paper anticipated that the hospital service in England and Wales would cost £80 million or 61 per cent of total expenditure (see Table 1). As previously noted, if an anticipated £7 million from voluntary hospital contributory income is added to this figure, the total financial resources for the hospital service in England and Wales was expected to be £87 million. The (annualized) expenditure

[36] Ministry of Health/Department of Health for Scotland, op. cit., note 5 above, Appendix E.

[37] Calculated from A Cutler, 'The cost of the National Health Service: problem definition and policy response 1942–1960', unpublished PhD thesis, London School of Hygiene and Tropical Medicine, 2000, p. 184.

[38] PRO MH 77/28, H H George to John Maude, 'First draft of the financial appendix', 5 Nov. 1943.

[39] See, PRO MH 137/80, 'Pharmaceutical services (England and Wales)', Nov. 1958.

[40] Ministry of Health, *Final report of the Committee on Cost of Prescribing* (Hinchliffe Committee), London, HMSO, 1959, para. 51.

on the hospital service in 1948/9 was £193 million.[41] Hospitals were thus significant for two reasons: there was a substantial difference between the estimate in the White Paper and the out-turn for the first fiscal year of the Service, though it was proportionately smaller than those for the dental/ophthalmic and pharmaceutical services; and hospitals were expected to constitute the most expensive part of service provision.

The Dental and Ophthalmic Estimates

To understand the problems posed by the White Paper estimates in the dental and ophthalmic areas, it is necessary to look at some key expenditure estimates in wartime health planning that preceded the White Paper.[42] The first major estimate produced by the Ministry of Health during wartime was titled 'Approximate cost of the main health services'. In that document a figure of £30 million is given for the *total* cost of a dental service under a future service, of which £20 million is the cost to "public funds".[43] To set these figures in context, it is necessary to recognize that, at this stage, the dental service was envisaged as providing for the adult population (those over 15 years old) only. Provision for under-15s was to be through the School Medical Service and local authority clinics. The source for the figure in the 'Approximate cost' estimate was a document of 21 July 1942 entitled 'Cost of dental treatment'. In the latter, two take-up possibilities for dental services were used: these predicted that 10 or 20 per cent of adults would use the dental service annually.[44] The figure given in the 'Approximate cost' document corresponded to the cost if the 20 per cent take-up rate materialized.[45] The cost to public funds was anticipated to be lower than the total cost because, although treatment would be free, provision of dentures would involve a charge.

However, a major reduction occurred in a later important draft estimate entitled 'Finance of new health scheme'.[46] This gave a cost to public funds figure of £10 million, half the earlier estimate, and this is also the figure cited in the 1944 White Paper.[47] The cut is not explained in this estimate, but a likely reason was a tension in dental policy. John Welshman has pointed to a "sea change" in official attitudes to dental provision in wartime planning, which contrasted with those prevailing in

[41] Calculated from Cutler, op. cit., note 37 above, p. 185.

[42] Prior to the development of wartime planning there was an important estimate of the cost of health services *pre-war*. This was included in the Political and Economic Planning's *Report on the British health services* (London, PEP, 1937). This gave a figure for the "cost of ill health" of £185 million. This might appear to be another argument against the estimate given in the 1944 White Paper. However, it is important to bear in mind that the two sources are not comparable. For example, £99 million of the PEP figure referred to funding from voluntary or private sources such as fees to doctors for private treatment; and part of the state funding referred to cash benefits under the NHI scheme rather than specific health service provision, see ibid., pp. 387–91.

[43] PRO MH 80/24, unsigned, 'Approximate cost of the main health services', 29 July 1942.

[44] PRO MH 80/24, unsigned, 'Cost of dental treatment', 21 July 1942.

[45] 'Approximate cost', op. cit., note 43 above.

[46] PRO MH 80/26, H H George to John Maude, 'Finance of new health scheme', 24 Sept. 1943.

[47] Ministry of Health/Department of Health for Scotland, op. cit., note 5 above, p. 82.

the inter-war period.[48] An important element in inter-war thinking was that low levels of take-up in the School Medical Service were a function of parental ignorance or negligence. The "sea change" led to a tendency to see low take-up as rooted in structural problems such as poverty.[49]

This shift in approach meant that public policy should be geared to encouraging the use of the dental service; an attitude reflected in the Report of the [Inter-Departmental] Committee on Post-War Dental Policy, a committee of civil servants chaired by the Permanent Secretary to the Ministry of Health, Sir John Maude. The Report linked restricted use of the service with the lack of a preventative approach to dental care. However, this preventative ideal was also seen as constrained by the supply of dentists. The Committee argued that 12,000 registered dentists were in practice and that while "this is adequate to present effective demand for dental treatment" it was "inadequate to secure any substantial improvement in the dental condition of the nation".[50]

The Committee therefore advocated a policy of concentrating resources on "priority" groups: nursing and expectant mothers, schoolchildren and adolescents (15- to 17-year-olds). A general service with a preventative bias was initially to be applied to these groups and, with respect to the rest of the population, the Committee argued that "stimulation of demand by education methods, by the provision of clinics and by the extension to the general population of 'dental benefit' or its equivalent must be timed to keep pace with the actual increase in the supply of dentists".[51]

This approach was supported by the relevant ministers, Henry Willink, the Minister of Health, and Thomas Johnston, the Secretary of State for Scotland. In a joint memorandum to the War Cabinet, they argued that "we have little doubt that ... the proper course is to concentrate our efforts on the teeth of the rising generation, and for that purpose to amplify and improve existing services dealing with mothers and pre-school children and to extend that service to adolescents".[52] This not only endorsed the priority group policy but was seen as having implications for costs. Thus the shift from a comprehensive service was said to mean that estimates can be "substantially cut for the time being".[53]

With respect to the ophthalmic estimate, the 'Approximate cost' document cited an estimated total cost of £4 million per annum and a cost to public funds of £2 million. The source of this estimate was a document entitled 'Ophthalmic benefit'.[54] The lower cost to public funds reflected the expectation that half of the cost of spectacles was to be paid by the user. However, there was an important difference between the two estimates. As noted, the 'Approximate cost' estimate was premised on a 20 per cent take-up rate, three times the take-up rate under National Health

[48] J Welshman, 'Dental health as a neglected issue in medical history: the School Dental Service in England and Wales 1900–1940', *Med. Hist.*, 1998, **42**: 306–37, p. 322.

[49] Ibid.

[50] PRO MH 80/35 , 'Report of a committee on post-war dental policy', 11 Feb. 1943.

[51] Ibid.

[52] PRO MH 80/25, 'Memorandum to the war cabinet by the Minister of Health and the Secretary of State for Scotland', 2 Feb. 1943.

[53] Ibid.

[54] PRO MH 80/35, 'Ophthalmic benefit', unsigned, 21 July 1942.

Insurance (7 per cent). In contrast, the ophthalmic estimates assumed that there would be no increase in take-up but that any increase in cost would flow solely from the higher population coverage. This, under NHI coverage, for ophthalmic benefit was 11.8 million and the cost to public funds was £630,000.[55] The 'Ophthalmic benefit' document assumed a coverage of 46 million or 3.9 times the coverage under NHI. If the NHI cost is grossed up to the new population coverage this would give £2.3 million, or £2 million if rounded down.

There was, however, a reduction in the ophthalmic estimate which parallels that for the dental service discussed above. The 'Finance of new health scheme' estimate also reduced the figure by half, giving a cost to public funds of £1 million.[56] Again, it is likely that the reason for the cut was the adoption of a restricted service reflecting resource constraints and, in the 1944 Commons debate on the White Paper, Johnston stated, "we propose that there shall be an ophthalmic service *as soon as the required increase of people in the profession can be obtained*".[57] The 1944 White Paper used the £1 million estimate.[58]

The serious problems with the White Paper dental and ophthalmic estimates relate to two issues. The first was that certain policy premises underlying the estimates were under constant debate and subject to modification; the second was that there were inconsistencies in the approach to the estimates in the two areas.

The policy question relates to two further issues: the question of charges; and that of the scope of an immediate post-war Service. The assumption of a charge for appliances meant that the cost to public funds of the dental and ophthalmic services was expected to be substantially reduced. This assumption stemmed from the Beveridge Report where it was argued: "To ensure careful use, it is reasonable that part of the cost of renewal of dentures should be borne by the person using them ... the same holds true of optical appliances".[59] However, a wartime planning document discussing dental policy pointed to the tension between this position and that of divorcing access to the service from ability to pay.[60] Naturally, such a tension meant that a policy of charging could be abandoned on the grounds that it acted as a deterrent to service use and raised awkward administrative problems of what did or did not constitute "misuse".[61] This line of argument suggested that the provision of these services should be free at the point of use. However, there were two major expenditure implications. The first was that the totality of service expenditure would fall on public funds. The second, and arguably more important feature, was that the terms of access to the Service would now be different from those which applied under NHI, since there would be no charge to the user.

[55] Dental and ophthalmic benefits under NHI could only be claimed if the individual was a member of an approved society which had an actuarial surplus, thus coverage was lower than for medical and pharmaceutical benefits, discussed later, which were provided for all those covered by NHI.

[56] 'Finance of new health scheme', op. cit., note 46 above.

[57] Thomas Johnston, *Hansard*, 1943–44, vol. 398, 17 March 1944, col. 632, my emphasis.

[58] Ministry of Health/Department of Health for Scotland, op. cit., note 5 above, p. 82.

[59] *Social insurance and allied services*, op. cit., note 18 above, para. 435.

[60] PRO MH 77/124, S F Wilkinson, 'Dentistry in the NHS', third paper, 21 June 1944.

[61] Ibid.

The second source of policy ambivalence was whether a universal service ought to be provided at the outset of the NHS or whether a more limited service should be offered. A precedent for the former was provided by Beveridge, since his report had envisaged "a comprehensive national health service" which was to include access to "dental, ophthalmic and surgical appliances" (and thus, perhaps by implication, dental and ophthalmic treatment) "for every citizen".[62]

It was argued above that the most plausible reconstruction of the sharp downward revision of the dental estimates was the "priority group" policy, and that similar restrictions on the ophthalmic service were also anticipated. However, with respect to dental provision, this approach was effectively reversed by the recommendations of the Teviot Committee. Appointed in April 1943, part of its terms of reference was to report on "the progressive stages by which, having regard to the number of practising dentists, provision for an adequate and satisfactory dental service should be made available for the population".[63] Such terms implied a "priority group" policy. However, the interim report, published in November 1944, recommended that a dental service be provided for the whole population. This was argued on two grounds: it was seen as integral to a comprehensive medical service,[64] and was necessary to stimulate an awareness of the importance of dental health amongst the population.[65] The latter concern was in line with the view that dental services were being under-utilized; it was noted earlier that the priority group policy went along with downplaying the stimulation of demand for the non-priority group. However, a reversal would have a clear financial corollary. If a priority group policy was the basis for the White Paper cost estimate figures, then the abandonment of such a policy would make these estimates untenable since a universal, not a restricted, basis of access was now presupposed.

However, if charges and tensions between a restricted and a universal service were crucial to policy shifts that rendered the White Paper assumptions redundant, there were also important issues relating to the Ministry's approach to cost estimates in these two areas.

As previously indicated, the estimation of levels of demand were inconsistent. The dental estimates projected much higher levels than those occurring under NHI. No analysis is given in the dental estimate documents of the effective selection of the 20 per cent rate. However, there could be two reasons for expecting an increase in demand. The first was the policy of seeking to stimulate demand as part of a preventative policy. The other was that there would also be a substantial call for new dentures. Such a backlog could be related to treatment costs in the inter-war period. Thus, for example, Roger King has argued that full dentures cost as much as 10 guineas, and this meant that "many people either did not bother ... or continued to use a set which had become a poor fit".[66]

[62] *Social insurance and allied services*, op. cit., note 18 above, para. 427.

[63] *Interim report of the Inter-Departmental Committee (Scotland) on Dentistry*, Cmd. 6565, PP 1943–4, III, para.1.

[64] Ibid., para 72.

[65] Ibid.

[66] R King, 'Dentistry in the new NHS of 1948', *Dental Historian*, 1994, no. 26: 11–21, p. 16.

However, while there were plausible reasons for planning for an increased demand for dental services, in the case of ophthalmic treatment quite different criteria were used. The estimate simply took NHI expenditure levels (and hence, by implication, demand levels) at the end of the inter-war period and extrapolated them to the whole population. Naturally this assumed that NHI take-up levels would remain constant, the increase of cases would merely be a result of the total population coverage. However, there was also reason to expect a backlog effect similar to that in the dental service. For example, there was a parallel to the ill-fitting dentures tolerated because of the cost of the replacement. NHI coverage for ophthalmic benefit was limited to less than 12 million people. Thus most of the market for spectacles was not via the recommendation of ophthalmologists or sight-testing opticians but through "sixpenny service at Woolworth's" or "itinerant vendors or second-hand from market stalls".[67] It would, therefore, have been realistic to plan for a substantial increase in demand stemming from the abandonment of inferior spectacles. Naturally, if this were to happen, the assumption of a constant NHI level of service take-up grossed up to a larger population would be highly inaccurate.

The Pharmaceutical Estimates

In contrast to the other two areas considered in this paper, the documentary evidence for the derivation of the pharmaceutical cost estimates is very sparse. Pharmaceutical figures were bracketed under the total cost of the general medical service. While substantial attention was devoted to estimating the expected level of general practitioner pay, pharmaceutical costs received no detailed attention.[68] In estimates of February 1942 and May 1943, they were put at £5 million per annum and the figure given in the 1944 White Paper was £6 million per annum.[69]

The lack of explicit documentation makes it impossible definitely to conclude how these figures were reached, but a plausible basis for them can be suggested. In the case of the ophthalmic estimates, the final figure assumed that expenditure would rise pro rata with population coverage, and it is possible that a similar procedure was used in the case of pharmaceuticals. In 1938, population coverage for NHI (and thus for the general medical and pharmaceutical services) in England and Wales was 18,883,000, and the cost of the pharmaceutical service was £2.4 million.[70] The expected (universal) coverage for a future national health service in England and Wales was 41,250,000, or roughly 2.2 times the NHI coverage. If NHI expenditure is grossed up by the same amount, this gives a figure of £5.3 million. Thus, while

[67] Webster, op. cit., note 2 above, p. 368.

[68] For the considerable work which went into discussions of GPs' pay, see PRO MH 80/31.

[69] For a discussion of these figures, see Cutler op. cit., note 37 above, ch. 2.

[70] *Twentieth annual report of the Ministry of Health, 1938–39*, Cmd. 6089, PP 1938–39, XI, pp. 142, 215, 273–4, 297–8.

any reconstruction has to be tentative, it can be said that the figure falls within the £5–6 million range of the wartime planning estimates.

As noted, this was an area in which very substantial cost overruns occurred. To understand the possible reasons for this it is necessary to look at two major drivers of pharmaceutical costs: the demand for general medical services and the (derived) demand for drugs; and the cost per prescription, which itself reflects the mix of drugs prescribed and the terms under which they were supplied to a national health service. If the working hypothesis is adopted that extrapolation was used to arrive at the estimate, then it is possible to analyse the relative importance of these different cost drivers.

In 1938, 68,256,000 prescriptions were issued in England and Wales under the NHI general medical service,[71] and a projection for universal population coverage would give an expected annual figure of 149 million prescriptions. The PRO statistical series on pharmaceutical services shows 141 million prescriptions issued in 1948/9, or roughly 189 million on an annual basis.[72] This suggests that demand would have been under-estimated by around 25 per cent.

However, given that expenditure for the first two fiscal years of the service was running at around four to five times the 1944 White Paper estimate, prescription costs were clearly the central determinant in the overrun. The use of extrapolation would assume that the average cost per prescription would remain unchanged at the 1938 level of 8d. However, by 1948/9 it was 2s. 9d.[73] The increase in average prescription costs were the crucial factor. In turn, this raises the question of how far the very low early estimate in this area reflected weaknesses in financial control or was attributable to factors that were difficult to predict.

In the case of the demand estimate, extrapolation would involve a straightforward problem: that the population covered by NHI was radically different from that to be covered under a national health service, and that there was a particularly striking contrast on gender lines. In 1938, 12.5 million men in England and Wales were covered for NHI, 63 per cent of the male population; the corresponding figures for women were 6.3 million and 29 per cent.[74] Here lay the potential for a "backlog" effect in which, particularly, women who had been excluded from general medical provision, free at the point of use, took advantage of the new conditions of access. This might have been anticipated, given the evidence available on long-term health problems amongst working-class women.[75] The Ministry of Health annual report for 1948/9 examined this issue by comparing consultation data for the same periods in 1946/7 under NHI, with those in 1948 under the

[71] Ibid, pp. 142, 215.

[72] 'Pharmaceutical services (England and Wales)', Nov. 1958, op. cit., note 39 above.

[73] 1938 costs calculated from the *Twentieth annual report*, op. cit., note 70 above, pp. 142, 215; 1948/9 costs from 'Pharmaceutical services (England and Wales)', Nov. 1958, op. cit., note 39 above.

[74] NHI coverage figures from from the *Twentieth annual report*, op. cit., note 70 above, pp. 273–4, 297–8; population figures from B Mitchell, *British historical statistics*, Cambridge University Press, 1988.

[75] For a classic account, see M Spring-Rice, *Working-class wives: their health and conditions*, 2nd ed., Virago, 1981 (1st ed. 1939).

NHS. This showed that male consultation rates (between the ages of 16 and 64) in 1948 were slightly lower than those under NHI in 1946, with a slight rise in consultation rates for men over 65. In contrast, the 1948 consultation rate for women aged 16 to 64 was just under 10 per cent higher than the 1946 figure; and for women over 65 it was 25 per cent higher.[76] Clearly extrapolation meant a failure to pick up this "backlog" effect.

On the issue of average prescription costs, a crucial feature was the pattern of innovation in the drug market. In this respect, the post-war period exhibited a distinctive character when contrasted with the inter-war period. As Webster has pointed out, the post-war years "coincided with an explosion in the production of new, effective and often expensive vaccines and drugs".[77] This radical shift had a number of consequences. When the NHI ended in 1947, proprietary preparations accounted for 7 per cent of prescriptions and 24 per cent of ingredient costs. Even then, average prescription costs were nearly three times those at the end of the inter-war period. By 1950, proprietary drugs accounted for 18 per cent of prescriptions and 44 per cent of ingredient costs; by 1956, the respective figures had increased to 40 per cent and 66 per cent.[78]

Little attention was devoted to the pharmaceutical estimates compared with that undertaken on GP pay. This may have reflected assumptions regarding the relative cost of these different parts of the general medical service. Wartime estimates operated on the assumption that the pharmaceutical service would cost around one-fifth of the cost of GP pay;[79] by 1956/7 the costs of the pharmaceutical service exceeded expenditure on GP pay.[80] Given the dynamic character of post-war pharmaceutical developments, early estimates in this area were likely to be problematic. As in the case of demand, but with more drastic effects, the use of extrapolation ran the risk of exposing the estimate to the major cost overruns.

The Hospital Estimates

Problems of forecasting also applied to the White Paper estimate of expenditure on hospitals. Acute hospitals were particularly significant, being seen as likely to absorb most resources under a future health service. An insight into the problems posed by the White Paper estimate of hospital costs is contained in an important contemporary critique by Dr A H T Robb-Smith, then Director of Pathology at the Radcliffe Infirmary, Oxford, which was published in the *Lancet* in

[76] These percentages were calculated from data in *Report of the Ministry of Health for the year ending 31st March, 1949*, Cmd. 7910, PP 1950, XI, p. 194.

[77] Webster, op. cit., note 1 above, p. 13.

[78] 'Pharmaceutical services (England and Wales)', Nov. 1958, op. cit., note 39 above.

[79] 'First draft of the financial appendix', 5 Nov. 1943, op. cit., note 38 above.

[80] Hinchliffe Committee Report, op. cit., note 40 above, para. 56.

Table 3
Reconstruction of Robb-Smith's calculation of expected cost per bed in hospitals (England and Wales) based on data in the 1944 White Paper, *A national health service*

Hospital Type	Bed Numbers	Grant	Local or voluntary funding	Implied cost per inpatient year/week
Municipal	210,000	£21m	£17m	
Voluntary	100,000	£10m	£6m	
Total	310,000	£31m	£23m	£174 4s per year; £3 7s per week

Source: A H T Robb-Smith, 'The conjectures of Appendix E', *Lancet*, 2 April 1944, i: 545–6.

April 1944.[81] Robb-Smith's article focused on the estimates for acute hospitals and, while it lacked some crucial details, it highlighted fundamental flaws in the White Paper estimate.

Robb-Smith sought to construct a reasonable set of assumptions which would allow a figure for expected general (acute) hospital unit costs (i.e. cost per inpatient week) to be calculated. The White Paper included 210,000 "other municipal beds" in the new Service, and these general hospital beds were to be funded by a grant of £100 per bed per annum.[82] However, local authorities were also expected to contribute to the financing of hospital provision through local taxation. The White Paper cited an expenditure figure for such municipal hospitals in 1938 of £14.6 million.[83] Total local authority hospital spending in 1938 was stated to be £35.7 million. The White Paper expected this to rise to £41.6 million under the new Service.[84] Robb-Smith argued that, if an assumption was made that expenditure on "other hospitals and institutions" was the same proportion of total expenditure as in 1938, then it could be expected to rise to £17 million under the new Service (£14.6 million multiplied by 41.6/35.7).[85]

Voluntary hospital grants would also be at £100 per bed per annum, and it was anticipated that 100,000 beds would be available under the new Service in this sector. However, to obtain a figure for the total funding of voluntary acute provision under a new service, an additional assumption was required regarding the likely level of voluntary income used to support this provision. Robb-Smith assumed that a further

[81] A H T Robb-Smith, 'The conjectures of Appendix E', *Lancet*, 2 April 1944, i: 545–6. While Robb-Smith's critique is of great importance in highlighting the problems of the hospital estimates in the White Paper, he did not return to this issue in his later career. He died in January 2000, and his curriculum vitae included in his papers held at the Wellcome Library in London includes no references to work on NHS costs after the *Lancet* article discussed here. See Cutler, op. cit., note 37 above, p. 155.

[82] Ministry of Health/Department of Health for Scotland, op. cit., note 5 above, p. 82.

[83] Ibid., p. 81.

[84] Ibid.

[85] Robb-Smith, op. cit., note 81 above, p. 545.

£6 million would come from this source.[86] He made no attempt to justify this figure, but it is broadly consistent with the available data. In 1938 total voluntary hospital income in England and Wales was £12.1 million with £4.8 million coming from voluntary gifts and investments, and £7.3 million from payments for services.[87] The largest part of the latter (£6.3 million) was accounted for by patient payments and revenue from subscription schemes.[88] Robb-Smith cited a unit cost figure of "£3 per week". In fact, as Table 3 indicates, the implied cost per patient week was somewhat higher than this at £3 7s per week. Robb-Smith claimed that such an expected unit cost would be inadequate "unless the majority of beds" under the new service were of "public assistance" institution standard, which he assumed to be radically at variance with the objectives of the White Paper.

To evaluate this argument it is necessary to go back to the concept of service standards set out in the White Paper, and to discuss the implications of such standards for hospital costs. The White Paper begins with the following statement "the Government have announced that they intend to establish a comprehensive health service.... They want to ensure that in future every man, woman and child can rely on getting all the advice and treatment and care which they may need in matters of personal health; that what they get shall be the *best medical* and other facilities available".[89]

The White Paper does not directly exemplify the acute hospital provision which could be seen as "the best". However, there are some indications in the text which allow an idea of the kind of institutions which served as a de facto model. Thus in Appendix (A), which discusses "existing health services", stress is laid on the variability of standards of provision. With respect to the voluntary sector, there were "larger and powerful general hospitals of the kind familiar in London and certain of the other big cities with distinguished specialists and consultants available with first-class modern equipment and treatment facilities .·. . drawing their patients from areas wide afield—as leading institutions in the medical world".[90] In contrast there were also "small 'cottage' hospitals" in the voluntary sector "really functioning as local nursing homes".[91] Similar sharp contrasts were discerned in the municipal sector. When discussing general municipal hospitals, the White Paper referred to institutions "at every stage of development from sick wards of an institution for the aged or chronic sick to the most modern and up-to-date hospitals".[92]

Given such contrasts it might be reasonable to take as exemplars of "the best", the major London teaching hospitals to which the White Paper refers; and, in the municipal sector, the acute hospitals of the London County Council (LCC). The latter are relevant because the LCC had gone furthest in appropriating beds from

[86] Ibid.

[87] R Pinker, *English hospital statistics, 1861–1938*, London, Heinemann, 1966, p. 149.

[88] Ibid.

[89] Ministry of Health/Department of Health for Scotland, op. cit., note 5 above, p. 5, my emphasis.

[90] Ibid., p. 55.

[91] Ibid.

[92] Ibid., p. 56.

Table 4
Costs per inpatient week, London teaching hospitals (1938) and London County Council general hospitals (1937/8)

Hospital	Available beds	Percentage of occupied beds	Cost per inpatient week
Charing Cross	290	88.24	£4 10s 1d
Guy's	687	84.80	£6 3s 8d
King's College	382	86.44	£5 6s 2d
London	885	84.14	£5 12s 6d
Middlesex	601	95.02	£5 6s 7d
Royal Free	312	90.64	£5 0s 0d
St Bartholomew's	726	89.42	£5 11s 5d
St George's	330	85.03	£5 0s 11d
St Mary's	460	84.76	£4 11s 3d
St Thomas's	659	90.12	£5 2s 3d
University College	592	91.49	£4 14s 5d
Westminster	257	88.99	£5 18s 5d
LCC (general hospitals)	17,931	87.30	£4 2s 3d

Sources: British Hospitals Association, *Hospitals Yearbook 1940*, London, British Hospitals Association, 1940; London County Council, *Annual report of the Council 1937, volume IV, Public health (hospital finance)*, London County Council, 1938.

the Poor Law and had been identified as attaining standards comparable with leading voluntary sector hospitals.[93]

Such considerations raise the question of the costs in such institutions, and Table 4 shows costs per inpatient week for the London teaching hospitals for 1938 and the average cost per inpatient week for the LCC general hospitals in 1937/8. However, before comparing these figures with the White Paper cost norm it is important to state a caveat. The White Paper figures referred to the *total* expected cost of hospital provision, i.e. covering both inpatients and outpatients. The figures in Table 4 refer to inpatient costs alone. There is insufficient data to allow for reliable adjustments of the figures in the table to reflect outpatient demand but, clearly, the figures underestimate the total cost of provision.

What is clear from the table is the extent of the divergence between the de facto White Paper cost norm and the cost per inpatient week in London municipal and voluntary hospitals. Equally, it is worth noting the occupancy rates in these hospitals. A relatively high inpatient cost per week could reflect very low occupancy levels. In such cases various fixed or semi-fixed costs are spread over a small patient population. Furthermore, the voluntary hospital cost data for 1938 reveal that hospitals combined

[93] For example, by 1938 only 1.8 per cent of LCC beds were still under the Poor Law, the average for county boroughs in that year was 42.5 per cent. Calculated from *Twentieth annual report of the Ministry of Health*, op. cit., note 70 above, p. 246.

very low occupancy rates with high costs per inpatient week. For example, Weir Hospital and Twickenham St John's were small institutions with 30 and 34 beds respectively, with costs per inpatient week of £4 14s 7d and £4 5s 6d.[94] They, however, operated with occupancy rates of 24.3 and 27.1 per cent respectively.[95] In contrast, the lowest occupancy rate among the London teaching hospitals in 1938 was 84.1 per cent, and the LCC general hospital average was 87.3 per cent. Thus the unit costs in these hospitals reflected the costs of medical activity, not the effects of operating well below capacity.

There was another important question regarding likely acute hospital costs, that of the consultant service. No direct mention of this was made in the White Paper financial estimate. It was, however, particularly crucial for voluntary hospitals. Consultant posts in the latter were honorary. The White Paper envisaged that voluntary hospital participation in the new service would be linked with substantial state funding, with the corollary that consultants would be paid in a future national health service. Such pressures had already emerged before the Second World War. Thus, as voluntary hospitals became increasingly dependent on providing services to patients either paying fees or covered by subscription schemes, the BMA pressed for payment for voluntary hospital consultants.

Robb-Smith sought to calculate the cost of a consultant service based on the assumption of 17 consultants per 100,000 population or a population ratio of 5,900:1 consultant. He also assumed that each consultant would require an assistant.[96] In his view, consultants should earn £2,000 a year, assistants £1,000. Robb-Smith's assumptions on consultant ratios were higher than those adopted by a Ministry wartime planning estimate in which George Godber, Principal Regional Medical Officer, drew on hospital survey work in the Sheffield and North Midlands area. He argued that 454 consultants would be required in the area, a population ratio of 8500:1.[97] Godber did not discuss the issue of assistants, but if Robb-Smith's assumption of one consultant to one assistant is accepted as well as his expected pay levels, then the two estimates would involve the expenditure levels shown in Table 5.

Taken together, the various strands of evidence considered so far suggest that there was powerful support for Robb-Smith's claim that expected acute hospital costs were too low, given the health policy objectives of the White Paper. In effect, the White Paper assumed a cost per bed in general hospitals of roughly £3 7s per week. As has been demonstrated (see Table 4), the lowest cost per inpatient week in a London teaching hospital, Charing Cross, was 34 per cent higher than this norm and the highest, Guy's, was 84 per cent higher. In the case of the LCC, general hospitals' average costs were 22 per cent higher.

Robb-Smith also attempted to estimate a more realistic figure. He argued that "it is unlikely that the average cost per bed can be less than £3 15/- per week" but this figure was "exclusive of the consultant service". As noted, he thought that

[94] British Hospitals Association, *Hospitals Yearbook 1940*, London, British Hospitals Association, 1940, p. 129.

[95] Ibid., p. 106.

[96] Robb-Smith, op. cit., note 81 above, p. 545.

[97] PRO MH 80/27, George E Godber, 'Consultants', 7 March 1944.

Table 5
Estimates of the cost of a consultant service (England and Wales)

Estimate	Consultant: population ratio	Consultant numbers	Consultants' pay	Assistants' pay	Total cost
Robb-Smith	1:5900	7000	£14m	£7m	£21m
Godber	1:8500	4850	£9.7m	£4.8m	£14.5m

Sources: A H T Robb-Smith, 'The conjectures of Appendix E', *Lancet*, 2 April 1944, i: 545–6; PRO, MH 80/27, George E Godber, 'Consultants', 7 March 1944.

£21 million would be an appropriate figure for such a service. At the £3 15s per bed hospital provision was estimated by Robb-Smith to cost £58.5 million and £21 million for the consultant service, a total cost of £79.5 million.[98] This contrasted with the £48 million of public funds suggested in the White Paper (or £54 million if the additional £6 million voluntary income was included), an alternative cost of roughly £5 per bed per inpatient week (£80 million divided by 310,000 beds). Interestingly, this was also the figure cited by the local authority representatives in the Ministry wartime estimates: a Memorandum from the three major local authority associations in June 1943 argued that costs per inpatient week in an "up-to-date and well equipped hospital" would not be "less than £5 per week".[99] The Memorandum gives no basis for the £5 figure and, as was indicated earlier, Robb-Smith's consultant service costs involved staffing levels higher than those thought appropriate in Godber's estimate. However, it is also worth noting that his initial cost per inpatient week, £3 15s, was itself low, certainly in the context of the London experience. Thus a reasonable case could be made for a £5 norm. In certain respects it might be thought conservative, but even this implied general hospital expenditure substantially higher than that stipulated in the White Paper.

Conclusion

At the beginning of this paper two views of the trajectory of NHS expenditure during the first decade of the Service were contrasted. The Guillebaud Committee concluded that it could find no scope for substantial cuts in Service expenditure. This conclusion was related to a trend of modest increases in NHS expenditure in real terms and of Service expenditure falling as a share of national income. It

[98] Robb-Smith, op. cit., note 81 above, p. 545.
[99] PRO MH 80/31, Memorandum by the County Councils Association, the Association of Municipal Corporations and the London County Council, 'Proposed financial basis of the new health services', 21 July 1943.

contrasted with the view, under both Labour and Conservative governments in the first decade of the Service, that NHS expenditure posed a political problem.

Under the influence of Abel-Smith and Titmuss, the Guillebaud Committee looked at the trajectory of NHS expenditure in terms of constant prices and the share of national current and capital expenditure taken by the NHS. But official policy used a different yardstick. Thus it was pointed out that the 1946 Financial Memorandum, itself a modest reworking of the 1944 White Paper estimate, was a point of reference not only in the financial crisis of the first two fiscal years of the Service but also at the end of the first decade of the Service. With respect to the latter period, Paul Bridgen and Rodney Lowe have pointed to the continued relevance of early estimates where there was "continual harking back to the original estimated cost".[100]

Equally, it was argued that the weakness in the estimates meant that they provided a gross under-estimate of the likely cost of a future health service in the light of data available at the time they were prepared. The potential political dangers of this yardstick were seen by Robb-Smith. Thus, in March 1944, he wrote to the Minister of Health, Willink, regarding the White Paper cost estimates. Referring to them as "quite inadequate", he went on to argue, "my concern is ... having mentioned a figure in the White Paper it may be difficult to persuade the legislature to accept a considerable increase in this figure".[101]

This letter received considerable attention from officials. In part, the discussion was concerned with detailed aspects of Robb-Smith's critique. However, the central objection to his argument was not so much that his alternative estimates were unsound, but rather that he had misunderstood the status of the figures in the financial appendix. Thus John Pater argued, "It is made quite clear in the Appendix that all it does is to make a very tentative estimate of the cost of the service in the early years. But Mr. Robb-Smith seems to regard it as an authoritative final pronouncement on what the Government is prepared to spend on a comprehensive service".[102]

This view was central to the reply to Robb-Smith, which Michael Reed, Willink's private secretary, wrote on behalf of the Minister: "Mr. Willink feels that you may be reading into Appendix E rather more than is justifiable. The estimates in Appendix E are not a statement of what the Government are prepared to spend but an attempt to suggest what the actual costs might be in the early years of the service".[103]

It has been argued in this paper that Robb-Smith was prescient on the political dangers posed by the White Paper estimate. In contrast to the official view, this estimate was regularly taken as an "authoritative pronouncement" of what the Service ought to cost. The White Paper itself raised the issue of the variation in standards of provision. However, at the end of the first volume of his official history

[100] Bridgen and Lowe, op. cit., note 10 above, p. 43.

[101] PRO MH 77/84, A H T Robb-Smith to Henry Willink, 23 March 1944.

[102] PRO MH 77/84, J E Pater to H H George, 1 April 1944.

[103] PRO MH 77/84, M Reed to A H T Robb-Smith, 11 April 1944.

of the Service, Webster observed that "the financing of the health service made little allowance for the correction of inherited problems such as maldistribution and general deficiency in standards".[104] Arguably, early estimates of the likely cost of the NHS played a significant role in providing a questionable standard by which parsimony was regularly justified in the first decade of the Service.

[104] Webster, op. cit., note 2 above, p. 395.