1. Introduction and overview

Scope of this volume

1.1 Our collection of earlier volumes on animal health and human health (Volumes 3–6) looks at the sequence of events as BSE emerged and spread, and in particular at the measures taken to counter the threat it posed through the food chain to other animals and to humans. Volume 6, on human health, also reviews the action taken with rather less publicity to address hazards for those handling animals and their products – the ‘occupational risks’.

1.2 The present volume is concerned mainly with a third potential pathway for BSE infection, where measures were again taken without much attendant publicity – veterinary and human medicines using animal tissues. There was particular concern over those that were injected, since it was well-established that injection or application to open wounds was usually a swifter and more effective route for transmission of transmissible spongiform encephalopathy (TSE) agents than when they were eaten. For the sake of simplicity, it focuses on products using bovine materials, though there were parallel concerns about material from sheep and goats and some of the action taken also applied to this.

1.3 The volume then goes on to review action taken on cosmetics and toiletries, which shared features with topical medicines such as ointments and lotions but were not covered by the provisions of the Medicines Act.

1.4 It concludes by examining the events that surrounded the failure to prepare a comprehensive overview of all possible ways in which bovine material might present risks of transmitting the BSE agent – what came to be termed an audit of uses of bovine tissues. The charts we have constructed and annexed to Chapter 9 illustrate just how extensively bovine material was used, though this was not immediately appreciated. They also show the complex interaction of the many industries involved, the degree of recycling and the various ultimate disposal outlets.

1.5 Different regulatory regimes applied to these activities, which were the province of a variety of Government Departments and agencies and separate tiers of local government. A glance through the summaries in vol. 14: Responsibilities for Human and Animal Health will reveal how tenuous a relationship many of these approaches and provisions bore to one another.

Animal and human medicines

1.6 Chapters 2–7 describe the arrangements covering the safety of medicines and medical devices and tell the story of the response to BSE over the period 1987–96.
1.7 The UK pharmaceuticals industry is one of the largest in the world, accounting for around 12 per cent of the world export market and with 1997 exports worth £5.5 billion. There are over 400 pharmaceutical manufacturers and research organisations in the UK, although the market is dominated by multinationals such as Glaxo Wellcome, SmithKline Beecham and Zeneca.¹

1.8 Although the licensing system was rigorous and elaborate, the BSE measures that were taken under it to exclude doubtful raw materials were much less prescriptive and time specific than those on diseased animals and on animal products intended as food. Not until 1992 was the main action on medicines – compliance with guidance about permissible materials in products injected or applied to the skin and eyes – fully implemented on existing products.

1.9 Chapter 2 describes the parallel licensing regimes covering veterinary and human medicines, and how matters on medical devices were handled. To illustrate the range of items that had to be considered, the chapter annexes a table setting out information provided to us by the Medicines Control Agency (MCA) about the main pharmaceutical uses of bovine products. It also annexes a description of the process of making vaccines and allergens. These, as injected products, were regarded as being of particular concern. Although vaccines did not directly use bovine ingredients, bovine material was widely used in their production to grow cells and viruses. The material did not form part of the final product, but it was not known whether its use at the earlier stages could transmit infection.

1.10 The comprehensive regulation applied to medicinal products reflected the importance attached to ensuring their safety, quality and efficacy. However, unlike animal health and food safety legislation, these powers could not be used to require destruction at source of raw materials deemed unsafe for medicinal use.

1.11 With a view to keeping licensing decisions demonstrably untainted by other departmental and political considerations, the system rested heavily on recommendations from advisory committees of outside experts established under section 4 of the Medicines Act. Appeals could be made against individual decisions and legal challenges mounted. Before refusing a licence the Licensing Authority had to consult the expert committees. Fuller details of the legislative framework and institutional arrangements can be found in Volume 14.

1.12 After describing the system in place, the chapter looks at how well it was working at the time BSE emerged. It sets out findings about workload, administrative weaknesses and poor databases in the licensing divisions of both the Ministry of Agriculture, Fisheries and Food (MAFF) and the Department of Health (DH) identified in management reports by Mr Cunliffe and Dr Evans in 1987–88. The subsequent restructuring into Executive Agencies was intended to rectify some of these defects but itself caused some inevitable transitional turmoil. The chapter also explains briefly how UK licensing interacted with EU-wide² licensing of medicines and medical devices.

¹ Britain 1999, Office for National Statistics, p. 475
² The European Union (EU) came into existence on 1 November 1993 as a result of the Maastricht Treaty. It incorporated but did not replace the European Community. Throughout the volumes of this Report, the term EU is generally used for consistency’s sake (even if sometimes chronologically incorrect), except where specific reference is made to the functions conferred by the European Community Treaty or its legal effect.
1.13 Chapter 3 traces the action taken within MAFF to review and deal with the risks of BSE transmission through veterinary medicines up to January 1989. This was undertaken in a timely way but with little or no reference to parallel issues affecting human medicines. Only in January 1989 did the licensing officials in the two Departments meet to discuss a common policy and handling. The chapter traces MAFF’s independent preparation by July 1988 of draft guidelines and of advice on hormone products and its discussions with manufacturers of veterinary products.

1.14 Chapter 4 covers the corresponding period in DH. It reviews the state of knowledge there about BSE prior to the MAFF approach to the Chief Medical Officer (CMO), Sir Donald Acheson, in March 1988 and the action Medicines Division officials took between then and January 1989. It discusses the unfortunate misunderstanding in MAFF about the extent to which Medicines Division officials were actually considering the implications of the epidemic and notes the effect this had on the speed with which the Division came to grips with the issues.

1.15 Chapter 4 goes on to review the response of DH officials after the CMO was informed about BSE and expressed his concerns about biological materials used in human medicines, and the time that elapsed before advice was sought from the relevant section 4 advisory committee, the Committee on Safety of Medicines (CSM). It considers the interest taken by the Southwood Working Party in this issue and their correspondence with the CSM, as well as that Committee’s consideration of the implications of BSE for human medicines in November 1988.

1.16 It became plain to Medicines Division officials following that meeting that advice was needed from officials at MAFF about the veterinary aspects of the CSM’s proposals, for instance regarding its recommendation that material should be sourced from certified healthy herds. Towards the end of 1988 this prompted officials in the Division to contact their counterparts in MAFF.

1.17 Chapter 5 reviews the intense period of joint activity by MAFF and DH officials and their ad hoc and statutory advisory committees between January and March 1989. During this period the Southwood Report was finalised, discussed by Ministers and published. The Report’s findings and their reassuring interpretation for medicines licensing purposes were crucial to the action taken then and subsequently.

1.18 Joint guidelines were agreed about bovine material in injected veterinary and human medicinal products and those applied to open wounds and eyes. A questionnaire was drawn up to establish which existing products used bovine materials either as ingredients or in the process of manufacture. A formal statement approved by the CSM said that it agreed with the Southwood Report assessment that the risk of harm through medicines was remote and that the measures being taken were precautionary. In March, the guidelines and questionnaire were sent to veterinary and human medicines manufacturers under cover of a letter that relayed the line taken in the CSM statement and stated that the action was ‘purely precautionary’. The same phrase was used in a DH Parliamentary Answer.

1.19 The prime concern of DH officials and their expert advisory committees during this period was to avoid a ‘vaccine scare’ that might reduce take-up of vaccinations, with consequent deaths or serious illnesses. They were also concerned to avoid shortages of essential products. This dominated their reactions during the
final drafting stages of the *Southwood Report* and led them to object to the way it was proposed in that Report to treat the risk through medicines. They preferred a more reassuring approach. They postponed decisions about how to deal with existing licences and stocks of material pending receipt of the replies to the questionnaires. However, that was to prove a protracted process.

1.20 Chapter 6 carries the story forward from March 1989 to 1996 in both MAFF and DH. The licensing divisions were being restructured into two new Executive Agencies, the Medicines Control Agency (MCA) and Veterinary Medicines Directorate (VMD) from April 1989 onwards. At the same time they were engaging in the large-scale administrative exercise, spread over the next 18 months, of collecting 100 per cent of responses to the thousands of questionnaires and analysing those of concern.

1.21 Concerns about presenting a reassuring message continued during this period. We discuss how the public presentation that resulted then affected the perceptions of those following up the questionnaire responses.

1.22 We look at the part played in the story by the special expert advisory committee set up by the CSM – the BSE Working Group – and its interaction with officials. The Working Group had the remit of providing advice on BSE risk to all the section 4 advisory committees involved with human medicinal products. Its membership included the chairmen of all those committees as well as the Chairman of the Spongiform Encephalopathy Advisory Committee (SEAC), Dr Tyrrell.

1.23 The chapter reviews the action taken to ensure that newly manufactured products complied with the guidance and existing stocks were eliminated. Only a small number of products that gave cause for concern were identified from the responses to the questionnaires. These were products that used high-risk material from a UK source and were administered by a high-risk route. The main items were sutures and some vaccines. We review the action taken on each of these and what is known about when existing stocks of them were used up or withdrawn. A small number of items that had used foetal calf serum (FCS), bovine serum albumen (BSA) or other bovine material in the production process may have continued in use until 1991 or 1992, and some stocks of animal vaccines may not have been exhausted until even later.

1.24 Chapter 7 looks at the fate of the recommendation to investigate the infectivity of FCS and BSA contained in the Interim Report of the Tyrrell Consultative Committee on Research into Spongiform Encephalopathies (the *Tyrrell Report*) in June 1989. The previous chapter indicates that those taking decisions on vaccines did not have firm evidence on whether BSE could be transmitted through these media. While MAFF put the work in hand through the NPU, DH took the view that the work was no longer necessary because of the steps already being taken by the pharmaceutical industry.

**Cosmetics**

1.25 Chapter 8 looks at how cosmetics containing bovine material were identified as a potential pathway for the BSE agent and the way that was followed up.
The chapter starts by describing the legislative framework under which the safety of cosmetics was regulated, and under which legislative measures to deal with any risk posed by BSE would have been taken. This framework was different again from that governing food and medicines safety and was implemented by a different Department: the Department of Trade and Industry (DTI).

We describe the different products involved and the action taken to deal with them. Collagen used for cosmetic purposes initially raised concern but was deemed to be adequately covered by Medicines Act provisions. Other widely used ingredients, which were considered intermittently, were tallow and gelatin. General advice from both SEAC and the EU was followed on these products.

The main items of concern were ‘exotic’ products such as anti-ageing creams, some of which it was thought might use high-risk materials such as brain, thymus and placenta.

We review the action taken by DTI when this risk was first drawn to its attention in early 1990. Guidance was promptly issued to manufacturers who were members of the Cosmetics, Toiletries and Perfumeries Association (CTPA), in accordance with advice that had been sought from DH.

We also consider the handling of the BSE risk associated with cosmetics thereafter. SEAC proposed in 1990 that revised guidance should be issued, but in the event this was not done until 1994. The chapter identifies a number of factors that led to this delay, including a confusion of roles between DTI, DH and the CTPA, and entanglement with the slow processes of developing EU-wide guidance.

Audit of uses of bovine tissues

Our final chapter in this volume, Chapter 9, looks at an important issue that bore on the whole way BSE was handled. This was the absence of a comprehensive overview of the uses made of bovine products to ensure all were being adequately addressed. A recommendation on this had been made in the Tyrrell Report, coupled with its recommendation about examination of cosmetics, which it saw as an example of a potential pathway outside the range of items that had to date been considered and addressed in order to contain this new animal disease.

Finding out where parts of the cow carcass went and what they were used for was, on the face of it, an obvious and essential initial stage in developing a comprehensive and consistent response to the risk posed by BSE. It involved tracing bovine products through the various stages of their sale, processing, distribution and ultimate use, for example in food, medicines or cosmetics, and also identifying the occupational exposure that might be associated with each.

Some of the matters discussed in this volume – the time taken to phase out suspect medicinal products, the inconsistent treatment of intestines for food use and for pharmaceutical use, and the line taken on testing infectivity of FCS and BSA – might have been approached differently had they been identified in an audit of this sort. It would have ensured that all aspects were being covered, and that those concerned were informed about the risks in relation to their responsibilities.
would also have provided a means of checking progress and consistency. The same
could be said of other matters described in other volumes, such as the absence of a
coherent approach to waste disposal and the approach to occupational advice.

1.34 This chapter describes how the usefulness of an overview of all the uses made
of bovine products had been identified, but not followed up, by the Southwood
Working Party. Having been included in the *Tyrrell Report* in June 1989, it was
subsequently endorsed by the MAFF Minister, Mr John Gummer, who told
Parliament that it was going ahead. In fact, it became lost in the long grass. It was
revived again in January 1995 and eventually put in hand, at least partially, in June
1996.

**Overview and general findings**

1.35 At the end of each of the Chapters 3–9 we have discussed the adequacy of the
response to the events covered in that chapter, and identified where we saw
shortcomings. As in the rest of this Report, we do not intend blame to be attributed
to specific individuals save where we have explicitly stated that they should have
acted differently.

1.36 A number of general features of what occurred struck us as meriting further
consideration and as giving rise to lessons for the future, which we discuss in vol.
1: *Findings and Conclusions*. We have recorded these at the end of Chapters 5–9,
having reviewed respectively medicines, cosmetics and the audit of uses of bovine
material.

1.37 Much of what was done reflects credit on the foresight and hard work of those
faced with this baffling new disease and with difficult decisions about a
proportionate response to the risks it presented to human health. Where things were
less well done, common threads were poor communication between Departments,
blurred perceptions of risk created by reassuring briefing, confusion between risk
assessment and policy decisions, problems over where the lead lay when issues
spanned departmental interests, and the management problems of seeking to operate
at speed with limited resources within different legislative frameworks and
enforcement systems. They were not unique to this sector of the general field of
action in the face of this new and deadly disease. In Volume 1 we review that overall
scene and the lessons to be learnt from where matters were handled well and where
they were not.