

SPECIAL FEATURE

A mobile dental unit from 70 years ago, illustrated

By Malcolm Bishop¹

Summary
A prominent proposal in the recently published Government Department of Health and Social Care Policy paper for England: ‘Faster, simpler and fairer: our plan to recover and reform NHS dentistry’¹ is for the increased use of mobile dental units, two examples of which were described in a previous *BDJ*.^{2,3} Seventy years ago just such a unit was described, and illustrated in a village setting, with a detailed cutaway drawing by the very accomplished draftsman Leslie Ashwell Wood (1903–1973) in the centre spread of the *Eagle* comic of 5 March 1954.

Victoria Atkins, Secretary of State for Health and Social Care stated:

‘I am delighted to announce this plan to make dental services faster, simpler and fairer. It aims to improve dental services by making them:

- Fairer, particularly for our rural and coastal communities, by introducing new dental vans to bring dental care to our most isolated communities [...]

Our plan has three components.
1. In 2024, we will significantly expand access so that everyone who needs to see a dentist will be able to. [...] We are introducing mobile dental vans to take dentists and surgeries to isolated under-served communities.’

A promise repeated by Jason Wong, Chief Dental Officer, and then again in the Summary:

‘...Deploy dental vans in under-served areas while longer-term solutions are established.

We know that there are some areas where patients struggle more to access the NHS dental care they need. We want to ensure that these patients can see an NHS dentist when they need to. To achieve this, we will deploy dental vans offering appointments to patients in targeted rural and coastal communities, starting later this year in the most under-served areas, while longer-term arrangements are set up.

These dental vans will provide care to patients in need, and patients will be able to



Fig. 1 *Eagle* comic, 5 March 1954

have dental examinations and straightforward treatments, such as fillings. This builds upon the early successes with the use of mobile vans to boost access in Cornwall and other areas. The appointments offered in vans will rapidly enable more patients who have had to go without NHS care to have faster access to the treatment they urgently need.’

An example of such a mobile van is illustrated in the document, attractively positioned in a fishing harbour situation with a Falmouth registered boat behind it.

It so happens that 70 years ago just such a unit was described, and illustrated in a village setting, with a detailed cutaway drawing, by the remarkable artist Leslie Ashwell Wood (1903–1973) in the centre spread of the *Eagle* comic of 5 March 1954 (Figures 1 and 2).

The legend provides a description of the use: ‘Three of these mobile dental clinics, combining a dental surgery and laboratory on wheels, have been brought into service by the Kent County Council for use in areas where village schools are remote from the usual services in towns.

The clinics cater for children of all ages and, in addition, for nursing mothers, who receive dental services free of charge.

A detachable “mechanical horse” (or prime mover), which is a 28 h.p. Austin 3–5 ton articulated short chassis, moves all three clinics about the county in turn, from village to village.

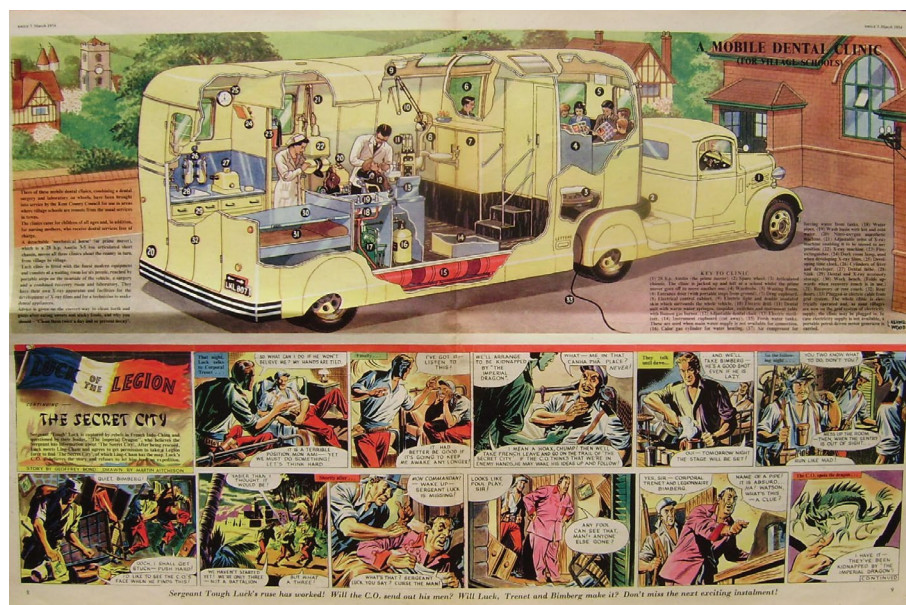


Fig. 2 The centre pages of the *Eagle* on 5 March 1954

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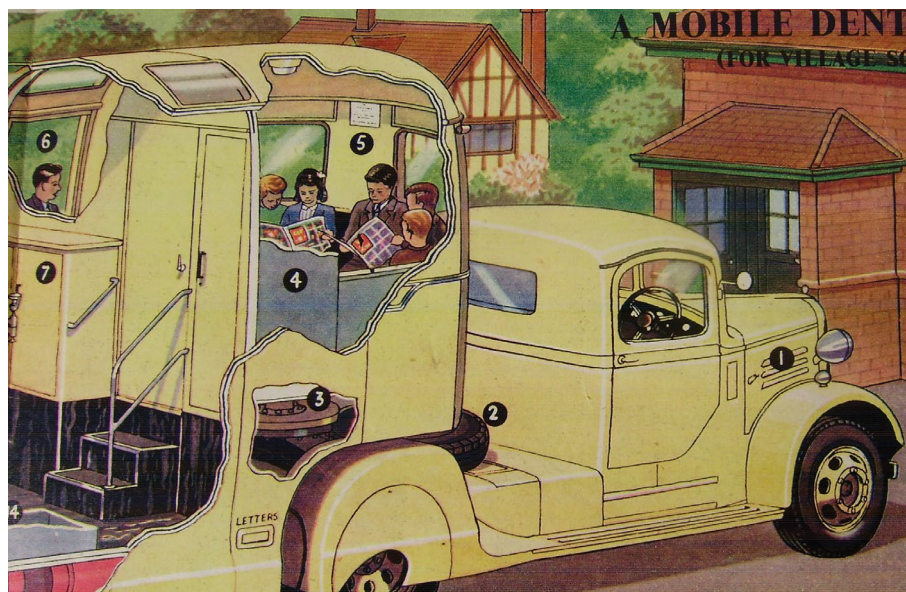


Fig. 3 The entrance and waiting area of the 1950s mobile dental van

Each clinic is fitted with the finest modern equipment and consists of a waiting room for six people, reached by portable steps on the nearside of the vehicle, a surgery and a combined recovery room and laboratory. They have their own X-ray apparatus and facilities for the development of X-ray films and for a technician to make dental appliances.

Advice is given on the correct way to clean teeth and gums after eating sweets and sticky foods, and why you should – “Clean them twice a day and so prevent decay”

Each section of the unit is annotated in detail – the Reception area/waiting room, the Surgery or Treatment area, and the Recovery area/stores.

The entrance and waiting area

The entrance and waiting area, with two young people reading the *Eagle*, are shown in Figure 3, with numbers corresponding to the following:

(1) 28h.p. Austin (the prime mover). (2) Spare wheel. (3) Articulated chassis. The clinic is jacked up and left at a school whilst the prime mover goes off to move another one. (4) Wardrobe. (5) Waiting Room. (6) Entrance door (with portable steps from ground). (33) Plugged-in electric cable from grid services. The whole clinic is electrically operated and, as most villages are now on the grid system of electricity supply, the clinic may be plugged in. In case electricity supply is not available, a portable petrol-driven motor generator is carried.

The surgery

The surgery is shown in Figure 4 with the numbers corresponding to the following:

(7) Drug Cupboard. (8) Electrical control cabinet. (9) Electric light and double insulated skin which surrounds the whole vehicle. (10) Electric Drill. (11) Dental unit with warm water syringes, cuspidor, switches and instrument table with Bunsen gas burner. (12) Adjustable dental chair. (13) Electric steriliser. (14) Instrument cupboard (cut away). (15) Fresh water tanks. These are used when main water supply is not available for connection. (16) Calor gas cylinder for water heating. (17) Air compressor for forcing water from tanks. (18) Water pipes. (19) Wash basin with hot and cold water. (20) Nitro-oxygen anaesthetic machine. (21) Adjustable arm of

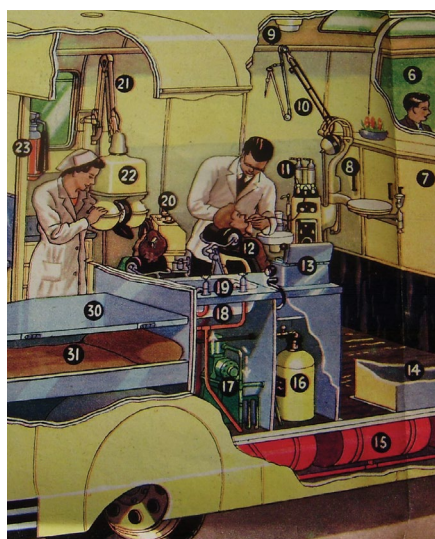


Fig. 4 The surgery of the 1950s mobile dental van

X-ray machine enabling it to be moved to any position. (21) X-ray machine. (23) Fire extinguisher

The recovery room and laboratory

The recovery room and laboratory is shown in Figure 5 with numbers corresponding to the following:

(24) Dark room lamp, used when developing X-ray films. (25) Developer time check. (26) Cylinders of fixer and developer. (27) Dental lathe. (28) Sink. (29) Dental and X-ray accessory storage. (30) Work bench (Folds upwards when recovery couch is in use). (31) Recovery or rest couch. (32) Rear doors.

Feedback, other illustrations, and summary

A pleasant bit of feedback came in a letter from J. Stevenson (age 9), Hythe, Kent, published in the 26 March issue under the heading Dan Dare Dentist:

‘I was very interested to see the picture of the Mobile Dental Unit in *EAGLE*. I received treatment at one last year. It was identical with the one shown in the picture, and the dentist called it his spaceship. The dentist was very nice and called his mouth wash syringe his space pistol.’

Other illustrations of early mobile dental units are available from military museum sources,^{4,5} and descriptions of the specialist circumstances of the units on board naval vessels can be found in the strongly recommended *History of Dentistry in the Royal Navy 1905-1964* by Nick Daws and JV Holland,⁶ and in the Oral History recording by Peter Long, describing his

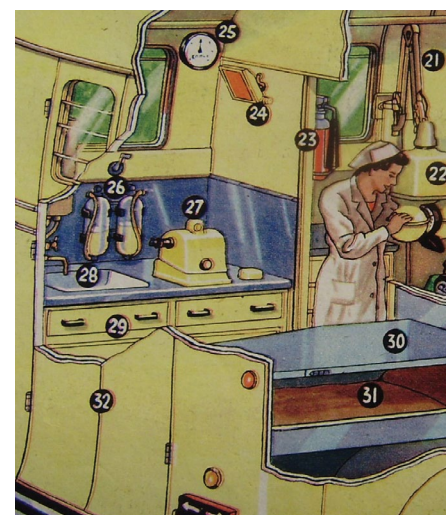


Fig. 5 The lab and recovery areas in the mobile dental van

« experience in National Service.

In the *BDJ* in 2007, life in a mobile dental laboratory during World War II was described.⁷

Mobile units have problems in dealing with weight and vibration during travel (and in naval ships during the firing of the guns), and a sign on the back shows that the unit was limited to 20 miles an hour when moving on the road. There are also potential problems with radiation protection, clinical waste disposal, and toxic waste management, and it is noticeable that these concerns are not addressed in the *Eagle* piece – especially radiation protection, where the nurse/DSA is shown positioning the cumbersome X-ray set of the time.

The illustration is nevertheless a valuable record of the state of the dental services just nine years after the end of the War, and six years after the inception of the dental NHS. It reveals a forward-looking and positive attitude, and also at the time, brought modern dentistry to the nearly one million subscribers to *Eagle*, and its young readers. A copy of the issue is now in the BDA Library and Museum. ■

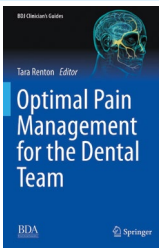
Acknowledgements: Thanks especially to the Dan Dare Corporation Limited, and to Helen Nield and Rachel Bairsto.

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2. New mobile dental service for under-served communities in Hampshire and Isle of Wight. *Br Dent J* 2024; **236**: 371.
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BOOK REVIEW



OPTIMAL PAIN MANAGEMENT FOR THE DENTAL TEAM

Editor: Tara Renton;
2022; Springer Cham; £47.99 (eBook); pp. 163;
ISBN: 978-3-030-86634-1

This textbook draws on the expert input of many well-known names in their respective fields, to curate what surely is an essential read for dental undergraduates, and a useful refresher for practising clinicians. Pain management is the most fundamental component of holistic patient care, and unfortunately is all too often overlooked.

The textbook comprises 12 chapters, each focusing on a subspecialist area pertinent to pain. A crash course on pain physiology opens the text, followed by a revision of the unique properties of dental pulp and dentine. Readers are reminded of the inextricable interplay between the two entities both embryologically and functionally, and about the unique nociceptive and proprioceptive properties of the dentition.

Two chapters are devoted to the topic of orofacial pain and headaches, drawing on current recommendations from the International Classification of Orofacial Pain (ICOP). Updated pain terminologies, including ‘nociceptive’ (inflammatory) and ‘nociplastic’ (neuropathic), feature throughout the text.

The role of psychological interventions in the management of orofacial pain syndromes and dental anxiety and phobia are covered in depth. Established and emerging techniques such as cognitive behavioural therapy (CBT), acceptance and commitment therapy (ACT) and mindfulness-based interventions (MBI) are recommended as part of a multidisciplinary approach to pain and anxiety management in a dental context.

All clinicians will encounter patients from time to time for whom behavioural management strategies alone or in combination with psychological interventions are simply not sufficient to permit delivery of successful dental treatment. Conscious sedation is as relevant as ever, and in an age where half of the UK population reports some degree of dental anxiety, it seems only right that these techniques are considered an essential component of the treatment armamentarium. Questionnaires such as the Indicator of Sedation Need (IOSN) and the Modified Dental Anxiety Scale (MDAS) serve as useful selection tools that may aid treatment planning.

Recent advances in local anaesthesia techniques are discussed, with specific attention given to the use of 4% articaine for mandibular infiltration anaesthesia as an alternative to the traditional inferior alveolar nerve block. The recommendation to shift away from block anaesthesia altogether is sure to divide opinion.

Interestingly, the analgesic combination of 1 g paracetamol and 400 mg ibuprofen remains the mainstay of optimum peri- and post-operative pain management, topping the Oxford league table of analgesic efficacy. It's good news for coffee lovers, as an average cup of coffee, estimated to contain 90 mg caffeine, can act as an effective analgesic adjuvant.

Last but not least, readers are treated to an informative chapter on rhinosinusitis and its relevance to dentistry. Appropriate use of 3D imaging is discussed, and the text is complemented by CT slices and endoscopy imaging. Clinicians involved in dental implant surgery will be comforted to know that incidental antral mucoceles and mucosal thickening have no bearing on outcomes in implant therapy.

In summary, this textbook is a comprehensive compilation of high-quality reading material supported by current best evidence, and should be on the shelves of all dentists involved in delivery of clinical care.

Laura O'Sullivan ✦