

We appreciate, however, that there are occasions when re-applications of our products are necessary; for example, when lice and eggs have been accidentally missed by the first application, or when reinfection has occurred. The information supplied with our head louse treatments states that they should not be used for more than once a week and for not more than three consecutive weeks.

If a health-care professional recommends two applications of a head louse lotion 7 days apart, in accordance with the *British National Formulary* and the Public Health Medicine Environment Group advice, then this recommendation would not lead to use of our products in excess of that listed on their labelling and patient information leaflets.

**Philip Davies**, Senior Manager  
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Dear Editor, Thank you for giving Warner Lambert the opportunity to reply to Marion Adair's letter regarding treatment instructions for head lice treatments.

I would firstly like to say that I agree with the content of your original article. As a company, Warner Lambert works closely with Dr Aston, one of the authors of the Public Health Medicine Environmental Group's (PHMEG) report (the "Stafford Report"), and we use this report as the basis for all our head lice recommendations.

Ms Adair's point refers to the apparently conflicting information provided on treatment duration. She is correct in stating that the *British National Formulary (BNF)* makes a general statement about contact time, ie "A contact time of 12 hours or overnight is recommended for lotions and liquids". This is intended to be generic advice, and since the action of different types of formulation varies, we would strongly recommend that the manufacturers' instructions are closely followed for optimum results. After the general section, the *BNF* (March 2000) goes on to give product-specific administration details including contact time; the entry for *Lyclear Creme Rinse* reads "Apply to clean, damp hair and rinse after 10 minutes".

The dosage recommendations on the pack are those that are on the product licence and these have been developed based on safety and efficacy data for that particular product. We would therefore not recommend that a health-care professional advise a different (unlicensed) contact time, although a doctor can advise use of a product outside of its licence.

*Lyclear Creme Rinse* has a licensed application time of 10 minutes and safety and efficacy data have shown that this is sufficient for successful treatment. We are aware that in some cases, although a single application kills nymphs and adults, some eggs may survive this initial treatment. In these cases we advocate that if further live lice are seen during the 7 days following treatment, a second application is used to kill any newly hatched nymphs and our Patient Information Leaflet has been updated to reflect this new advice.

We share Ms Adair's concerns that not all professionals give out the same information. We would hope that the PHMEG guidelines form the basis of all advice and that these are used in association with the licensed details for individual products.

**Caroline Rutter**  
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## Managing the head louse problem: two different views

### 1. In support of the Bug Busting Programme

by **Joanna Ibarra**, Co-ordinator, Community Hygiene Concern

Dear Editor, The leader on head lice in Vol 9 No 6<sup>1</sup> inadvertently suggests that the Bug Busting programme diametrically opposes the use of insecticides for treatment. This is not so. Bug Busting remains first and foremost, as it was piloted in 1989, a co-ordinated, detection programme<sup>2,3</sup>. Following this, we originally advised an overnight application of malathion lotion for the treatment of cases verified by the identification of a louse. In 1989 this was the most effective choice because numerous reports from the field testified to the poor performance of the alternative carbaryl, also more toxic than malathion. Pyrethroids (phenothrin and permethrin) were introduced in 1990. By 1995, when Community Hygiene Concern (CHC) had refined the Bug Busting method into a remedy presented in a pilot kit<sup>4</sup>, both anecdotal (eg up to 80 calls a week to our Help Line describing product failure with all four recommended compounds) and direct evidence of resistance<sup>5</sup> was available. Today, CHC, the Department of Health (DoH)<sup>6,7</sup>, the Royal College of Nursing (RCN)<sup>8</sup> and the Community Practitioners' and Health Visitors' Association<sup>9</sup> aim to offer an informed choice, rather than issue decrees, on treatment options, with the emphasis on informed. This is set out in the new DoH leaflet *The Detection and Treatment of Head Lice* as a choice between licensed medication (lotions or creme rinse containing insecticide), with follow-up to check its efficacy, or the Bug Busting method, with commitment to the full instructions, using the right comb<sup>6</sup>.

The DoH leaflet warns those choosing insecticides to check 3-5 days after use for lice hatching from unsuccessfully treated eggs<sup>6</sup>. To make this check it is crucial that the detection method reliably shows up a low level of first stage lice, which are only 1mm long. We find that fine-tooth combing dry or damp hair is deceptive in these circumstances, producing false negatives, whereas the Bug Busting method provides an efficient check. Pivotal to the Bug Busting method is the knowledge that thoroughly wet lice stay still, and, unlike dry or damp lice, do not move away from disturbance, thus avoiding detection<sup>10</sup>. The 1995 incorporation of conditioner into the method prolongs the soaking, making both hair and lice more manageable<sup>4,11</sup>. Referring to the authors of the Stafford Group Report<sup>12</sup>, your leader<sup>1</sup> states that "Dr Aston and his colleagues found that many cases of head lice are misdiagnosed due to psychogenic itch". However, study of the Report itself reveals that it is presented without references, so this statement is not supported with substantiating details<sup>12</sup>. Did these cases pass the Bug Busting test, for instance?

We have just tested the effect of providing the 1999 model of the Bug Buster Kit, which contains an improved comb, to all families of pupils at a primary school (450 children), encouraging them to use it for detection purposes on Bug Busting Day (BBD) and giving them the choice of using it to treat the diagnosed cases.

Our results at December 1999 were as follows. 450 questionnaires were distributed with Bug Buster Kits to pupils. There was a 41% return of questionnaires (186). On the 186 completed questionnaires, 186 (100%) parents said they took part in Bug Busting on the October 1999 BBD. 119 (64%) parents found evidence of lice in their families using the Bug Buster Kit. They identified 133 pupil cases; this equals a 29% prevalence rate amongst pupils. 96% of families chose to treat identified cases using the Bug Buster Kit.

There was one negative comment in the comments section and

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127 positive comments. Of those who found lice, two types of comment regularly appear: astonishment at the detection of a low level of asymptomatic lice, and relief at the ability of the Kit to clear long-standing infestation where insecticides had failed.

Numerous comments were made about the failure and cost of insecticide medication. These included comments from 11 parents who already had a Kit and commented that they would not use anything else for head lice; 22 parents who commented that the Kit should be available in all schools; and eight parents who commented the Kit should be available on GP prescription. The head teachers and staff were very pleased with the outcome because complaints about lice (previously frequent) ceased to the end of term<sup>13</sup>.

In the 1970s the work of "Paddy" Donaldson, then Medical Officer of Health in Teesside, established that targeting health education to the community at risk and concentrating a control campaign into a short period of maximum effort is the most economically effective approach<sup>14</sup>. Monitoring implementation of the Bug Busting programme has reinforced his conclusions<sup>15</sup>. Therefore the DoH leaflet suggests: "Taking part on 'Bug Busting' days can help to prevent lice circulating, ie if all cases are identified and treated successfully at the same time there will be few opportunities for lice to circulate amongst children and their families."<sup>6</sup> The Stafford Group recommends that schools should not take part in mass action, including wet combing campaigns, but the evidence base on which this is founded is not clear<sup>12</sup>.

CHC agrees with the Stafford Group that most "alert notes" are unhelpful. CHC finds that when they fail to designate a date on which to check, and/or offer scant or erroneous information on how best to check, their effect is negative. However, we do not find the Stafford Group's proposed alternative of instructing families with lice to trace and warn their own contacts is workable.

The *Prescribing Nurse Bulletin* on head lice, prepared in March 1999, provides a patient information leaflet called *Head Lice - The Facts of Lice* for photocopying, containing a contact list for affected families to tick<sup>16</sup>. Some health authorities have issued this list with a Stafford Group-inspired policy statement to local schools. As recipient head teachers have been quick to point out, parents are requested on the contact list to inform the school if they find their child has lice, but head teachers may only inform the school nurse of each reported incident. Echoing the conclusion of your leader<sup>1</sup>, they ask: How will the school nurses cope? Are the Primary Care Groups/Trusts and Health authorities giving over substantial "new" funding to resourcing the implementation of this policy? If not, at best it will consist of nothing more than nitpicking, at worst it will smack of "blaming the victim".

In addition, the Stafford Group's treatment recommendation of two lotion applications a week apart (Day 1 and Day 8)<sup>12</sup>, adopted by the *Prescribing Nurse Bulletin*<sup>16</sup>, will double NHS prescription costs and be charged to the Primary Care Group/ Trust budgets. The protocol does not mention a check for hatchlings at Days 3-5, the presence of which would indicate the futility of making a second application of the same insecticide, and prevent the spread of lice, some of which will be mature enough to leave the head where they hatch at six days<sup>17,18</sup>.

Since Medical Entomology Centre employees introduced the advice that the two lotion applications should be made a week apart<sup>19</sup>, which was adopted by the *British National Formulary* (BNF) in 1991, no scientifically validated evidence to support the effectiveness of the régime has been produced. In view of this, it is questionable that the Cochrane Review<sup>20</sup> should endorse the régime.

The independent London School of Hygiene & Tropical Medicine (LSHTM) evaluation of treatments, including the Bug Buster Kit, in a randomised, controlled trial, has been welcomed by the DoH, RCN and the BNF. It will not be possible to test the Stafford Group's

treatment régime because it disregards the manufacturers' instructions: all lotions, liquids, the creme rinse and new mousse formulations stipulate that a single application is sufficient. It is felt that technically double dosing is misuse of a medical product and the LSHTM could be liable to prosecution if there were to be an adverse reaction. Also, in their 1999 presentation, most lotions containing malathion, carbaryl and phenothrin warn that no more than three consecutive applications a week apart should be made. This suggests that repeated use of a combination of these insecticides is highly undesirable. Meanwhile the Stafford Group recommends six consecutive applications a week apart (two applications of a product from each insecticide group) for persistent cases.

CHC receives constant calls from distressed nurses obliged by health authority policy makers to follow the Stafford Group régime against their better judgement. Nurses want to encourage parents to learn how to Bug Bust, introducing parental self-reliance<sup>21</sup>, and leave nursing time for health issues where their input is indispensable. Policy-makers should check back to source that their evidence base is robust and consult with those who have experience of working to combat the head louse locally.

**Joanna Ibarra**

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We showed Joanna Ibarra's letter to Dr Robert Aston, a co-author of the Stafford Report, and his reply appears below.

## 2. The Stafford Report: a structured, professional approach

by Dr Robert Aston,

Consultant in Communicable Disease Control

Dear Editor, Joanna Ibarra criticises the Stafford Report<sup>1</sup> on the grounds that it is not referenced. The Stafford Report, and those summaries of it in reputable publications<sup>2,3</sup>, make it clear that it represents "good practice" rather than being "evidence-based".

Recognising that it is not possible to present a rigorous, evidence-based approach, the authors decided to avoid presenting a pseudo-scientific paper. It is unfortunately all too easy to dress up publications in scientific garb with multiple references so that they look authoritative when in fact the "evidence" referred to does not stand up to scrutiny.

Joanna Ibarra's letter, for example, has 21 references. Nearly half (ten) of these are her own work or published by her own organisation, two are "position statements", and one is a Department of Health leaflet. Of the remainder, six favour orthodox insecticidal treatment (although one dates from before "Bug Busting"), and one describes how "nurses want to encourage parents how to 'Bug Bust' ". The remaining one (reference 11) is a good example of what looks like an authoritative report, but which is worthless as evidence. It is in fact what appears to be three case reports (though "patient 5" is referred to) by one observer of Ibarra at work with her own method.

Public and professionals frequently confuse combing as a detection method with combing as a claimed method of treatment. Finding a living louse by detection combing is an essential part of diagnosis<sup>1</sup>, though there is no good scientific evidence that wet combing, with or without conditioner, is more effective than damp combing, or even dry combing.

Community Hygiene Concern promotes "Bug Busting" not only as wet detection combing with conditioner, but as a remedy for head louse infection, and as a way of eradicating head louse infections in the community. Its philosophy is antagonistic to insecticidal therapy, sometimes even to the degree of appearing alarmist, the following being two of many examples:

"The other headlouse pesticides are even less safe than Malathion. So the only way to avoid these problems is to fine comb" and "If families do not have the opportunity to learn to cope with head lice without pesticides, there may be serious damage to their health"<sup>17,18</sup>.

There is evidence supporting conventional treatment using approved insecticides. Recently reputable literature reviews and evidence assessments have been clear that there is evidence for their effectiveness and safety, and equally clear that there is no published evidence to support Bug Busting<sup>5-14</sup>. The first properly controlled study comparing Bug Busting with insecticidal treatment has just been accepted for publication by a reputable journal and shows the effectiveness of insecticide at about twice that of Bug Busting (approximately 80% against 40%)<sup>15</sup>.

Very striking, and in complete contrast, is the absence of any authoritative scientific evidence base that Bug Busting actually works. Anecdotal reports simply are not good enough; there are in my experience at least as many anecdotal reports of the failure of the method as of its success. No more convincing is the report in Ibarra's letter of an apparently unpublished, un-controlled, un-peer reviewed study of the method applied in one school in 1999, for which there appear to be no outcome measures for effectiveness.

The method is very labour intensive and time-consuming and requires great dedication. Even if it works for individual highly-motivated families, it seems unrealistic to expect it to control head louse infection at the population level. Indeed, there is some evidence that the promotion of physical removal by wet combing at the expense of insecticidal treatments may increase the prevalence of infection in the population<sup>4</sup>.

Nor is it good enough to promote Bug Busting on anecdotal or inadequate studies alone, claiming that it does not have rigorous scientific support simply because "nobody has done the studies yet". If one quotes anecdotal "evidence" for Bug Busting as justification for what otherwise would seem to be a belief that the system works and only needs to be proved to do so, then it is important to recognise that there is at least as much anecdotal "evidence" against the system.

Incidentally I myself am a "policy maker" who not only "consults with those who have experience of working to combat the head louse locally" (Joanna Ibarra's letter), but also does so himself. I have had increasing reports from health districts which have discovered, as did my own, that Bug Busting is inadequate and inappropriate for many people.

It used to be that I had to explain (eg in presentations around the country) my reservations about the promotion of this system in the face of a barrage of anecdotal support for it by school nurses, practice nurses, and other colleagues. Increasingly I am now being told that I do not need to justify my scepticism – they themselves have concluded that physical removal methods (at least for head louse control in populations) simply do not work, or are unrealistic, even when done strictly according to the protocol and with professional support.

Joanna Ibarra puts forward the need for informed choice. The main issue which concerns me is not at all about whether parents should be able to follow physical removal systems if they prefer. It is about the much wider issue (and of course not restricted to head louse infection) of the professional promotion of a claimed "treatment" which has no validated evidence of efficacy, effectiveness, or safety.

For "Bug Busting" it is especially the last two which concern me. Even if there were (and there is not) adequate evidence of efficacy for dedicated individuals or families, this is not in itself a justification for recommending the system as a method of head louse control in the population. If professionals promote a "treatment" which does not work, they may increase choice, but it will be a misinformed choice.

One of the arguments used by those supporting and promoting physical removal is the alleged toxicity of the chemical agents. In passing, one might be forgiven for wondering at the reason for their insistence on the use of the word "pesticides" with its clearly alarmist overtones, especially in the context of their equal insistence on the need to destigmatise head louse management.

In fact there is good evidence for the safety of chemicals when used correctly<sup>4,5,8-10,12</sup>. There is, however, no evidence (that I am aware of) for the safety of conditioner used intensively in this process. "Bug Busting", which is promoted as a safe and "natural" way of avoiding toxic and presumably "unnatural" chemical agents, relies on the use of large quantities of conditioner applied over considerable periods of time to a child's head.

During the process, a fine toothed comb is repeatedly run over the scalp, with a possible risk of scarification and increased absorption of the chemicals in the conditioner. The process is repeated several times over two weeks and may need to be continued beyond that if lice continue to be found.

A glance at the labels on bottles of conditioner suggests that the ingredients are hardly "natural" (even if one accepts the current