GETTING AHEAD OF HEAD LICE: A STUDY INTO HEAD LICE MANAGEMENT IN THE UK

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This report was prepared with the support of Ian Burgess, Director of the Medical Entomology Centre; community pharmacist, Mary Morris and international head lice expert Kim Larsen

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OVERVIEW

This report has been commissioned to provide a snapshot of current thinking on head lice management in the UK and to investigate whether best practice and the latest advice is being adopted. The report reviews current management and treatment options as well as highlighting attitudes and behaviours of consumers. It reviews the impact of recent head lice research and guidance and assesses whether more needs to be done to publicise their recommendations.

The research for this report has been widespread and encompasses health professionals most concerned with the diagnosis and treatment of head lice as well as schools, consumer groups and parents. Individual interviews have also taken place with people who have a wide experience of dealing with head lice.

The Public Health Medicine Environmental Group (PHMEG) is the national professional organisation for Consultants in Communicable Disease Control in Great Britain and Ireland.

This group commissioned three members to produce guidance on head lice control, known as the Stafford report, originally published in 1997, updated in 2002 and 2008. One of the main aims of this investigation was to see how widespread the knowledge of the Stafford report is and whether it is widely used.

Finally, the research for this report looked at the gaps in the chains of responsibility for dealing with head lice and the flow of information through to parents.

EXPERT PANEL

Christine Brown

Christine Brown is a Nurse Consultant and has, in the past, advised Primary Care Trusts in relation to policy for dealing with head lice. She has been involved with clinical trial work. As a school nurse she worked within schools, inspecting and advising parents and schools on head lice treatment and management. She joined the Medical Entomology Centre in Cambridge in 1985 to liaise between scientists carrying out research into head lice and other insect pests, and the community health sector of the NHS, and she has published several papers on head lice in the medical press.

Ian F. Burgess

Ian Burgess, director of the Medical Entomology Centre has been researching into head lice for more than 20 years, having studied medical parasitology at the London School of Hygiene and Tropical Medicine. The Medical Entomology Centre has conducted numerous head lice clinical trials and published many papers on this subject. Ian Burgess was involved with the Stafford report as an advisor.

Mary Morris

Mary Morris runs an independent family-owned pharmacy company established in 1995 and based in Northamptonshire. She operates two pharmacies: Wootton Pharmacy and Tudor Pharmacy in Wootton Fields, where she employs experienced pharmacists and professionally qualified staff offering a friendly and efficient range of services. Mary was involved in an initiative 'Once A Week, Take A Peek' led by Wootton Primary School in Northampton designed to encourage parents to check their children's hair for head lice on a regular, weekly basis.

Kim Søholt Larsen

Kim Larsen is based in Denmark and has worked for ten years as research entomologist specialising in blood sucking insects and mites. In 1998 he established KSL Consulting, a company combining science, technology and practical experience working closely with national and international organisations with a focus on ectoparasites of veterinary and medical importance. Over the years he has published a number of scientific, educational and popular science papers.

FOREWORD

Christine Brown

I have always been intrigued as to why something as small as a head louse causes so much social havoc, anger and frustration. Given the correct information, families are more than capable of eliminating head lice. The research for this report indicates the lack of up-to-date knowledge those who advise families have. This poses the question – "How are they expected to educate the community without receiving adequate training themselves?" The aim of this report was to investigate the gaps in communication and knowledge and see how they might be closed, and how best to target the various groups so that best practice can be instigated throughout the country rather than the current piecemeal system.

Ian F. Burgess

This report reviews many aspects of the management of head lice from the point of view of health professionals and consumers. The findings and recommendations are intended to promote national and international best practice to serve as the basis for local policies and protocols.

Mary Morris

I regularly see parents who have been affected by head lice and are seeking treatment advice. Often they do not know what they are looking for and many are embarrassed. Some are frustrated because their child is being regularly re-infested. This report seeks to show how health professionals can highlight the ongoing problem and work together to provide parents with reliable, accurate up to date information.

Kim Søholt Larsen

I have been researching head lice for over 20 years and am aware of the potential pitfalls caused by misinformation. I'm particularly interested in addressing whether it is possible to create a modern standard in head lice therapy and whether we can share best practice internationally. It is important for up-to-date, accurate information on head lice to be shared by professionals like pharmacy personnel, school nurses, the industry, GPs and dermatologists and health authorities, but these recommendations are also important for the general consumer. The question is how can we use the insights from this report to encourage head lice management and how can we share best practice internationally? Let the debate begin.

INTRODUCTION

Head lice occur throughout the world and know no social boundaries. Adults can become infested but head lice are more common amongst children from pre-school to eleven years of age who have greater levels of physical contact with peers. Between 10 and 20 per cent of children in the UK have head lice at any one time[1].

Persistent head lice can result in a real loss of health quality and self-esteem. Adverse health effects can derive from head lice including bacterial infections as a result of scratching[2,3]. Loss of sleep and concentration may affect a child's ability to progress in education. The unsightly appearance of eggshells attached to the hair can also lead to bullying and stigmatization.

In the UK routine school inspections first began as a result of the poor state of health of recruits to the armed forces in the early 1900s. School inspections became the norm once a state school system was in place and with the passing of the 1944 Education Act, inspections were held once per term.

During the days of school nurse inspections thousands of children were checked, any children found to have lice or nits were taken out of class whilst their parents were contacted to take them home. Treatment was provided to the parents by the nurse and they could return to school the next morning. These inspections weren't foolproof; perhaps there were only one or two lice, the light in the room might be poor, there were always a proportion of children who were absent and therefore not checked, and sometimes the nurse had already inspected 200 children and her eyes were weary from the constant concentration. Excluding children made little difference either, other than singling them out and depriving them of an education. Children were often over-treated as the lotions were issued if nits were present but there were no live lice.

In the early part of the 20th Century there were several treatments for head lice, often not very effective and involving some nasty and dangerous preparations. Liquid paraffin was one of the better ones and is sometimes still used today. It was not until the early 1950s that pesticidal preparations were introduced. They worked well and the incidence of head lice declined quite rapidly, but because these preparations acted on the louse's nervous system it was not long before they began to develop resistance to many of the active pesticides in the different formulations.

In the mid 1980s the NHS lost its Crown Immunity for providing medicines and school nurses could no longer issue free head lice treatments. This meant that parents had to obtain treatment on prescription from their GP or buy it over

the counter at a pharmacy. At the same time inspections for head lice ceased throughout the country as Health Authorities realised it was an expensive and ineffectual use of school nurses' time.

In the late 1990s financial cuts in the NHS saw many school nurses without a job and the school health service was disbanded in some areas. For parents this left a very confused picture as they did not know who to turn to for help. Recently this trend has been reversed and school nurses are back working with children.

Responsibility lay with parents to keep themselves and their families free of lice as they do with other contagious diseases. However, previously held knowledge concerning head lice had been lost as, over time, communities had abdicated responsibility and relied solely on the school nurse to find the lice and then inform the parents.

The gap has been filled by pharmacists who are in an ideal position to help parents and suggest effective treatment. Several 'Minor Ailment' schemes which incorporated the professional help of the local pharmacist, trained in diagnosing a number of minor ailments, were set up. Primary Care Trusts organised ways for children to obtain free treatment, especially where families were financially vulnerable. Schemes in Sunderland, Leeds and Peterborough are examples.

GPs had made prescriptions for head lice freely available until they became budget holders for their own practice's medicines. Subsequently, families were advised to comb out the lice or buy products over the counter. Combing out lice using a fine tooth comb and conditioner had become the vogue in the early 1990s and is known as Bug Busting. It was a cheap option for the NHS and promoted by many school nurses and health visitors, with schools themselves targeted to initiate bug busting days. Many parents saw this method as a better option than the frequent use of pesticides on their children's heads but the process is time-consuming, it is easy to miss lice, not always done correctly and children remain contagious to others during the process.

There are four types of head lice treatment – pesticide; non-pesticide; wet combing with conditioner and alternative treatments such as herbal remedies. Current clinical evidence shows lice have developed immunity to conventional pesticide treatments. Non-pesticide treatments work in a different way, by coating the outside of the lice so they suffocate and die, so resistance cannot be built up. A number of clinical studies have demonstrated the efficacy of non-pesticide treatments and shown consistently high cure rates. [4]

There is evidence that head lice are increasing in prevalence,[5] in part due to increasing resistance to insecticide treatments, but also because people spend less time on detecting and treating for lice, or are using clinically unproven treatments.

Some head lice treatments claim to kill all head lice within one application. These claims appear to be based on laboratory data which is not sufficient to prove the case in home use.

The British National Formulary which provides UK healthcare professionals with authoritative and practical information on the clinical use of medicines recommend that any head lice treatments used should involve two applications a week apart to kill any lice that have hatched from eggs during that time. This is further supported by the independent Stafford Report which also reviewed available clinical data.

Moreover the head lice guide produced by the Department of Health recommends checking for lice again after five days, and that this advice stands for products which may be capable of killing eggs. Consumers who use one application treatments run more risk of product failure and subsequent family /community re infection.

In 1997 the Public Health Medicine Environmental Group (PHMEG) commissioned what became known as the Stafford Report, produced in 1998. There was little evidence with which to produce a high quality scientific report and it was intended to be a document of best practice. The report was updated in 2002 after review by the Centre for Evidence-Based Medicine at the University of Oxford and it was published in the Journal of Family Health Care. In 2008 the Stafford Report was updated again to include more recent evidence and recommendations in relation to treatment, including non-pesticidal formulations.

The report contains sections for health professionals, especially community staff as well as schools and parents and is readily available from the PHMEG website: www.phmeg.org.uk.

Head lice have remained at the forefront of the family's health concerns, featuring frequently in Ministerial correspondence, for example questions were presented to the House of Commons in February 2008 about head lice trends and clarification from the Secretary of State for Health on what advice is given to (a) GPs, (b) pharmacies and (c) schools on head lice infestation.

RESEARCH CONDUCTED

GPs

200 GPs took part in an online survey in May 2009. Drawn from all areas of the UK, they responded to a range of questions about head lice management and treatment.

PHARMACY

A panel of 50 pharmacists took part in an online survey in May 2009. Drawn from all areas of the UK, they were asked to agree or disagree with a range of statements about head lice

Mystery Shopper research was conducted by ESA Market Research Ltd who visited seven pharmacies covering Scotland, Wales and the North-west, North-east, South-east and South-west of England and the Midlands.

PRIMARY CARE TRUSTS

203 public health leads within Primary Health Trusts or Health Boards were contacted and asked about their head lice policies, 152 in England, 23 in Wales and 28 in Scotland.

Audrey Pepperman, a public health nurse and a member of the Stafford report working group was interviewed to find out how policy is formed within her Health Protection Unit and how this is rolled out across the PCTs.

SCHOOLS

2,000 school nurses across the UK were polled via SAPHNA, the School and Public Health Nurses Association.

672 schools across the UK were contacted and asked to complete a series of questions about their attitudes to head lice treatment and management.

In September 2007, 107 parents of pupils at Wootton Primary school in Northamptonshire completed questionnaires, answering a series of questions about their attitudes to head lice treatment and management. The same parents were surveyed again at the end of a three-month project at the school to increase awareness of the need to regularly check for head lice to assess whether attitudes had changed.

CONSUMERS

4,000 people were surveyed in June 2008 by One Poll. The individuals responded to 12 questions about their attitudes towards head lice and treatment.

1,000 people were surveyed about head lice treatment usage and awareness by Keith Gorton Services in April 2009

Face-to-face interviews were held with ten parents who had taken part in a clinical trial for head lice treatment.

REVIEW OF PREVIOUS RESEARCH

For the report authoritative research was reviewed focusing, where possible, on the most current head lice reports and legislation.

REVIEW OF POPULAR DISCUSSION FORUMS

A review of two popular internet discussion forums has been conducted to find out how many requests for information about head lice were submitted within a specific time period and the level of interest that these threads generated.

RESULTS

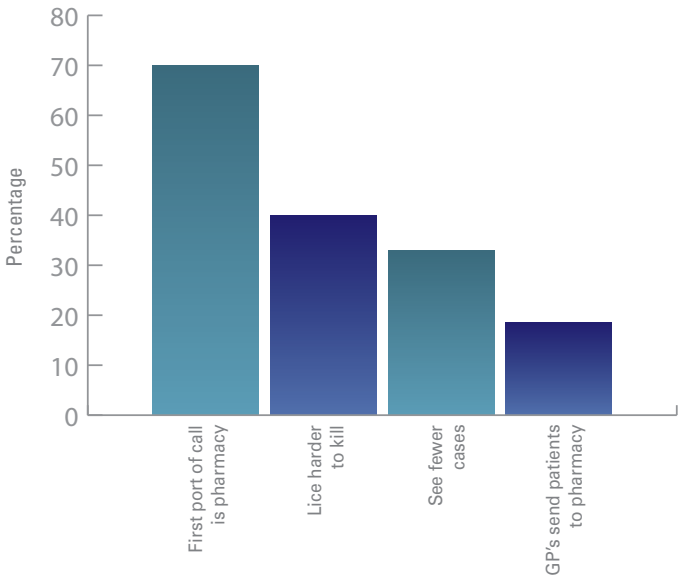
Level of support health professionals provide consumers about head lice

GPs

GPs have an important role to play in the health of young children and yet their role in head lice management has reduced in recent years with 70 per cent of responding doctors saying the first port of call should be to the pharmacy or minor ailments clinic.

Whilst 40 per cent believe head lice have become harder to kill, 33 per cent said they see fewer cases of head lice than they used to. Around 1 in 5 GPs send patients to the pharmacy for treatment rather than attending to the condition themselves.

GP attitudes to head lice management



Pharmacists

Since checks in schools for head lice ceased and the school health service stopped handing out free head lice lotions, pharmacies and their assistants have been at the forefront of helping families with the diagnosis and treatment of head lice. Well over half (61 per cent) of the pharmacists who participated in the research believe GPs are writing fewer prescriptions for head lice and that it is falling to them to provide a service for families.

Many have taken on this role willingly and spend considerable time helping families in their area to deal with head lice. Some Primary Care Trusts (PCTs) have put schemes in place whereby free treatment is available to families from the pharmacy with the pharmacist claiming the cost back from the PCT.

School nurses

School nurses are seen by the public as being at the forefront of the fight against head lice. All parents surveyed would like to hand back responsibility to them for detecting lice. However the school nurse's role is much wider than this. They are instrumental in dealing with a wide range of children's health programmes including sex education, smoking cessation, and immunisation programmes.

The replies indicate that the majority of school nurses spend an average of between 10 and 15 per cent of their time advising and educating families about head lice.

PCTs

Few of the Trusts offer any sort of training to their staff and the amount of time spent by the public health leads in dealing with head lice issues is very low, between 0 per cent and 10 per cent, which would seem to be at odds with the level of concern felt by families.

Some PCTS have policies which allow for parents to be contacted by schools if there are cases of head lice and some advocated that children should be taken out of school when they had head lice until they had received treatment.

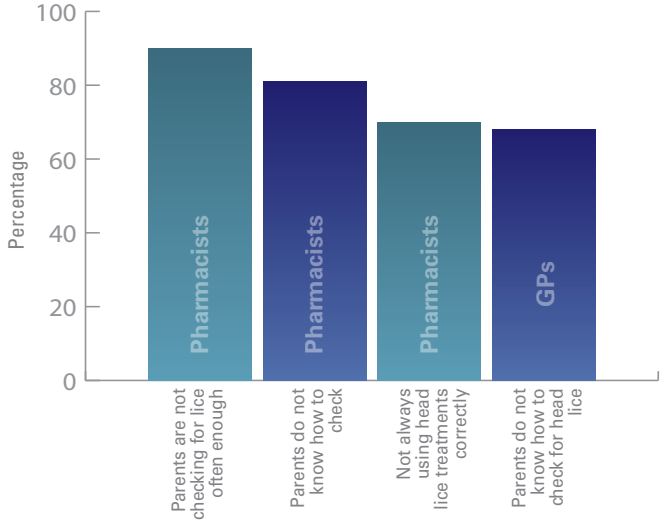
Audrey Pepperman is a public health nurse who is at the forefront of ensuring that health visitors and school nurses in her area receive training and up to date information about head lice. Whilst she is a contact for other health professionals for advice on health matters she receives few calls concerning head lice. Her local health protection unit has a Standard Operating Procedure (SOP) for head lice and this, in conjunction with the Stafford report is used for training purposes and as a referral document for health professionals. Other agencies may not have the same methods of dealing with the problem. She believes GPs tend to steer families to pharmacists and minor ailment schemes, although those who have young families themselves can be instrumental in organising school education sessions on head lice.

Consumer management of head lice

Viewpoint of the health professional

The majority of health professionals think parents do not manage head lice detection and treatment effectively. Amongst pharmacists 90 per cent think parents are not checking for lice often enough and 81 per cent believe that parents do not know how to check or what they were looking for. In the opinion of 70 per cent of these pharmacists, parents are not always using head lice treatments correctly. From the GP perspective, 68 per cent agree that not all parents know how to check their children for head lice effectively

Health professionals viewpoint of consumer management of head lice (pharmacists and GPs)



All PCT representatives researched agreed that it is the parent's responsibility to diagnose and treat head lice and think the single most important issue is that parents are not taking action when their children had head lice. Respondents also think many parents do not know how to check for lice, or what to do if they find them, however only one supported the return of the "nit nurse." All public health representatives would like more power to penalise parents who refused to treat, they also see this as a way of helping children with persistent head lice.

The consumer viewpoint

Whilst health professionals don't think parents do enough, focus group research indicates families have felt abandoned by health professionals. A small pilot study which enrolled parents who had previously taken part in a clinical trial for head lice treatment indicated that information is not given to parents at an early enough stage in their child's life. Few of them had been given information about head lice through official channels and much of the information they had received came from their mothers or other relatives, occasionally from other parents and some from articles read in magazines.[6]

The consumer research for this report identifies one of the biggest problems associated with managing head lice was that parents aren't checking their children and taking action regularly enough, which means head lice keep coming back.

Half of parents claimed to check for head lice once a month or less whilst 1 in 10 parents only check once a year. When questioned as to why they don't check more frequently the research showed that 46 per cent of parents don't understand the need to check regularly and 33 per cent don't know what to look for, whilst almost 1 in 4 thought the school was checking for them.

Emotional impact of lice

Parents concerns about head lice centre on whether they will be able to get rid of them, a fear that their children will be bullied and that their child's ability to learn will be affected. More than a quarter of them worry about what other people will think of them as parents.

These findings are re-enforced by a review of two popular internet discussion forums, Mums Net and Yahoo Answers, conducted to find out how many requests for information about head lice were submitted. In the period between 31 May 2008 and 31 May 2009 there were more than 292 posts about head lice on popular mum's discussion site, Mum's Net. The tone of the majority of posts is shock, horror and guilt but all of them indicate the need for more and better information.

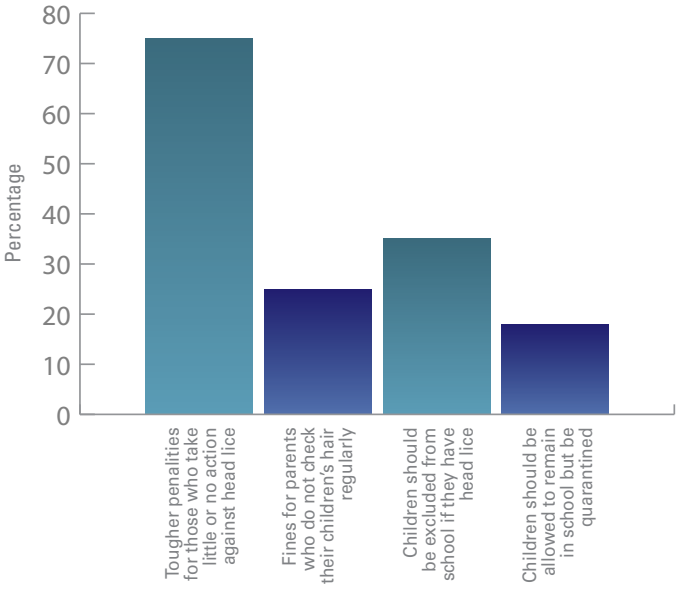
Head lice information is available via the Internet, much of it being anecdotal and personal, and with no research to back it up, thus compounding myths and misconceptions. Preparations for head lice treatments are also available via this route, many of these are clinically untested, some are ineffectual and some could be construed as dangerous. There is nothing to indicate whether a site is giving good or poor information, thus adding to the confusion of parents.

Parents are also concerned about whether they will catch head lice too. There are no official, published figures for the number of adults who have head lice at any one time but a piece of research carried out for this report of a thousand people indicates an adult total of 3.7 per cent. [7]

Consumer research of 4000 parents indicates that they are clearly frustrated, fearful and angry about head lice. This fear and anger is clearly demonstrated by the demand for tougher penalties for parents and guardians who they deem take little or no action against head lice (75 per cent). [8]

Of those polled, 25 per cent thought there should be fines for parents who do not check their children's hair regularly and over 35 per cent thought children should be excluded from school if they have head lice. 18 per cent thought children should be allowed to remain in school but be quarantined.

Consumer attitudes to head lice



However, for those parents who took part in clinical trials testing new head lice treatments, when their family's head lice had been treated and monitored for a period of two weeks, this not only increased their knowledge base but also increased their confidence. They were no longer afraid of the infection or embarrassed by it. It seems that once people know what they are looking for, how and when to look and given the right sort of support for a short time they can deal with this ailment more than adequately. [6]

CASE STUDIES

The case studies below support the research findings indicating that parents are confused about which treatment methods to use and will try any method which might solve the problem.

Case study 1

Stephen has lost count of the different methods he has used to rid his daughter Sarah's hair of lice. He even tried making her hair shorter to make it easier to comb out the bugs. Sarah had lice off and on for five years and, at one stage, the lice even spread to Stephen's hair. It was upsetting for his daughter and Stephen didn't talk about it with other parents due to the stigma involved.

He tried all sorts of treatments including an electric comb he found from the internet. Stephen also became concerned about putting chemical treatments on his daughter's hair. He eventually found a non-pesticide treatment. Sarah had head lice at the end of the summer term but infestations have been a lot less frequent and disappear more quickly.

Case study 2

Head lice were a nightmare for Beckie's family. Her nine year old daughter Jessica had head lice for five years during which time the lice would often be spotted running across her lovely white-blonde hair.

Jessica was teased because of her constant problem with head lice and was known as the 'nit girl' at school, which both Jessica and her mother Beckie found very upsetting. Beckie was desperate to put an end to the teasing and to stop the nits in their tracks, but because Jessica's hair was very fine, no amount of combing could prize the eggs from her hair. As a working mum of three, Beckie struggled desperately to find the 45 minutes a day she needed to sit there picking the eggs out by hand. More than that, this time-consuming daily ritual was dreaded by little Jessica.

Beckie could never get all the eggs out and she tried numerous treatments including chemical products prescribed by the doctor, but they too never got rid of the lice completely. Finally, she turned to a local pharmacist for advice and found a treatment which worked.

Myths and Misconceptions

The research indicated there are still many myths and misconceptions that surround the subject of head lice.

Over half (54 per cent) of people surveyed for this report[8] believe that head lice can live on coats and hats as well as on hairbrushes and bed linen, however, head lice are dependent on the scalp for survival. A louse will never willingly leave its host except for another host, or if the host experiences a very high fever or dies.

There is a lot of confusion over nits and lice, the two terms are not interchangeable. A nit is a hatched or dead egg. It is stuck firmly to a shaft of hair; lice are insects which move freely through the hair and feed on blood, which they take from the scalp.

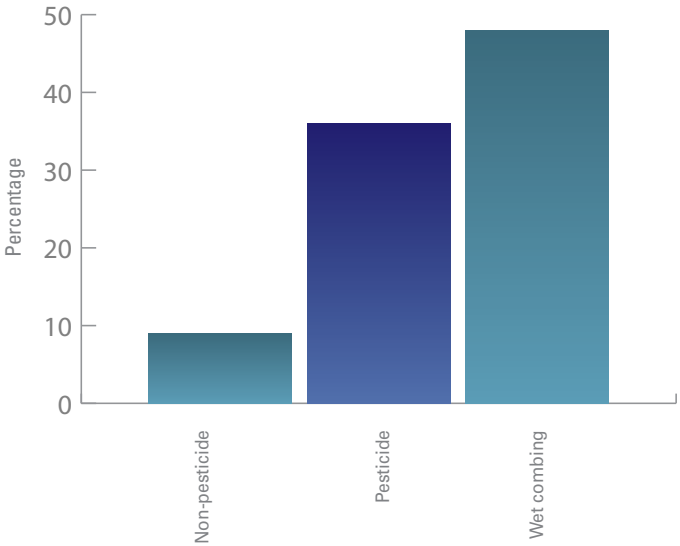
Whilst 37 per cent of parents believe lice only live in clean hair they really do not care whether hair is clean or dirty as long as they have a ready access to their food supply as they must feed several times a day.

TREATMENT ADVICE PROVIDED BY HEALTH PROFESSIONALS

GPs

When questioned about treatment advice only 9 per cent are prescribing or recommending non-pesticide formulations. Pesticidal formulations are recommended by 36 per cent of the doctors but the largest number, 48 per cent, are recommending wet combing as the treatment of choice, even though research shows it to be only 38% – 57% per cent successful.[9,10] One per cent of doctors recommend herbal treatments or other natural alternatives with limited or no efficacy data.

GP Treatment Recommendations



Pharmacists

Although 61 per cent regard themselves as the first port of call for parents, when it comes to treatment only 29 per cent of pharmacists think they are up to date with the latest advice. Over half (52 per cent) are recommending non-pesticidal treatment as the treatment of choice, as against 35 per cent who still recommend pesticides as their first preference.

Whilst over half of pharmacists claim to recommend non-pesticide treatments, despite this intention, this is not translating into action at the coal face. The mystery shopper exercise showed that several recommendations in the pharmacy itself are still for pesticide based treatments.

One pharmacy in Birmingham recommended the use of head lice shampoos; these have been blacklisted for some considerable time. After going through all the options available a leading drug store in Glasgow advised using Tea tree shampoo despite there being little clinical evidence to support its effectiveness. Three out of seven pharmacies recommended non-pesticide silicone treatments.

Some of the assistants were knowledgeable, polite and helpful explaining how and when to use the treatment, whilst others seemed to know very little about the treatment they were

recommending, even countermanding the instructions on the pack about the number of applications required.

All of the mystery shoppers received some one to one information about checking the hair for head lice although several assistants recommended using a metal comb, usually used to remove nits, rather than a fine toothed plastic one which is much better for finding lice of all stages. Some of the pharmacies had leaflets for the shopper to take away and most suggested looking on the internet for further help.

School Nurses

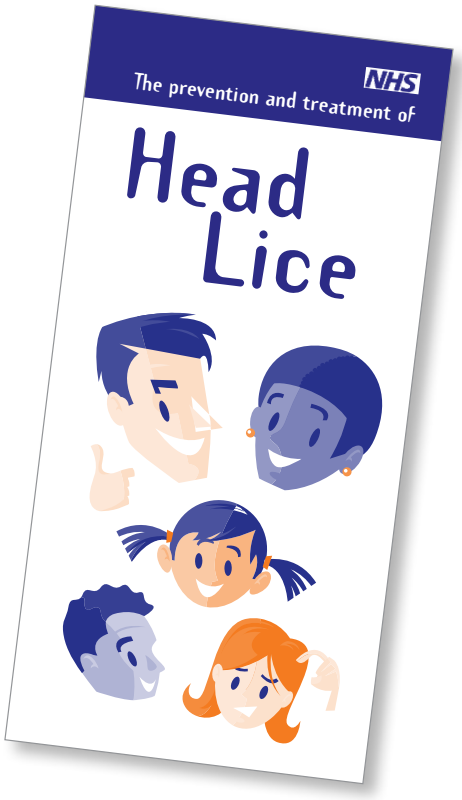
When it came to treatments only two per cent of school nurses surveyed recommend silicone treatment as a first option, the remainder are still of the opinion that pesticides or wet combing are the best choices; a sure indicator that they are not kept up to date with head lice research.

They are all of the opinion that parents do not check regularly and think many do not know how to check or know what they are looking for. They also think parents are often too embarrassed to face up to the problem, but feel that the advice given to parents is unclear and not consistent. Whilst they felt it is part of their role to give families information about head lice and that parents should receive it as soon as their child attended nursery or playgroup, it is not difficult to see how confusion arises when the school nurses themselves receive very little updating or training. They also think parents should receive regular up dates throughout their child's time in education.

School nurses also feel there is a lack of resources from the Government on head lice education both for professional staff and for the general public, with 80 per cent feeling that Government legislation is inadequate. (Some would like to see schools have power to exclude children and one thought parents should be fined if they do not take action to deal with head lice.)

Government

Current Government advice through the Department of Health continues to give two options for treatment; lotions or wet combing. There is no differentiation made between pesticides, non-pesticides i.e. silicone treatments, or herbal lotions, and this must be very confusing and unhelpful for parents. Whilst the Department of Health publication "The prevention and treatment of head lice" does give some facts along with advice on the detection of lice there is nothing on head lice resistance or how to recognise treatment failure. In response to a query made to the Department of Health for this report, it was made clear there are no plans to change the advice it gives on lotions or wet combing by updating this leaflet, even though wet combing has a poor treatment record [9,10].



SOURCES OF HEAD LICE INFORMATION FOR PROFESSIONALS

GPs

The primary source of information on head lice for many GPs appears to be the internet with 43 per cent using it to gain head lice information, as against 41 per cent who consider their PCT as the primary source. Training manuals, CD ROMS, the BMA, The Royal College of General Practitioners and Medical Journals did not figure highly as sources of information about head lice for this group.

Pharmacists

Pharmacists would like to receive more information and training on the subject as, whilst many believe their knowledge is up to date, they take that knowledge from pharmacy trade journals, (30 per cent), rather than from their PCTs (14 per cent) or other sources. Pharmacists receive many CD ROMS and manuals as training material but this survey showed that only 15 per cent admit to thinking of them as a primary source of up to date information. The majority of this group (83 per cent) would like to receive summarised recommendations from head lice research papers.

School nurses

Only two per cent of school nurses have received specialist training, whilst five per cent said they have never received up to date information. The remainder all receive pharmaceutical training documents, read the professional press and research via the internet. To some degree the amount of knowledge this group has seems to correlate to the interest they have in the topic and how it impinges on their workload.

AWARENESS AND SHARING OF HEAD LICE BEST PRACTICE

GPs

Just 2 per cent of doctors were aware of the Stafford Report and yet the bulk of the information contained in the report would be of benefit to them. Many surgeries have no information on head lice available for parents, yet it is a place parents often visit when their children are small and would be an ideal venue to pick up useful information on this topic, along with other aspects of children's health. Only 25 per cent said they had any information about head lice in the surgery.

Pharmacists

The Stafford Report contains several important points on the responsibilities of pharmacists and yet only 3 per cent were aware of the report's existence. Stafford encourages pharmacists to take more responsibility for teaching parents how to check for lice and to advise appropriate treatment if live lice are found.

Primary Care Trusts

Half of the Primary Care Trusts have heard of either or both PHMEG and the Stafford Report, although not all use it to formulate their policy on head lice and for this reason policies vary widely. Three Trusts said they would use the report now they were aware of its existence. There is no one specific health professional or team who write head lice policies, these vary from a General Practitioner to a Policy and Procedures Committee, although several use the Public Health Team/ Health Protection Nurse Specialist. The remaining replies indicate a workforce expected to cover a subject with little or no training at all.

School nurses

The majority of the school nurses (90 per cent) were unaware of the Stafford report and yet it is a document which would be of great value to them in dealing with head lice. The 10 per cent who do know of the report did not know its recommendations

FLOW OF INFORMATION

The pharmacists surveyed believe the information they receive from various sources can be conflicting. Whilst some pharmacists adhere to local PCT policy many believe the policy should be more widely available. They would like to see better information available for families and for that information to be consistent throughout a wide area and that myths and misconceptions should be properly regarded and dealt with.

One of their main criticisms is that there is not enough contact between health professional groups or with the health authority itself and that any policy needs to be amended more frequently to reflect the latest research. They would also like the PCTs to initiate more and better training on the subject (49 per cent) as they see conflicting information coming from different disciplines.

Amongst the GPs, 43 per cent also think health authority guidelines regarding head lice treatments need to be more widely available and easily accessible and 69 per cent said GPs would benefit from summarised recommendations from head lice reports.

It has been demonstrated that it is possible to rid a community of head lice if there is an appropriate flow of information. This was done successfully on the Isle of Man at the end of the 1980s.[11]

The campaign was organised by Dr. Zoe Vermaak, at that time the island's Consultant Community Paediatrician, and began with a check of all the children, this gave base line information on the prevalence rate.

There followed a 12 month long information campaign as well as training for health staff; the local newspapers and other media avenues. Head lice information was given to everyone who lived or stayed on the island; every household was visited and joined in the elimination day held in October. There was a six year follow up period which showed the incidence and prevalence of head lice to be much lower than before the campaign although numbers did rise slightly. This paper shows just how difficult it is to get full co-operation for such a project and how hard it is to maintain the interest of the general public afterwards.

ROLE OF SCHOOLS

Head lice have remained an important issue to schools, who are frequently blamed for their existence. Parents look to them for help and information, something they do not do for other health issues.

All the replies from the school research indicate that this group see the responsibility of head lice as lying with parents but 80 per cent are certain that many parents do not check regularly enough and often fail to take action when lice are found. There is the popular view that many parents spent a lot of time passing the blame to other parents. This subject is a highly emotionally charged one with everyone thinking that someone else should deal with it and passing the blame is commonplace. Even the government came in for criticism, with 20 per cent of respondents from schools wanting them to do more.

Although 70 per cent of schools took the time and trouble to alert parents if there were head lice in a class and/or approached parents directly, there were some which did not do this because they followed the policy from their PCT, as advised by the Stafford report. Most schools were happy to give out leaflets to parents but did think there should be better information than is currently available, as it did not dispel the myths and misconceptions and was often not as informative as it could be.

Many schools (43per cent) wish for the return of the "nit nurse" as they all agreed they had enough to do and being involved with the head lice issue was not their remit, other than in general terms. All the school replies saw head lice as a health matter which should be addressed by the school nurse. Some had held education sessions for parents about head lice (60%) but of these 40% said the number of parents who had attended was low, only two of these schools included head lice as part of the induction meeting for new parents.

Schools see the school health service as the body which should be helping them and their families to deal with head lice; this need not and should not include the return of inspections. However 10% of schools would like the power to exclude children from school until they have been treated.

School case study: Educating about head lice management

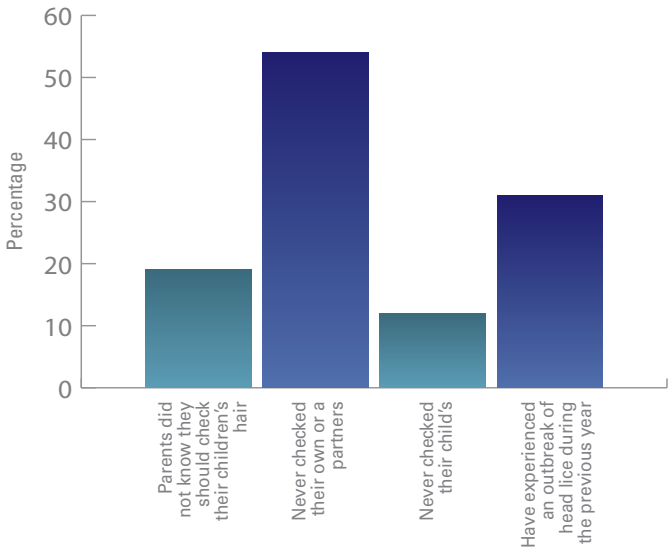
A pilot initiative took place at a Primary School in Northampton in September 2007 which ran for 3 months and its aim was to give parents confidence in their ability to deal with head lice.

The project consisted of announcements to launch the concept of "Once a week, Take a Peek" and as well as leaflets containing information about head lice. Posters about the scheme were put in school and in the local pharmacy. The children themselves were informed about the campaign during school assemblies and given stickers so they felt involved and could encourage their parents to check through

their hair. Parents also signed up for text alerts for reminders about the need for checking once a week and also to inform them if there were any cases of head lice in their child's class after being informed of this by the parents.

Prior to this initiative parents were asked to fill in a questionnaire. The results of this showed that less than half the parents claimed to be checking their child's hair for head lice with "lack of time" as the main reason for not doing it. 1 in 5 of the parents did not know they should check their children's hair. Over half (54 per cent) never checked their own or a partners hair and 12 per cent never checked their child's at all, although 31 per cent of families had experienced an outbreak of head lice during the previous year.

Parents' views pre-initiative



Asked about their attitudes to head lice 82 per cent thought the biggest problem was that not all parents took action when their child had them, they also thought parents were too embarrassed to face up to the problem. The majority of parents felt that not enough checking was done by parents and if they did have lice in the family there was a great deal of frustration over dealing with them.

Such a concentrated project proved to be a great success with 88 per cent of parents saying they felt better informed and confident to check and treat if head lice appeared in their family. 74 per cent of parents said they checked their own, their partner's and their children's hair at least once a week and more than three quarters of the parents felt that the outbreaks of head lice had reduced during the campaign.

Only 3 per cent of parents still felt embarrassed about their child having head lice. The school administrator felt that the school had an important role to play by supporting parents in managing the problem, and because the school and the parents had been seen to pull together there had been a big change in the way outbreaks were viewed. Parents had found the text alerts particularly helpful. It reminded them of the need to check weekly and alerted them to be especially vigilant if an outbreak occurred in their child's class.

Two years on the school believes the incidence of head lice is lower than previously. The school no longer texts parents if there is an outbreak in a particular class as this proved to be too expensive, but they are thinking of alerting parents by email in the future. This school does have a school nurse and families continue to receive reminders about head lice in general letters from school.

There is also information for parents on the OAWTAP website **www.onceaweektakeapeek.com**, which was launched soon after this campaign. The website dealt with requests for over 150,000 head lice information leaflets in its first year of operation indicating that there is a large demand for reliable, up-to-date information on this topic.

THE LEGAL PICTURE

Since the inception of public health law it has been illegal for people to be infested with insects and mites, this includes the 3 types of lice as well as fleas and the scabies mite, as they are all considered contagious to others. It has always been the responsibility of the householder to keep himself and his family free of them. When the Education Act 1944 was ratified the school health service had the power to "cleanse" pupils of their vermin.

Local Education Authorities still have the power to 'forcibly cleanse' a child today under the Education Act 1996 (a direct copy of the 1944 Act) and prosecution is the ultimate sanction.
The new Health and Social Care Act 2008 also uses prosecution as a main sanction. However Primary Care Trusts would need to appoint an enforcing officer whichever Act they wished to use in order to prosecute parents for non-treatment of their children's head lice infections.

Under the Education Act the Education Authorities would need to appoint a medical officer in order to carry out enforcement or prosecution but it is doubtful if this position exists currently anywhere in the UK.

A direct request to the Department of Health for information on the legal position for this report received the reply that current legislation is seen as more than adequate as "there are various provisions within the Public Health Act, the Education Act and the Health and Social Care Act 2008 to address matters of cleanliness, infestation, contamination and infection control".

KEY FINDINGS

- Responsibility for head lice management and treatment ultimately lies with parents, but research indicates they are not getting enough support from health professionals – when parents are given an appropriate level of advice they are able to deal with this ailment adequately.

- Parents are feeling very frustrated by head lice, many of them are venting this frustration on other parents by demanding fines and worse penalties, and on schools, who are unfairly blamed for the presence of head lice

- The health staff who should have most experience and knowledge on this topic are poorly trained, or receive no training at all and do not keep up to date with treatment options, but stay with treatments they know even when they are no longer effective in the case of some pesticides or of limited effectiveness (wet combing).

- Only a small percentage of GPs are familiar with the Stafford report outlining head lice best practice and many surgeries have no information on head lice available for parents.

- GPs are no longer at the forefront of advising or prescribing treatment. The mainstay of help, advice and treatment has moved to the pharmacy.

- Pesticidal treatments, to which lice have been clinically proven to have acquired resistance, are still being recommended by over one third of pharmacists

- There is not enough contact between the various health professional groups about head lice information and the information that does flow between the various groups is often conflicting.

- It has been demonstrated that it is possible to rid a community of head lice if there is an appropriate level of information, effort and will.

CONCLUSION

- Head lice are not taken seriously enough by the NHS and its staff and the emotional impact of head lice infestation upon families is underestimated.

- The changes to the health service during the 1990s and post Millennium have caused a lot of confusion with many parents feeling isolated if their family catches head lice; they then turn to friends, family and the internet for help.

- Each case of head lice needs to be treated properly and individually so the infection is eradicated swiftly and children do not suffer long term infections. Controlling head lice is not an option as this indicates that health staff and the community accept they are always present but at a low level.

- Parents need to be given clear instructions on how to check for head lice. This should include the need to check regularly, what to look for and how to treat. Myths and misconceptions hamper successful treatment and management of lice.

- The frustration of parents will only increase if pesticidal treatments, which clinical tests have shown lice have built resistant to, continue to be recommended.

- In recent years, mechanical removal of lice by wet combing (bug-busting) has been put forward as a popular method of treatment and control, but clinical trials have shown the level of effectiveness to be low. Treatment recommendations should always be based on the strength of their clinical effectiveness.

- Some head lice treatments are basing their claims about head lice cure rates on laboratory data and recommend one application only which is misleading, as lice may hatch from eggs after the initial treatment. It is best practice to use two applications, seven days apart. Failure to do this may lead to re-infestation and put the community at risk of lice outbreaks.

- Schools should have a minimal role to play – but the quality of the information provided by schools is key to keeping parents confident, unembarrassed and able to combat lice. Bringing back school nurse inspections would not eradicate head lice.

- A scheme similar to the one in Northamptonshire could work well in all areas if it became normal for schools to participate in the giving out of this health information and emailing parents, as long as the children were also equally well informed.

THE WAY FORWARD

- All PCTs should have an up-to-date policy for the treatment of head lice which is sent to all healthcare professionals, particularly pharmacists who are at the frontline of treatment advice.

- Primary responsibility for head lice prevention and treatment should lie with parents but they need to be adequately influenced and supported by professionals through the flow of accurate, integrated information between all healthcare professionals.

- All parents should get training or information, directed by Government, at an earlier stage in the child's life such as at playgroup or nursery level. This would help parents feel informed and confident about dealing with the issue.

- Parents should be encouraged by Government and healthcare professionals to see head lice screening as a routine procedure. Parents should check for head lice on a regular, weekly basis to identify infestations at the earliest stage when there are few insects, which also helps combat head lice infestation in the community.

- A Government funded advertisement campaign with clear, consistent messaging could reduce the level of infestation in the UK.

- Department of Health information and Primary Care Trust information needs to be kept more regularly up-to-date to ensure it reflects current best practice.

- Pharmacies and GPs should not be recommending pesticidal treatments which have been clinically proven to be ineffective, as lice have built up a resistance to them.

- More head lice training from health authorities for healthcare professionals, particularly pharmacists.

- Wider publication of the Stafford report to help it reach a wider audience, directed by Government.

- An increase in the number of minor ailment clinics, to include head lice, held in health centres and/or pharmacies would benefit parents and their children.

- Formularies need to be updated more frequently to reflect the current situation regarding head lice treatment, directed by health authorities. Old formularies containing information on treatments which have been proven to be ineffective or discontinued by the manufacturers should be discarded.

- With increased usage of the Internet as a source of information, there is a growing need for international co-ordination of information and international head lice recommendations.

- Greater international co-ordination on head lice research projects such as resistance.

- The creation of a European head lice expert panel co-ordinated by the European Union, funded and organised similar to the model adopted by the European Scientific Counsel Companion Animal Parasites (www.esccap.org)

- A standard for head lice treatment could be part of the agenda for an EU-working group in the same way that the EU seeks to harmonise legal advice for different types of medical products.

REFERENCES

1. Willems et al. 2005 (Belgium) 8.6%; Welsh PHLS (Wales) 2002 10%; Downs et al. 1999 (UK) up to 19%; Burgess and Brown 1996 (Cambridge, UK) 0.6%-15%

2. Maunder JW, The Appreciation of Lice. Proceedings of the Royal institute of Great Britain, Volume 55 (1983)

3. Bonilla Denise L, Kabeya Hidenori, Henn Jennifer, Kramer Vicki L and Kosoy Michael Y. Bartonella quitana in body lice and head lice from homeless persons, San franciscco, California, USA. Emerging Infectious Diseases. www.cdc.gov/eid Vol 15, No 6, June 2009
Taplin D, Meinking D. Infestations. Pediatric dermatology pp1465-93, New York, Churchill Livingstone, 1988

4. Burgess F, Lee P, Matlock G. Randomised, Controlled, Assessor Blind Trial Comparing 4% Dimeticone Lotion with 0.5% Malathion Liquid for Head Louse Infestation. Public Library of Science. Nov (2007)

5. Downs, AM, Harvey I, Kenny CT. The epidemiology of head lice and scabies in the UK. Epidemiology and Infection 1999 122:471-7

6. Brown CM. A pilot study to investigate the attitudes and strategies adopted by families towards head lice. July 2005; Unpublished work.

7. Gorton, K. Head lice treatment usage and awareness research by Keith Gorton Services, April 2009

8. Research into head lice treatment and management by One Poll, June 2008

9. Roberts RJ, Casey D, Morgan DA, Petrovic M. Comparison of wet combing with malathion for treatment of head lice in the UK: a pragmatic randomised controlled trial. The Lancet 2000; 356: 540-544.

10. Hill, N, Moor G, Cameron MM, Butlin A, Preston S, Williamson MS et al. Single blind, randomised, comparative study of the Bug Buster kit and over the counter pediculocide treatments against head lice in the United Kingdom. BMJ 2005; 331:384-7

11. Vermaak Z. Model for the control of pediculus humanus capitis. Public Health (1996) 110, 283-288.