# Consultation on draft guideline – deadline for comments

**5pm on 6 November 2017 email:** Lymedisease@nice.org.uk

Please read the checklist for submitting comments at the end of this form. We cannot accept forms that are not filled in correctly.

We would like to hear your views on the draft recommendations presented in the short version and any comments you may have on the evidence presented in the full version. We would also welcome views on the Equality Impact Assessment.

We would like to hear your views on these questions:

1. Which areas will have the biggest impact on practice and be challenging to implement? Please say for whom and why.
2. Would implementation of any of the draft recommendations have significant cost implications?
3. What would help users overcome any challenges? (For example, existing practical resources or national initiatives, or examples of good practice.)

See section 3.9 of **Developing NICE guidance: how to get involved** for suggestions of general points to think about when commenting.

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<thead>
<tr>
<th>Organisation name – Stakeholder or respondent (if you are responding as an individual rather than a registered stakeholder please leave blank):</th>
<th>VIRAS</th>
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Lyme disease

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<tr>
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<tr>
<td>Short</td>
<td>General</td>
<td>General</td>
<td>Abbreviations used in the comments: A&amp;E: Accident and Emergency hospital department BIA: British Infection Association CBT: Cognitive Behavioural Therapy CDC: Centres for Disease Control and Prevention (USA) CFS: Chronic Fatigue Syndrome ELISA: Enzyme-linked immunosorbent assay EM (rash): Erythema Migrans GDC: Guideline Development Committee</td>
<td>Insert each comment in a new row. Do not paste other tables into this table, because your comments could get lost – type directly into this table.</td>
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**MAJOR OMISSIONS OF THE NICE DRAFT GUIDELINE**

1/ Blood Donation

The Short Draft omits to inform doctors that patients should not donate blood or organs. M.E. and CFS are the most probable and common missed and misdiagnoses of Lyme disease – especially chronic Lyme. Patients with M.E. and CFS diagnoses are banned for life from being blood donors in the UK since 1st November 2010 ([http://www.bbc.co.uk/news/health-11465723](http://www.bbc.co.uk/news/health-11465723)).


Defines the Lyme bacterium as:

"Unusual bacterial / fungal / and protozoal infections"

"Infections which lie dormant or are difficult to eradicate (e.g. Brucellosis, Lyme disease, Typhoid)"

And in section: “Did the donor have a past history of an infection which might transmit to and reactivate in the recipient?”

Question: “Has the donor had Lyme disease (Borrelia), brucellosis, or tuberculosis?”

The CDC state:
“Although no cases of Lyme disease have been linked to blood transfusion, scientists have found that the Lyme disease bacteria can live in blood from a person with an active infection that is stored for donation. Individuals being treated for Lyme disease with an antibiotic should not donate blood.”

The World Health Organisation. Guidelines on Assessing Donor Suitability for Blood Donation. 2012. Recommend that blood donors who have had Lyme disease:

“Defer for 28 days following full recovery and completion of treatment, whichever is longer”.

VIRAS await with interest to learn how NICE will define ‘full recovery’ from Lyme disease, especially as the tests it recommends do not detect the infection, but only antibodies which are known to decline over time regardless of infection status. If a recipient gets a lot of antibodies from donor blood, that might not do them any harm, but if they also get a dose of dormant borrelia cells, it might not be good for them. NICE have had ample warnings about borrelia persisting beyond so-called ‘adequate treatment’ by dormant and other resistant forms of borrelia. If they fail to provide adequate information about the risk of transmission by tissue donation, the blood will – so to speak, be on their hands.

2/ Exclusion of cases that the UK health authorities have failed to detect over decades of mismanagement of Lyme disease

In the USA since the turn of the century around 17 to 30 thousand cases per year of Lyme disease have been officially recorded, with many of these ‘official’ cases concentrated in a small number of states. The CDC have admitted that the true USA incidence is probably 10 to 12 times higher than these figures, in a country where doctors and the public are much more aware of Lyme than in the UK. It is ridiculous for the HPA and PHE to claim that the true UK incidence is only 2 to 3 times higher than reported cases (see http://counsellingme.com/VIRAS/UKLymeIncidence2.pdf). Therefore it is logical to conclude that for decades the UK has been accumulating many thousands of undiagnosed and untreated patients per year who are infected with Lyme disease. An unknown proportion of these patients will have gone on to become chronically and severely ill and many of these will have been misdiagnosed with M.E or CFS which have very similar complex and varied symptom profiles (see http://counsellingme.com/VIRAS/IsabelSymptomCheckerSurvey.PDF). Substantial evidence for this was provided in the VIRAS comments on the draft Scope for these guidelines (see http://counsellingme.com/VIRAS/NICE/consultationcommentsandresponses.pdf).

Omitting to address this major health problem of overlooked and untreated Lyme disease in the UK is
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inexcusable. Excluding consideration of the most likely misdiagnoses of unrecognised Lyme disease is at best, negligent and constitutes discrimination against Lyme patients injured due to PHE policies. These patients are not only marginalised by these guidelines, but have been actively discriminated against, which might reasonably be interpreted as evasion of accountability.

3/ Common Lyme disease co-infections, opportunistic infection

Ozcaglar et al (2012) state:
“Co-infection: Co-infection is the infection of a host by at least two different types of pathogens. TB and HIV dynamics have a correlation, as HIV weakens the immune system of the host, which creates a proper medium for MTBC to infect the host. Therefore, in areas with high HIV prevalence, TB is one of the main causes of death.” (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3330831/ doi: 10.1016/j.mbs.2012.02.003)

A tick bite carries the risk of transmitting at least 10 serious infections to humans. Some doctors in the USA are finding that treatment of Lyme disease is hampered by coinfections and recommend that these must also be addressed in Lyme disease patients (see (https://www.nytimes.com/roomfordebate/2013/08/11/deconstructing-lyme-disease/to-treat-lyme-disease-focus-on-the-co-infections).

Nicolson remarks “Lyme Disease patients are at risk for a variety of opportunistic infections, including other bacterial infections, viral and fungal infections. These can complicate diagnosis and treatment, but they may be principally a problem in the late persistent phase of the disease. Late stage patients with neurological manifestations, meningitis, encephalitis, peripheral neuropathy and other signs and symptoms may have complicated co-infections that are neither recognized nor treated by their physicians.” (see http://www.prohealth.com/library/showarticle.cfm?libid=8026)

4/ Immune Suppression

Singh and Girschick (2004) state: “Long-term exposure of the host immune system to spirochaetes and/or borrelial compounds may induce chronic autoimmune disease. The study of bacterium-host interactions has revealed a variety of proinflammatory and also immunomodulatory-immunosuppressive features caused by the pathogen.” (see http://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(14)62887-1/fulltext DOI: 10.1111/j.1469-0691.2004.00895.x)

The compounding and confounding factors in 3 and 4 above are routinely anticipated by experienced Lyme treating doctors, and should as a bare minimum be described within a credible guideline for Lyme disease.
| Short | 3 | 4 | “Lyme disease is transmitted by the bite of an infected tick”
Should read ‘Lyme disease can be caught by the bite of an infected tick’ since the infection has been identified in biting flies and mosquitoes. The bacteria has been detected in human semen and vaginal secretions and therefore could be transmitted through sexual intercourse. Trans-placental transmission is documented. Furthermore, it is not known if ‘an infected tick’ will definitely transmit the infection. We are not aware of any research into what percentage of infected ticks transmit infection with a bite. The latter might seem overly pernickety, but the question is, do NICE want to make accurate statements or not? |
| Short | 3 | 8 | “infected ticks are found throughout the UK and Ireland” is quite sufficient. The remainder of the sentence is just likely to confuse. More ticks probably means more infected ticks, but it might not. Do NICE really want to burden doctor’s memories with this when there is so much they need to remember? |
| Short | 3 | 12 | “but infection can occur in many areas” unnecessary after stating that infected ticks are found ‘throughout the UK and Ireland’. |
| Short | 3 | 13 | This statement about prevalence seems superfluous especially as there is no proof that Lyme disease is any more prevalent in these places than in the UK which has no accurate prevalence data |
| Short | 3 | 18 | “Give people advice about:” There is some good advice here, but it hardly seems that it would be the role of a doctor to know and give advice about some of these. It seems rather like a doctor telling their patients who are cyclists to wear a helmet and test their brakes before setting off. Weird. |
| Short | 4 | 1 | “insect repellents” It has not been demonstrated that insect repellents provide protection (we believe it has been shown that they do not guarantee protection) – if advice like this is going to be given it needs qualification if it is to be reliable. A false sense of security could increase the risk to the public. |
| Short | 4 | 8 | “Diagnose Lyme disease in people with erythema migrans, that is:”
Add to this list or make it absolutely clear elsewhere, that an Erythema Migrans rash is an uncommon presenting symptom. E.g., occurring in only one fifth to one quarter of patients. Doctors must be informed
that the majority of Lyme disease cases will have to be diagnosed without any visible signs.


Knudtzen et al (March 2017) analysed 431 confirmed cases of Lyme neuroborreliosis of which 37% reported a tick bite and only 20% had an Erythema Migrans rash. (https://doi.org/10.1093/cid/cix568)


As a discrete event representing an ‘outbreak’ which was studied by the CDC, the latter was completely objective. This is very important statistical evidence and represents data from a real-world ‘experiment’ that is unlikely to be replicated. Virtually all epidemiological data following this event has been skewed by the recognition of an EM rash as not only indicative of Lyme, but often the only sign.

Knudtzen et al (March 2017) analysed 431 confirmed cases of Lyme neuroborreliosis of which 37% reported a tick bite and only 20% had an Erythema Migrans rash. (https://doi.org/10.1093/cid/cix568)


Failure to make it explicit that most cases will not report an EM rash will predictably put patients at risk of not being diagnosed and treated.

Add to this section: An EM rash may be atypical, almost unnoticeable (faint) and may be less noticeable on dark coloured skin.

This list is rather limited and is probably not much help to doctors without more information to trigger a suspicion of Lyme. Suspecting Lyme in the absence of an EM rash and/or absence of a reported tick bite –
especially in ‘non-hotspot’ areas (where both patient and doctor could be unfamiliar with Lyme), could rely upon a doctor’s intuition if patients are going to be investigated and treated promptly. Therefore symptoms that the patient has no previous experience of, which might be noted by the doctor or patient, as odd or unexpected could be very informative. VIRAS recommend that doctors working in the USA and Germany should be consulted on how to question a patient if suspicions of Lyme are aroused. Doctors in those countries are far more experienced than any UK doctors.

E.g. the Horowitz Multiple Systemic Infectious Disease Syndrome Questionnaire (HMQ) when tested it was found:
“The results consistently demonstrated that the HMQ accurately differentiated those with Lyme disease from healthy individuals. Three migratory pain survey items (persistent muscular pain, arthritic pain, and nerve pain/paresthesias) robustly identified individuals with verified Lyme disease. The results support the use of the HMQ as a valid, efficient, and low-cost screening tool for medical practitioners to decide if additional testing is warranted to distinguish between Lyme disease and other illnesses.”

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“Consider the possibility of Lyme disease in people presenting with”. Add to this list:

- Dementias (www.ncbi.nlm.nih.gov/pmc/articles/PMC2831066/)
(https://www.ncbi.nlm.nih.gov/pubmed/15894409/)
(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3171359/)
(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4981904/)

This is section is not appropriately laid out. The bulleted points in lines 24 and 25 makes it appear that these are priorities rather than just factors. These points are actually inferior in significance to the presenting symptoms and any further symptoms revealed by careful questioning. The danger is that cases could be overlooked because the patient has not been hunting in the Scottish highlands nor spent a week in a hide in the New Forest. NICE have got to get over the notion and stop giving the impression that people
### Lyme disease

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| “Do not diagnose Lyme disease in people without symptoms, even if they have had a tick bite.” Which symptoms does this refer to? Lyme Disease Action list 130 symptoms on their page: http://www.lymediseaseaction.org.uk/about-lyme/symptoms/ and doctors experienced in diagnosing and treating Lyme disease have also produced lists (i.e.>60) of symptoms that can occur with the infection. This is why Lyme is sometimes referred to as the ‘new great imitator’ after syphilis, which was the original ‘great imitator’, and is why Sir William Osler stated: “He who knows syphilis knows medicine”.

Therefore we suggest rephrase to ‘Do not diagnose Lyme disease in people ONLY based on a tick bite when careful examination does not reveal indicative symptoms’. As remarked above, people bitten by a tick should received appropriate information.

Professor Klaus Kurtenbach told the BBC: "Lyme disease is wicked - the onset of the disease might be up to a year later, so it is difficult to diagnose - many cases are misdiagnosed and we have no real figures for the incidence in the UK" (http://news.bbc.co.uk/1/hi/health/466809.stm)

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| “Offer testing if there is a clinical suspicion of Lyme disease”. The first tier (ELISA) of the two tier tests provided by the NHS are an aid to confirming diagnosis in around 50% of POSITIVE cases according to independent research, which generally used well characterised samples already determined by similar methodology. When these tests are used in the real-world and followed-up by a test that is supposed to be even less sensitive, their performance can be expected to drop significantly. What this means to patients and doctors sending samples to RIPL, is that of the ~12,000 tests per year sent for testing, and ~1,000 positive results, at least 1,000 more have been dismissed as negative when they are positive. Of the remaining 10,000 tests deemed ‘negative’, an unknown number are actually positive because the test was badly timed, or the species of borrelia is not detected by RIPL tests (e.g., myamotoi), the initial level of infection was low or the infection results from low immunogenic round-bodies of borrelia and the slow reproducing borrelia have not evoked a significant immune response (see above quote from Kurtenbach: “the onset of the disease might be up to a year later”). All these add-up to possibly thousands of false-negative tests, and exclude those who were not tested because their doctor was ill-informed, they did not go
Lyme disease

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<td>“If the ELISA is positive or equivocal, offer an immunoblot test to confirm diagnosis of Lyme disease”. Add: “the second test increases specificity but further reduces the sensitivity of the overall result.” Doctors are entitled to know if NICE guidance risks exposing them to a Fitness to Practice complaint or law suit for negligence, e.g., should they misdiagnose an absence of Lyme and withhold treatment based on an unreliable laboratory test.</td>
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<td>This advice (as with much of the earlier advice) could fail patients who present long after they became infected. There is no human spirochaete infection which does not have a chronic presentation.</td>
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<td>If antibodies can remain for 3 years, then standard NHS tests are useless for people that get re-infected, or for those who relapse due to so-called ‘adequate treatment’ proving to be inadequate. Kindly address this.</td>
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<td>“1.2.21 Carry out tests for Lyme disease only at NHS-accredited laboratories”  The Rare and Imported Pathogens Laboratory (RIPL), Porton Down, is not listed as a UKAS accredited laboratory meeting ISO 15189: (<a href="https://www.ukas.com/search-accredited-organisations/">https://www.ukas.com/search-accredited-organisations/</a>). Where will the NHS source testing for UK patients? What steps will be taken to retest patients whose Lyme serology was provided by this unaccredited laboratory in order to meet the requirement at Page 8 Line 5?: “When tests have been done in laboratories that do not fulfil the criteria in recommendation 1.2.21, do not diagnose Lyme disease, but carry out testing again using an NHS-accredited laboratory”</td>
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| These requirements appear to be contrived on the basis of: ‘what statements can we make about the
**Lyme disease**

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| VIRAMED tests as employed at the RIPL testing laboratory? We then recommend these as the requirements for testing. This would give RIPL automatic ‘validation’ by NICE, so that they can keep their virtual monopoly on testing in England. These recommendations appear to be contrived to suppress competition. The Health Protection Agency (HPA, now part of Public Health England) ‘validated’ the VIRAMED tests themselves by comparing them with the test kits they formerly used. If one poor test is compared with another poor test which employs the same or similar methodology, the outcome might ‘validate’ that the new is similar to the old, but it does not show that either are accurate or useful. The ELISA/Western Blot combination has consistently been shown to have low sensitivity. The sensitivity is so poor that it would be unacceptable in many other serious infections demanding urgent diagnosis and treatment. Furthermore, these tests have not been validated for the UK population and UK strains of borrelia which could only be done by employing a full gamut of comparison tests such as culture, microscopy, PCR, immuno-fluorescent antibody, with multiple tissue types and repeat testing over a period of time. It may be cheap and convenient to pick a testing product off the shelf, but if it leaves thousands of patients undiagnosed, that is not convenient for them.

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| “Discuss with the person the accuracy and limitations of the different tests for diagnosing Lyme disease.” This is NOT a ‘discussion’. Patients are entitled to expect accurate and balanced INFORMATION from their doctors as required by GMC guidelines for Consent and Good Medical Practice. Replace with: “Inform patients about the limited accuracy of the tests currently used by the NHS. Explain that false-negative results are common and that false-positive results can also occur.”

The draft guideline persistently seeks to downplay or even evade the fact that Lyme serology as used by the NHS is insensitive. This evasion is dangerous and will predictably lead to patients not being diagnosed and treated. Why are NICE so bent on producing ‘advice’ that will allow this foreseeable harm to occur?

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| “Explain […] that the accuracy of blood tests may be reduced if:” “testing is carried out too early (before antibodies have developed)” “the person has reduced immunity, which might affect the development of antibodies, for example people on immunosuppressant treatments.”

Add these equally important and relevant qualifiers:

1/ “the infecting species of borrelia might not be detected by NHS tests”
### Lyme disease

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<td>“testing is carried out too early (before antibodies have developed)”</td>
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Define “too early”. See 6, 16 above. When a person has an infection in which successful treatment could be time-dependent, and when the prevention of severe symptoms and injury occurring could be time-dependent, it is nonsensical to use a test which could delay treatment by weeks.

LabTestsOnline state: “If the ELISA test is carried out within a few weeks of a tick bite or possible exposure it may fail to detect antibodies to *B. burgdorferi*, and will usually be repeated a few weeks later. About 30% of tests are positive by two weeks and about 80% by six weeks.”

(http://labtestsonline.org.uk/understanding/analytes/lyme/tab/test/)

Explain to doctors and patients, by what logic NICE have decided to put patients at risk of having delayed treatment. Include in the guideline, the mean, standard deviation and min/max of days between patients

2/ “testing is carried out too late and the infection is now hidden from the immune system” E.g., Berndtson, (2013):  (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3636972/) “This review describes known and suspected mechanisms by which spirochetes of the *Borrelia* genus evade host immune defenses and survive antibiotic challenge.”

And Citera et al (2017):

“Identifying Borrelia has proven challenging because it has the ability to evade the immune system and “the bacteria is able to traverse the blood brain barrier, endothelial tissue, and imbed itself in joints, entering certain cells intercellularly and invaginating itself in a manner that reduces the potential exposure of antigens, enabling it to avoid immune recognition.”


3/ “testing is carried out too late and the infection has itself become immunosuppressant”

E.g., Jarfores et al, 2007 state (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1810439/):

“Forthcoming, we showed that chronic LB had higher amounts of *Borrelia*-specific FoxP3 mRNA than healthy controls, which might imply that chronic LB patients have an immunosuppression caused by the increased Treg population.”

8 11

Good, but omits important codicils – see below
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<th>Days from tick bite</th>
<th># borrelia cells</th>
<th>Mean cells per microlitre</th>
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<tr>
<td>1</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>1,280</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>163,840</td>
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<tr>
<td>21</td>
<td>20,971,520</td>
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<td>28</td>
<td>2,684,354,560</td>
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Doubling the Heroldová et al maximum replication time to 24 hours to allow for in-vivo conditions could result in the following levels of infection in a 60Kg (132 lbs) person infected with 10 borrelia organisms, which reproduce @ x 2 per day and assuming that these reside only in extra-cellular body fluids:

Infection with borrelia Lyme spp is itself an ‘immunosuppressant’. The infection can suppress the immune response by various means, making detection of the infection by immune response non-viable. Failure to warn doctors and patients of this basic clinical fact would be negligent. E.g.: Immune evasion- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3636972/ B. burgdorferi actively attaches to, invades, and kills human B and T Lymphocytes https://www.ncbi.nlm.nih.gov/pubmed/9233657

In mice - http://journals.plos.org/plospathogens/article?id=10.1371%2Fjournal.ppat.1004976

This AIDS-like capability of borrelia may not manifest as dramatically as in HIV, but it can lead to serious consequences, especially in long-infected patients. These consequences might be avoided by the conscientious application of good medical practice.

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**Lyme disease**

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“Advise people that tests available privately (including from overseas) may not have been fully evaluated or meet the standards needed to diagnose Lyme disease”

If this statement is included then it is essential to also state that NHS/RIPL tests have absolutely NOT “been fully evaluated or meet the standards needed to diagnose Lyme disease”. Otherwise this statement is prejudicial against non-NHS laboratories which it lumps together. The purpose of this appears to be in order deprive patients of choice and to maintain RIPL’s monopoly on testing for England. The tests used by RIPL have not been ‘fully evaluated’ – ever, and RIPL and its tests do not “meet the required standards needed to diagnose Lyme disease”. No test ever marketed has met all the requirements to “diagnose Lyme disease”. Implying that RIPL are capable of this feat using a methodology that is hardly better than flipping a coin is dangerously misleading. If you omit to make this fundamental element of serology testing absolutely explicit in the guidelines, and cease the ploy of ‘implying’, ‘suggesting’, ‘hinting’ or prompting readers to ‘draw conclusions’ from muddy and misleading information, it is going to cause serious harm to patients and threaten their doctor’s values and careers.

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More ‘Discussions’? Do NICE seriously believe that patients need to be told that, “symptoms such as tiredness, headache and muscle pain are common and a specific medical cause is often not found”? These puerile statements have no medical or clinical value except that they might be useful to make patients feel like idiots and persuade them that they are wasting the doctor’s time. Achieving this would be a good step towards setting-up the patient for a ‘disengagement’ strategy planned by PHE to get rid of nuisance patients. ([http://www.hse.gov.uk/aboutus/meetings/committees/acdp/161012/acdp_99_p62.pdf](http://www.hse.gov.uk/aboutus/meetings/committees/acdp/161012/acdp_99_p62.pdf)) Lyme patients (at any stage) may suffer exhaustion, anxiety and confusion and be unable to assert themselves in the face of a doctor who has been coached by NICE Guidelines to patronise, condescend and dismiss them and their illness as neurotic and hypochondriac because all they have is, ‘common symptoms’ which are subjective. It is notable that doctors are hardly encouraged to probe for more symptoms before deciding that the patient is just neurotic and must now, somehow be got out of the surgery and kept out. For NICE to coach doctors to condescend in this way is disturbing in its disregard for patient welfare. Patient autonomy means that doctors do not ‘fob-off’ patients with strategic but meaningless ‘discussions’ about ‘common symptoms’.

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This is bogus and frankly, quite shocking. Children are an especially ‘at risk’ group for Lyme disease, but thanks to the HPA and PHE, paediatricians – as with most other doctors, have probably absorbed a fair amount of misinformation. If doctors need advice on managing complicated Lyme disease, they should get

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it from someone with experience of the illness and its management. If the UK has paediatricians with experience of more than a handful of cases, then start a register so that doctors needing paediatric advice can consult someone who at least has first-hand experience. Alternatively, ask for advice from specialist USA or European doctors working in countries where they have got experience. NICE have got to wake-up to the fact that the UK is 30 years behind the rest of the world in Lyme disease management. Not only do we not have the expertise and skills, we have a home-grown knowledge base that is in many respects, worse than useless and potentially dangerous.

The phenomenon known as the ‘Teacher’s dilemma’, describes how teaching students with preconceptions is more difficult than educating those who start with a ‘blank slate’. False premises must be eliminated before learning can take place. Due to the misinformation that UK doctors have been exposed to, this is not going to be a straightforward task. The immediate need of doctors and patients is to have access to the skills of the world’s most experienced doctors who recognise the complexities of Lyme disease and have risen to the challenge in getting properly educated.

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<td>“offer antibiotic treatment according to their symptoms as described in table 1”</td>
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These guidelines stick patients in boxes and doctors in other boxes. It is convenient, neat and unethical. Straightforward treatment of a complex illness is a lovely dream, but for those patients that end-up in a living nightmare because their skilled physician felt constrained by what was ‘described in table 1’ is not by any stretch, the practice of medicine.

The consequences to the patient are potentially catastrophic. Halting treatment before the infection is eradicated could allow the remaining infection to re-establish. The infection could become worse than it was before treatment and result in serious injury – especially if necessary treatment is withheld because the patient’s continued and/or relapsing symptoms are explained away as normal. E.g.:

“1.3.11 Explain to people with persisting symptoms following antibiotic treatment that:

“symptoms of Lyme disease may take months to resolve even after treatment

“ continuing symptoms does not necessarily mean they still have an active infection"

“1.3.12 Support people who have a slow recovery from Lyme disease by:

“encouraging and helping them to access additional services, including

“referring to adult social care for a care and support needs assessment, if they would benefit from these
In the context of these draft guidelines and its contrived and illogical restrictions for treatment, the meaning of these statements is obvious – ‘patients should not get any more treatment even if they remain ill (infected), or relapse or deteriorate.’ This would be unacceptable in any other disease and is a disgraceful abandonment of basic medical ethics. There is NO evidence to support depriving a patient of treatment when their symptoms indicate a progressive Lyme infection.

If treatment fails to eradicate the infection, this may also increase the risk of antimicrobial resistance, not only of the Lyme spirochaetes, but of other infections transmitted by the tick bite, as well as opportunistic infections that take advantage of the immune suppression caused by the Lyme bacteria.

All Infectious disease doctors treat chronic infections with individualised care. Bone infections need 6 weeks of intravenous antibiotics, but if the patient is a diabetic this can sometimes increase to 12 weeks followed by oral doxycycline plus co-trimoxazole for months, based on the patient’s clinical response. These guidelines should state that treating Lyme disease needs a similar approach. This could start with a three month trial of doxycycline or co-trimoxazole, extended as necessary according to the patient’s clinical response. Clinical guidance for dermatology is to treat for 3 to 6 month period for ‘bad acne’ with doxycycline or sometimes co-trimoxazole, as precedent to considering the more toxic and more expensive acne drugs like roaccutane. Recommended treatment for Tuberculosis is for 6 or 9 months with high dose combination antibiotics. If a 14 day or longer break in treatment occurs, the whole treatment regime must start again from scratch. Patients that are re-infected can repeat this treatment and patients that relapse or do not respond can have alternative combinations and repeated and/or extended phases of treatment. Chronic Q fever is difficult to treat and can require up to four years of treatment with doxycycline and quinolones or doxycycline with hydroxychloroquine.

This NICE guidance is dangerous and will result in entirely foreseeable iatrogenic harm to patients. It will result in large numbers of patients suffering avoidable illness and injury and justifiably seeking compensation.

"If symptoms worsen within the first day of antibiotic treatment, assess the person for Jarisch-Herxheimer reaction."
In the treatment of Lyme disease, a ‘herx’ or significant die-off of the bacteria can occur at any time during treatment before the infection burden is substantially reduced. Giving doctors and patients a false sense of security once the ‘first day of antibiotic treatment’ is passed, is dangerously misleading. Some doctors experienced in treating Lyme patients recommend pausing treatment if a severe worsening of symptoms occurs at any time.

Patients receiving antibiotic treatment should be routinely provided with information about ‘herxes’ as they occur and manifest in Lyme, including what to do if they experience a severe worsening of symptoms or new symptoms.

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<td>“Antibiotic treatment for Lyme disease in adults and young people”. As already described, this table should only be a suggestion for initial treatment to be followed with careful reassessment. E.g.: “Suggestions for initial antibiotic treatment for Lyme disease in adults and young people” It is the view of VIRAS that in a significant number of cases these fixed treatments will prove inadequate and result in continued infection and serious consequences to patients.</td>
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<td>“Do not routinely offer further antibiotics if a person has persisting symptoms following 2 courses of antibiotics. Consider discussion with or referral to a specialist as outlined in recommendation 1.2.19.”</td>
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This advice is dangerous and has no clinical basis. Where and who are these ‘specialists’ that the draft refers to? Virtually all of the consultant physicians claiming Lyme expertise that VIRAS are aware of, are Chronic Lyme deniers, indoctrinated by IDSA and BIA propaganda to serve the interests of medical re-insurance companies by promulgating the belief that Lyme is rare, easy to detect and straightforward to treat with a short course of antibiotics. Complicated and chronic Lyme is far outside their experience or expertise. It is entirely predictable that this advice will result in harm to patients, and represents nothing more than non-medical ‘disengagement’ strategies to dismiss patients who remain symptomatic due to continuing infection following 6 weeks of antimicrobial treatment. These patients do, and will continue to exist, and in their current form these draft NICE guidelines will perpetuate and compound this entirely foreseeable threat to patient safety. Doctors that follow this NICE guidance in good faith will inevitably face Fitness to Practice complaints. No wonder NICE include such a comprehensive Disclaimer with their guidelines if this is an example of their cavalier approach to patient care.
**Lyme disease**

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| The guideline refers to “persistent symptoms” however they do not recognised the existence of persistent infection. Borrelia can evade the human immune system and the bacteria can tolerate antibiotics and there are numerous articles that demonstrate this. The possibility that persistent infection may require more than 6 weeks of antibiotics is not considered, but should be communicated to clinicians. TB, leprosy and acne patients can all benefit from long courses of antibiotics. **Citations of works by recognised Lyme experts that demonstrate persistent infection after antibiotics:**

* Sleeper cells: the stringent response and persistence in the Borrelia (Borrelia) burgdorferi enzootic cycle. 2017. Cabello FC, Godfrey HP, Bugrysheva JV, Newman SA. The metabolic and morphologic changes resulting from activation of the stringent response in B. burgdorferi may also be involved in the recently described non-genetic phenotypic phenomenon of tolerance to otherwise lethal doses of antimicrobials and to other antimicrobial activities. It may thus constitute a linchpin in multiple aspects of infections with Lyme disease borrelia, providing a link between the micro-ecological challenges of its enzootic life-cycle and long-term residence in the tissues of its animal reservoirs, with the evolutionary side effect of potential persistence in incidental human hosts. ([https://www.ncbi.nlm.nih.gov/pubmed/28836724](https://www.ncbi.nlm.nih.gov/pubmed/28836724) doi: 10.1111/1462-2920.13897)


* We demonstrated that B. burgdorferi treated in the stationary phase has a higher probability of regrowth following removal of antibiotic. Caskey, John R. and Monica E. Embers. 2015. "Persister Development by Borrelia Burgdorferi Populations

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| Short | 14 | 8 | In Vitro." Antimicrobial agents and chemotherapy 59(10):6288-95. Retrieved January 18, 2016 ([http://aac.asm.org/content/early/2015/07/21/AAC.00883-15](http://aac.asm.org/content/early/2015/07/21/AAC.00883-15)).  
* Our study substantiates borrelial persistence in some EM patients at the site of the infectious lesion despite antibiotic treatment over a reasonable time period. Hunfeld KP et al 2005 In Vitro Susceptibility Testing of Borrelia burgdorferi Sensu Lato Isolates Cultured from Patients with Erythema Migrans before and after Antimicrobial Chemotherapy. |
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Lyme disease

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| have no idea how many people in the UK get Lyme, nor what happens to them, because the vast majority never even get diagnosed let alone treated for the infection. Define ‘recover completely’, are you claiming that this means that the infection is eradicated? Also explain how you know that this occurs in ‘most people’.

Also explain why, if ‘most people recover completely’, the draft also claims: “The development of a core outcome set was identified as a high priority”? If most patients recover completely, then the development of a ‘core outcome set’ would be a ridiculous waste of resources.

The Centres for Disease Control and Prevention in the USA admit that the true incidence of Lyme is 10 to 12 times higher than the number of reported cases. That is in a country where 14 states have an officially recorded average incidence of 43 per 100k compared to England and Wales measly 1.7 per 100k. Public Health England are deluded if they believe that UK surveillance for Lyme is 4 times more efficient than that of the USA.

Therefore it is a logical deduction that as an absolute minimum, 9,000 cases of Lyme disease in the UK go unrecorded every year. That could be ~160,000 missed cases since the turn of the century. How can the NICE guidelines imply that they or anyone else, knows what has happened to these tens of thousands of undiagnosed and untreated patients? Stop making ludicrous claims based on nothing more concrete than wishful thinking and willful ignorance. These attempts at diverting patients are propaganda and they have no scientific validity. If NICE are so bent on manipulating doctor’s into accepting false information, then one must assume that the pretence of having a public consultation and gathering different viewpoints – is primarily for the purpose of producing more effective and acceptable propaganda. There appears to be an underlying agenda in the guideline’s constant use of insupportable statements. As these mostly seem intended to create a false sense of security, and thereby justification for dismissing patient’s concerns, it can be concluded that these deceptions reveal an underlying contempt for patients and patient rights.

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| “Explain to people who are starting antibiotic treatment for Lyme disease that some people may experience a worsening of symptoms early in treatment." […] “Tell them to contact their doctor if this happens and not to stop their antibiotic treatment”.

NO! It is evident that for years PHE have portrayed Lyme disease as rare and not very serious and patients, especially those who do not respond to treatment as PHE dictate, as hypochondriacs and
neurotics. This contemptuous attitude also appears to have pervaded NICE and its GDC so thoroughly, that they seem to forget that a lot of people are actually, stoical. As patients, these people don’t like making a fuss, and even if they are able to ‘contact their doctor’ may not give adequate information to receive appropriate advice. If you tell people that they might feel worse on treatment but not to stop their treatment, then you are going to have some very seriously ill patients. This is foreseeable due to the wrong advice the guideline gives on Jarisch-Herxheimer reactions. If the NICE GDC possessed a basic knowledge of Lyme, or had taken advantage of the wealth of published information about Lyme disease then they would recognise how stupid and dangerous this advice is.

If a person is experiencing a herx but they put it down to, ‘the doctor told me I might feel worse’, and they continue treatment they could have a crisis that will land them in A&E. Some experienced doctors are concerned that a severe herx can result in permanent injury. NICE have to break this down and give better advice. A good first step towards achieving this would be to show some respect for patients. The second step would be to have some knowledge of the borrelia pathogen that causes Lyme disease and the antigens and bio-toxins exposed when it is killed. It is basic vaccine science and it is astounding that NICE lack understanding of this simple biology.

The following comments relate to the sections in: Recommendations for research

“Can a core outcome set be developed for clinical trials of management of Lyme disease?”

“The development of a core outcome set was identified as a high priority because it would allow comparison across trials and allow appropriate meta-analysis to strengthen results.”

NICE affect to recognise the weakness of the available evidence and acknowledge that better is required. But notwithstanding this lack of evidence meeting their requirements, the draft guideline makes treatment recommendations with such authority and confidence that they consider it appropriate to set definite limits on treatment and make the unsubstantiated claim that ‘most people recover completely’. If this were true, then there would be little point in spending hundreds of thousands of pounds developing a ‘core outcome set’.

That NICE appear to have been selective in the opinions that they chose to upgrade to ‘evidence’ shows that bias is involved. That bias is in favour of those who hold the opinion that a Lyme infection at any stage is easily eradicated with a few weeks treatment, and that despite all evidence to the contrary, the infection is
self-limiting. The opinion of those who hold that a Lyme infection could take longer to eradicate is ignored. No balance, no evidence and no science, just opinions prejudiced against patients who need longer treatment for a disseminated and persisting infection.

Producing a Core Outcome Set and calling for multiple Clinical Trials adopting those criteria, is a contradiction in the context of the draft guideline. The draft treatment recommendations have predetermined that most patients will be cured with 3 weeks of antibiotics and all of the remainder will be cured with a further 3 weeks treatment with a single antibiotic. Therefore, a “core outcome set” would be superfluous and the call to establish a set is contradictory and suspect.

VIRAS and many others are well aware that the draft treatment regimen would leave substantial numbers of patients infected. Following treatment some patients will continue to have symptoms due to an ongoing infection, others will relapse later. This is exactly what happens with inadequately treated tuberculosis and other difficult infections.

The contradiction makes sense when one understands that a ‘core outcome set’ will provide ‘evidence’ to facilitate the re-diagnosis of patients with persisting or relapsing symptoms, which in any other resistant infection would be interpreted as ‘treatment failure’.

Once a ‘core outcome set’ has determined that ‘adequately treated’ patients can have persisting, relapsing or even deteriorating symptoms, the patient can nevertheless be classed as ‘adequately treated’. Patient’s ongoing disease and symptoms can be attributed to tissue damage or acquired autoimmune disease, and they can be re-diagnosed as having post-treatment Lyme disease syndrome (PTLDS). This will mean that they require no further investigations or treatment beyond symptom management. Alternatively, some could be re-diagnosed with CFS or any other convenient label that gets rid of them with less expense to the NHS. Informed patients have been aware of PHE’s plans to realise this outcome for chronic Lyme patients for some years (see below).

EVIDENCE THAT A ‘CORE OUTCOME SET’ IS IMPRACTICAL WITHOUT RELIABLE TESTS AND THAT ANTIBODY TESTS ARE INAPPLICABLE IN CHRONIC LYME DISEASE

**Fibroblasts protect the Lyme disease spirochete, Borrelia burgdorferi, from ceftriaxone in vitro.**
Georgilis K1, Peacocke M, Klempner MS.

**Abstract**
The Lyme disease spirochete, Borrelia burgdorferi, can be recovered long after initial infection, even from antibiotic-treated patients, indicating that it resists eradication by host defense mechanisms and antibiotics. Since B. burgdorferi first infects skin, the possible protective effect of skin fibroblasts from an antibiotic commonly used to treat Lyme disease, ceftriaxone, was examined. Human foreskin fibroblasts protected B. burgdorferi from the lethal action of a 2-day exposure to ceftriaxone at 1 microgram/mL, 10-20x MBC. In the absence of fibroblasts, organisms did not survive. Spirochetes were not protected from ceftriaxone by glutaraldehyde-fixed fibroblasts or fibroblast lysate, suggesting that a living cell was required. The ability of the organism to survive in the presence of fibroblasts was not related to its infectivity. Fibroblasts protected B. burgdorferi for at least 14 days of exposure to ceftriaxone. Mouse keratinocytes, HEP-2 cells, and Vero cells but not Caco-2 cells showed the same protective effect. Thus, several eukaryotic cell types provide the Lyme disease spirochete with a protective environment contributing to its long-term survival. ([https://www.ncbi.nlm.nih.gov/pubmed/1634816](https://www.ncbi.nlm.nih.gov/pubmed/1634816))


**Abstract**
The diagnosis of Lyme disease often depends on the measurement of serum antibodies to Borrelia burgdorferi, the spirochete that causes this disorder. Although prompt treatment with antibiotics may abrogate the antibody response to the infection, symptoms persist in some patients. **We studied 17 patients who had presented with acute Lyme disease and received prompt treatment with oral antibiotics, but in whom chronic Lyme disease subsequently developed.** Although these patients had clinically active disease, none had diagnostic levels of antibodies to B. burgdorferi on either a standard enzyme-linked immunosorbent assay or immunofluorescence assay. On Western blot analysis, the level of immunoglobulin reactivity against B. burgdorferi in serum from these patients was no greater than that in serum from normal controls. The patients had a vigorous T-cell proliferative response to whole B. burgdorferi, with a mean ( +/- SEM) stimulation index of 17.8 +/- 3.3, similar to that (15.8 +/- 3.2) in 18 patients with chronic Lyme disease who had detectable antibodies. The T-cell response
of both groups was greater than that of a control group of healthy subjects (3.1 +/- 0.5; P less than 0.001). We conclude that the presence of chronic Lyme disease cannot be excluded by the absence of antibodies against B. burgdorferi and that a specific T-cell blastogenic response to B. burgdorferi is evidence of infection in seronegative patients with clinical indications of chronic Lyme disease.

HOW ARE NICE GOING TO PROVE THAT PATIENTS ARE NO LONGER INFECTED? Without a validated method to show this, the whole ‘research recommendation’ section is nonsense as far as patient care is concerned. Ignoring this requirement means that a ‘core outcome set’ would simply be a means of establishing arbitrary thresholds beyond which patients can be denied further treatment. Many of the patients formerly misdiagnosed with M.E., but who later discovered that they have borreliosis are aware of this stratagem, because it has already been used to marginalise those patients. PHE intend to use the same strategy on Lyme patients.

E.g., in the PACE Trial (2011) of treatments for M.E. and CFS, the treatments failed to reach the reach the Primary Outcome Thresholds for ‘recovery’ and ‘improved’. But after all the data had been collected, the Primary Outcome Measures were discarded, and new ones were designed with much lower thresholds, which created the appearance of a Treatment Effect.

In November 2016 the Journal of Health Psychology published: ‘PACE-Gate’: When clinical trial evidence meets open data access, by Keith J Geraghty of the University of Manchester. Geraghty observes:

"The data were only released after a protracted freedom of information case brought by a patient with CFS. A tribunal ordered the lead author’s institution to release their data. Upon release, re-analysis showed that the levels of improvement and recovery observed in the released data were much lower than the levels reported in the published report (White et al., 2011a) and other related publications. The released data showed that the effectiveness of cognitive behavioural therapy (CBT) and graded exercise therapy (GET), in comparison to standard medical care (SMC) and adaptive pacing therapy (APT), fell by almost two-thirds."

(Volume: 22 issue: 9, page(s): 1106-1112.
http://journals.sagepub.com/doi/10.1177/1359105316675213
https://doi.org/10.1177/1359105316675213)
Lyme disease

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<td>“Antibiotic treatment is the mainstay of management for Lyme disease.”</td>
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This statement is false and without understanding why, it is impossible to recognise that what follows the statement is meaningless. The actual ‘mainstay of management for Lyme disease’ in the UK, which has been applied to the vast majority of Lyme disease patients (>90%) is:

1/ do not recognise the disease
2/ diagnose the patient with something else, probably M.E. or CFS.
3/ try to get rid of them.

Therefore the ‘mainstay’ of Lyme disease management in the UK is to misdiagnose the patient and thereby deprive them of the treatment that they need. This is the ‘management’ that has been given to tens of thousands of patients, who were often previously fit and successful, but were then left to rot in their homes among the shattered remnants of their former life. Thanks to PHE (and the HPA), the NHS has been providing this mainstay service for at least 30 years.

The outcome of this ‘mainstay’ of Lyme disease management in the UK is fairly well established for patients who became and remained symptomatic for longer than 6 months. Few patients recover (<10%). The majority improve somewhat over a course of years and decades with a fluctuating course of remission and relapse, around 25% remain very severely ill and a proportion of these have progressively worsening disease. A substantial proportion of patients with M.E. remain more chronically ill and disabled and with a lower quality of life, than patients with almost all other diseases*. A patient’s risk of being among the 25% of severely ill is increased if in the course of their illness they had a period of extreme illness and incapacity, especially if this was prolonged. However, even some of the 25% can improve substantially with long-term treatment targeting Lyme disease and co-infections.

*QUALITY OF LIFE AND FUNCTIONAL STATUS IN M.E. AND CFS
The following papers show greater incapacity and worse quality of life in ME/CFS than virtually all other diseases
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0132421

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The draft NICE guideline shows no concern and does not even acknowledge the existence of the tens of thousands of Lyme disease patients that are chronically ill because they were never diagnosed or treated. For those who were misdiagnosed with ‘CFS’, their plight was specifically excluded from the NICE guideline Scope, and their situation is permanently compounded by getting a ‘waste-basket’ diagnosis that obstructs further investigation or treatment. That is all the evidence that VIRAS or any reasonable person needs in order to recognise that from the outset, the NICE guideline was never about helping patients with Lyme disease. It was only ever about protecting PHE and covering-up a shameful medical scandal representing decades of incompetence.

"There is a lack of robust epidemiological data on Lyme disease in the UK".

Replace with: ‘The epidemiology of Lyme disease in the UK is wholly inadequate to deduce risk or inform healthcare planning.’ The true incidence is likely to be at least 10 times higher than reported cases and due to many years of inadequate identification of cases, the prevalence is probably tens or hundreds of thousands of chronic cases. That is what the situation actually is. The fact that this draft guideline continuously implies that Lyme in the UK is under control and simply filling-in a few gaps in knowledge will sort it all out is ludicrous. This overconfidence suggests either a lack of understanding of the gravity of the situation and the consequences to patients of this cavalier approach, or a callous attempt to manipulate opinion with propaganda and spin. Neither of these can help doctors and patients. See the VIRAS stakeholder comment on the Scope [https://www.nice.org.uk/guidance/gid-ng10007/documents/consultation-comments-and-responses](https://www.nice.org.uk/guidance/gid-ng10007/documents/consultation-comments-and-responses) page 148, and the VIRAS article: [http://counsellingme.com/VIRAS/UKLymeIncidence2.pdf](http://counsellingme.com/VIRAS/UKLymeIncidence2.pdf) “Estimating the Incidence of Lyme Borreliosis in England and Wales.”

"A large clinico-epidemiological study to collect data on incidence […] would generate population-based statistics".

This claim is misleading. An epidemiological study is not possible without an accurate method for identifying cases and one does not exist. The exercise as it is described would predictably maintain the current gross underestimation of incidence and ignore prevalence altogether. It may be acceptable to PHE who appear to enjoy ridiculous Lyme disease statistics but will do nothing for patients, doctors or the
**Lyme disease**

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<td>“What is the current seroprevalence of Lyme disease-specific antibodies and other tick-borne infections”</td>
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For the reasons outlined above (16,2. 16,3 to 6) this exercise would produce predictably misleading information, especially in view of the proviso for using the PHE approved test method of serology which has been shown to be inaccurate. This statement appears to show a willingness to make concessions to the concerns of patients. However, when read in the context of the remainder of this draft guideline and the historical claims of PHE and the HPA, it can be recognised as just another ruse to protect those responsible for the incompetent management of Lyme disease. Furthermore, it facilitates those who wish to enforce antimicrobial stewardship on doctors and an unsuspecting patient population, and maintain the illusion that regarding Lyme in the UK – everything is under control.

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<td>“What is the current seroprevalence of Lyme disease-specific antibodies and other tick-borne infections (such as babesiosis, ehrlichiosis, anaplasmosis, bartonellosis or Q fever) in people in the UK when performed using UK-accredited assays (ELISA based on C6 antigen and immunoblot)?”</td>
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<td>And on line 22:</td>
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<td></td>
<td>“This information is not currently available and is of high priority”.</td>
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It is of higher priority to recognise the deceptive nature of these grandiose calls for research and the specific meaning and consequences of this particular recommendation, i.e., for somebody else to spend hundreds of thousands, if not millions of pounds on projects that will not help doctors or patients.

All that anyone needs to recognise at the present time, is the patent fact that Lyme disease in the UK has not been, and is not being monitored or handled effectively. Acquiring evidence about seroprevalence in the population is of LOW priority and in fact, has no practical application to protect the nation’s health from the threat of Lyme disease. Claiming that this is ‘high priority’ appears to be in order to create an impression that Lyme disease is being taken seriously. Whereas the predictable result of this stratagem would be to show that healthy people are seropositive in substantial numbers – just as has been found in other countries. This would aid RIPL and the former Reference Laboratory at Southampton to defend their disgraceful record of obstructing the diagnosis of patients requiring treatment, but do nothing for doctors or their patients who suffer serious and chronic illness due to infection with Lyme bacteria.
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E.g.: “Screening of IgG antibodies against *B. burgdorferi* in blood donors as a proxy for the presence in the healthy population showed seroprevalences of 2.7% both in Hamburg and Bavaria [16], [17]. In France (3.2%) [18], Italy (4.9%) [19] and Romania (4.3%) [20], similar proportions of seropositive individuals among blood donors were assessed. In population-based surveys, higher seroprevalences were seen in Germany (Berlin: 8%, n = 3,736 [21]; Bavaria: 15%, n = 4,896 [22]; Baden-Württemberg: 16.9%, n = 1,228 [5]) and Finland (19.3%, n = 3,248 [23]). In individuals with higher risk of exposure to ticks such as forestry and agricultural workers seroprevalences between 8% and 52% have been described [15], [18], [19], [24]–[26].”, etc., etc. (http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0041321 https://doi.org/10.1371/journal.pone.0041321)

A really callous move.

**Short 16 19**

“What is the current seroprevalence of Lyme disease-specific antibodies […] in people in the UK when performed using UK-accredited assays (ELISA based on C6 antigen and immunoblot)?”

There is no such thing as a “UK-accredited assay” for Lyme disease. This Research Recommendation is nonsense.

**Short 16 22**

VIRAS consider these recommendations for ‘Priority’ research, to be nothing more than a subterfuge intended to placate patients and patient groups. They are structured in such a way that even if they were actually carried out, they will not change UK Lyme statistics, will not improve patient care and will protect PHE and RIPL from claims for compensation. The recommendations are based on the same research exploited by USA Lyme deniers of the IDSA, which has been used to deny patients diagnosis and treatment, deny chronic Lyme disease exists and to protect those with vested interests in those denials.

**Short 16 31**

“Many patients are concerned about the possible presence of co-infections transmitted by ticks”.

As this concern was specifically excluded from the Scope and has not been properly addressed in the draft guideline and is represented only as a concern of ‘many patients’, it is safe to assume that this is not a concern of PHE or of NICE. This statement is just another stratagem to try and mollify patients. It in no way addresses the evidence, including that provided in the stakeholder responses to the Scope. E.g., Lyme Disease UK: page 53, 54, 72. Lyme Research UK: page 95, 176, 285. VIRAS: page 159, 327. Caudwell LymeCo: page 2, Lyme Disease Action: page 33 and many other references to Lyme coinfections which
can cause serious complications in the effective treatment of Lyme disease and some of which represent serious diseases in their own right.

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| “The evidence on the effectiveness of antimicrobial treatment regimens used in different presentations of Lyme diseases is of poor quality, out-dated and often based on small studies. Most studies are not UK based.”

We are unaware of and cannot locate ANY Trials of antimicrobial treatment conducted in the UK, on PubMed or the Health Research Agency (HRA, providing the Ethical approval service). Please provide VIRAS with references for all of the UK studies this statement refers to. Please also provide the REC reference code and date. VIRAS are concerned that the UK trials that the statement refers to could include covert and unethical experiments conducted without Informed Consent or Ethical Approval. Please supply the requested information as a matter of urgency.

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| “A series of prospective multicentre studies is needed to compare the clinical and cost-effectiveness of different dosages and length of treatment”.

The draft NICE guideline provides restrictive treatment recommendations, which VIRAS believe are unfounded, unethical and dangerous. This proposal for ‘multicentre studies’ appears to support our view. NICE admit that the clinical effect of “different dosages and length of treatment” are unknown, yet they nevertheless make insupportable and restrictive treatment recommendations which cannot be ‘Evidence Based’.

The only rationale for an expensive ‘multicentre’ study would be if various borrelia species produce different responses to treatment and these are expected to vary according to different regions of England and Wales. ‘Multicentre’ studies are not generally required for ‘prospective’ studies, they are only required for such time as a full-scale Clinical Trial is designed. That is, unless wide variations are actually anticipated – in which case explain why they are expected. This research proposition seems wildly excessive and as such, it does not appear to be authentic.

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| It is notable that in the past 16 years the Medical Research Council has not allocated funding for a single study into Lyme disease. In the past 16 years, of the 7 billion pounds allocated to around 20,000 research projects of medically related research by the Wellcome Trust, only 2 projects were vaguely relevant to Lyme
Lyme disease

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| disease patients and doctors. One was a study of pathogens found in ticks in Europe led by the late Professor Klaus Kurtenbach which included investigation of borrelia species in ticks in the UK. The second was a study of borrelia spirochaetes in ticks in the Baltic region of Europe, led by Dr Sarah Randolph. The Cochrane library list one systematic review of Lyme disease treatment, relating to treatment of neurological complications but not focussed on the UK. The National Institute for Health Research (NIHR) list no projects for Lyme disease. However, the University of Liverpool is getting some funding from NIHR for Health Protection Research and indicate that zoonoses including Lyme: “will explore new ways of detecting and characterising pathogens”. This is a drop in the ocean and cannot be expected to translate into benefit for patients or doctors in the foreseeable future. Where do NICE imagine that the millions of pounds needed to make their research recommendations a reality, are going to come from?

At first glance the Research Recommendations appear encouraging. Further evaluation suggests that they are disingenuous. NICE do not conduct or fund research and neither they nor anyone else will never have to deliver on their recommendations. The gaping holes in Lyme research for UK patients have remained exactly the same for 30 years and in all that time the need for research has gone unanswered. PHE have been telling doctors and patients for years that the UK is different from the USA and the rest of Europe. That Lyme is different here and that is why France and Holland record >10 times as many cases. Yet they are prepared to import tests, diagnostic criteria and treatment protocols from all and sundry without a shred of UK research to show whether these are applicable – even after telling us that they are not.

The repeated calls for “Priority” research are empty in the context of the whole draft guideline. The contents of the draft contradict the stated objectives of these ‘priorities’.

“What is the most clinically and cost effective serological antibody-based test, biomarker (such as CXCL13), lymphocyte transformation and ELISPOT for diagnosing Lyme disease in the UK at all stages, including reinfection?”

and Line 26:
“Determining the most clinically and cost effective diagnostic tests for Lyme disease will improve patient care and is of high priority. The clinical presentation of Lyme disease is very variable, with diagnosis of all presentations except erythema migrans relying in part on laboratory testing”

VIRAS appreciate the acknowledgement that NHS testing is inadequate and that improving it is ‘high
priority’, but this statement reveals some disturbing assumptions.

Direct detection tests are not mentioned: culture, immuno-flourescent antibody staining, including molecular beacons (the latter being 100% specific) and PCR (highly specific) which detect the presence of the actual infective organism – not only an immune response which NICE have already indicated can last for 3 years after treatment, making the tests they specify irrelevant to a substantial number of patients at risk and useless for determining prevalence.

Line 6 states: “However, we know little about the evolution of antibody titres over time in those who have been treated successfully and in those who have persisting symptoms.” [emphasis added]

This loaded statement implies that there are only two possible outcomes to treatment: 1/ success or 2/ "persisting symptoms", and as already noted, the latter are explained as NOT treatment failure (p12 lines 1 – 10). Even though “treatment failure” is mentioned in the draft, it is not addressed. There are no good medical or scientific justifications for this omission. The draft guideline evasion of treatment failure is a prejudice and discrimination against patients.

‘Reinfection’ is mentioned but failed-treatment and delayed-relapse due to failed-treatment are not. Perhaps NICE do not want these patients to have a valid test, which could be interpreted as a strategy to discriminate against and marginalise those patients, deny them treatment and permit their ongoing infection to progress. This stratagem would permit PHE to claim that all cases of proven ‘post-treatment’ Lyme must represent ‘reinfection’. That would give PHE and individual doctors a useful get-out for their years of individual and collaborative failures. They can evade blame for harms due to inadequate treatment because the patient must have got ‘reinfected’. Therefore this serves the interests of PHE whilst discriminating against patients and their medical needs.

How will ‘cost effectiveness’ be calculated? What price will NICE put on a formerly healthy person spending years or decades confined to their home by untreated or under-treated Lyme disease?

The claim that “diagnosis of all presentations except erythema migrans relying in part on laboratory testing”, is badly misleading and reconfirms our objection that this draft guideline assumes that NHS testing for Lyme can reliably diagnose the disease and must therefore also be able to rule it out. No diagnosis of Lyme disease can ‘rely’ in part or whole on NHS laboratory tests. These tests can only provide support for a
Lyme disease

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clinical diagnosis in-line with the test kit manufacturer’s instructions.

VIRAS recommend replacing, “diagnosis of all presentations except erythema migrans relying in part on laboratory testing” with: “diagnosis of all presentations are always a clinical decision based on assessment of the evidence and are not required to agree with any laboratory test results obtained.”

The gold-standard test for any infection is direct detection of the infective organism, which for some reason best known to themselves, NICE have omitted. The draft guideline specifies a “serological antibody-based test”. This suggests bias which might allow PHE/RIPL tests to be judged only against tests with related methodologies, rather than against the best that can be achieved. This bias, which would predictably help to preserve the PHE/RIPL monopoly on UK testing has anti-trust implications and must be eliminated. The draft is supposed to represent a clinical guideline, not an illegal business venture. Even though these are research recommendations, their inclusion requires that they meet the standard for a Clinical Guideline. The ‘customer’ for NHS Lyme tests is not PHE or RIPL or doctors, it is the patients that get tested. It is the interests of patients and what they want and need that must come first. Patients may understandably place a high value on their health. They may appreciate being able to go to work, have holidays and play an active role in their social circles. They may enjoy being able to walk, talk, read and watch TV. Those that understand that a severe case of Lyme disease could deprive them of all of those things, might well consider that a £200 test with 60% sensitivity would be a far better purchase than a £50 test with 50% sensitivity. Society at large might also agree, if it understands that inaccurate testing could deprive it of thousands of formerly productive citizens who have become disabled because of a false-saving on testing.

The question posed in the draft is a compound question when it should have represented two completely different issues. This indicates a disturbing lack of understanding of the complexities, consequences and costs of Lyme disease diagnosis and misdiagnosis, and an even more disturbing lack of caring.

“Many symptoms associated with Lyme disease have more common causes, so testing is helpful to ensure accurate diagnosis and appropriate treatment”

This bizarre sentence appears to be contrived to mislead with assumptions. A test with ~50% accuracy cannot possibly be “helpful to ensure accurate diagnosis” – it is impossible. In all cases, diagnosis is based on a physician’s evaluation of the evidence. Laboratory testing as used by the NHS is already known to be unreliable. Just HOW unreliable remains to be seen and will only ever become clear when those tests
can be compared with better tests, which have been demonstrated to have sufficient accuracy to actually provide an acceptably reliable diagnosis, e.g., with sensitivity and specificity equivalent to tests for HIV.

Numerous aspects of these draft guidelines are not only bereft of scientific exactitude, they appear to be innocent of the most basic powers of logic. Thank goodness this is only a draft.

"Because of the limitations of tests for Lyme disease the committee also agreed that people with negative test results who continue to have symptoms might be discussed with or referred to an infectious disease specialist or a specialist appropriate for the person’s symptoms to review whether further tests are needed or to consider alternative diagnoses."

This statement appears innocent enough even though it actually makes no sense. But for those who are aware that PHE have formulated cynical plans to marginalise chronically ill Lyme patients, it appears that this statement is part of that agenda.

EVERY patient with ongoing symptoms gets further investigation when initial investigations do not find the cause of their symptoms. This is routine practice, which makes the draft guideline statement bizarre. The claim that the referral of patients to a specialist is: “Because of the limitations of tests for Lyme disease”, appears disingenuous and evidence is provided below to support this view.

The NICE draft guideline statement appears to be just one stage of a planned DISENGAGEMENT STRATEGY to get rid of problem patients, who have negative Lyme serology but remain ill with symptoms correlating to Lyme. This criteria will predictably apply to the vast majority of UK patients with chronic Lyme disease.

The procedure for this particular ‘stage’ of disengagement is that a ‘Consultant physician’ will have examined the case or discussed it with a GP, and when they cannot find anything wrong and based-on-all-the-evidence, declare that they are certain that it is not Lyme disease. This is to be followed by the Penultimate Stage when the ‘Specialist’ says, “I am sorry that you have these (subjective) symptoms, but we cannot find any cause for them, perhaps you should see a psychiatrist”.

The Final Stage is for the GP to provide a diagnosis of Chronic Fatigue Syndrome (CFS) and offer a course of CBT or Graded Exercise. Whatever the patient does or says, their symptoms have been investigated to
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the fullest extent necessary to prevent a successful complaint and they are now officially, on a medical rubbish-heap where they can be refused any further investigations or treatment. If they don’t like it, they can take themselves and their illness elsewhere. If they do not get a label of ‘CFS’, alternatives might include Post-Treatment Lyme Disease Syndrome (if they had any treatment for Lyme) Somatic Symptom Disorder, Bodily Distress Disorder, Malingering or Being a Nuisance, or any other convenient waste-basket label which all amount to the same thing. This is PHE’s plan for the ‘disengagement’ of chronically ill Lyme patients from their healthcare provider. PHE must be delighted with the contribution that the draft guidelines makes towards realising this goal.

EVIDENCE OF PLANS TO MARGINALISE AND DISENFRANCHISE PATIENTS WITH CHRONIC LYME DISEASE

In a document prepared by PHE and submitted to the Health and Safety Executive (HSE) (http://www.hse.gov.uk/aboutus/meetings/committees/acdp/161012/acdp_99_p62.pdf) are the following remarks:

“As a significant proportion of self-acclaimed Lyme sufferers are self diagnosed, with no objective evidence of infection, it is essential to develop protocols that identify true cases, and refer those with other conditions sympathetically but firmly to appropriate practitioners for their problems.” (p.3)

“RIPL and HPA staff will discuss with Simon Wesseley’s (sic) group and other interested parties the development of guidance for clinicians on dealing with the disaffected group with unprovable Lyme disease. This will cover the therapeutic approach, investigation of cases and “disengagement” strategies when further investigation is counter-productive.” (p.24)

According to these draft NICE Guidelines, and in fact, most other guidelines for Lyme disease, the only objective sign of the infection is an EM rash which occurs in around 25% of cases. If PHE took the trouble to actually communicate with patients, they would find that many of these so-called “self diagnosed” patients, have in fact had EM rashes. Aside from an EM rash, the only practical currently available ‘objective evidence’ is direct detection of the infective organism, or as a second best - indirect detection by the presence of immune markers. Contrary to the assertions of PHE, many of the patients that they have denigrated and intend to marginalise, do actually have ‘objective evidence’ of infection with Lyme bacteria, identified by top-class laboratories, some of which have accreditation superior to that of RIPL.

Furthermore, in those patients that did not have or do not recall having a rash and whose only serology was
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provided by the inaccurate tests supplied at RIPL, it is often found that they have (or had) high risk occupations and/or leisure and sporting activities. It is also often found that they live in or have visited highly endemic areas called ‘hot spots’. Also, investigation of the so-called “self diagnosed” patients would frequently show that prior to becoming ill, many of these patients were very fit and active with no history of significant physical or mental illness, and that they have an illness which has devastated their health and deprived them of their social roles and careers. They also have symptoms which strongly correlate to Lyme disease.

These observations about common features of patients are based on VIRAS member’s years of participation in support groups. We now witness almost daily occurrences of patients joining groups because they have illness following a tick bite, some with EM rashes, and too many of these have been dismissed by their doctor without even a test for Lyme disease. Some are told that ‘there is no Lyme disease in this area’, or incredibly that, ‘there is no Lyme disease in the UK’. People with symptom profiles highly indicative of Lyme who do get tested are told by their doctor that ‘your test results were negative so you do not have Lyme’, without informing the patient that negative serology cannot exclude Lyme (rather suggesting that the doctor may be unaware of this basic fact). Many patients who had been misdiagnosed with ‘Chronic Fatigue Syndrome’ and M.E. and who learn about Lyme disease, share a history which strongly suggests that Lyme disease has been the cause of their illness, yet they have never been investigated. We now frequently witness patients who had been diagnosed with an EM rash or NHS positive serology, who were treated with 2 or 3 weeks of antibiotics, but weeks, months or even years later their symptoms are not just relapsing, but are worse than they were before they were originally treated.

The mismanagement of Lyme disease has caused untold suffering. But instead of admitting its failings, PHE are arranging matters so that the very patients that it has so egregiously failed, will take the blame for their illness and suffer even more. The denigrating remarks in the document sent to the HSE are an insult to these patients who would be entirely justified in laying the blame for the chronic and devastating nature of their illness squarely at the door of PHE. But instead of honesty and an apology, these often terribly ill patients, they get more insults and stratagems to ‘disengage’ them from their healthcare providers.

No ELISA, Western blot or combination of these two has ever been independently validated for UK patients or the UK strains of borrelia causing disease. In addition to its disturbing misrepresentation of sensitivity figures, the HPA then shockingly state that “A negative ELISA does not require a confirmatory western blot and is recorded as negative (Centre for Disease Control 1995).” Whilst the HPA imply that this practice will
result in a tiny percentage of false negatives, the reality is that it has, and will continue to result in a substantial and foreseeable percentage of false negatives:

In a study of 90 patients, Tylewska-Wierzbanska and Chmielewski concluded that (https://www.ncbi.nlm.nih.gov/pubmed/12422608):

“**There is no correlation between** the level of antibodies (ELISA), the number of protein bands (Western blot) and the presence of spirochetes in body fluids (culture and PCR), indicating that in addition to serological testing the use of PCR and cultivation in the diagnosis of Lyme borreliosis should be recommended.”

The implications of this are important. This study was a rare example of the type of study needed to quantify the comparative efficiency of different testing methods. **This type of investigation is almost completely absent from Lyme disease literature and with good reason.** It must cause serious consternation to test kit manufacturers and anyone who has made exaggerated claims for these tests and whose credibility could depend on those same kits being reliable. Yet the research showed unequivocally that whenever a single testing methodology is used, its sensitivity is unacceptable. Please remember, that even with 2 tier testing, diagnosis is by two SINGLE tests. This DOUBLES the chances for low sensitivity to exclude patients from a diagnosis and treatment.

RIPL omitted to apply this basic scientific discipline when they chose the VIRAMED tests for UK patients. They ‘validated’ the new test against the two-tier test they had previously been using, and which relied on virtually identical methodology.

**What Tylewska-Wierzbanska and Chmielewski showed, is that the presence of borrelia antibodies has no reliable correlation to the presence of Lyme spirochaetes infecting a patient.** The implications of this finding has been continuously evaded by test kit manufacturers and testing laboratories such as RIPL. **There can be only one interpretation of this anti-evidence, anti-science conduct, and that is that the intention is to NOT diagnose and not treat Lyme disease.**

So, whilst we do not know exactly how many false negative ELISA’s RIPL produce, according to the literature it will be a bare minimum of 30% and would probably be shown to be double that amount if alternative methods were used and increase again if UK isolates were included. In two-tier testing (as required by PHE for Lyme serology) the number of false negatives would render the method entirely
### Lyme disease

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useless except perhaps in helping to confirm a small percentage of TRUE POSITIVES, whilst at the same time producing numbers of FALSE NEGATIVES that would be unacceptable in any other serious infectious disease.

We do not know whether RIPL’s current virtual monopoly on Lyme disease testing for patients in England represents a conflict of interests for members of the GDC, but the recommendations in the draft guideline would obviously ensure that the monopoly continues. Whilst that monopoly cannot do RIPL’s reputation any harm, it is reasonable to speculate that it serves their purposes, whether those purposes include costs, or control over diagnosis and treatment of Lyme disease in the UK, and control over antibiotic prescriptions for infected patients.

In the production of this draft guideline, it appears that NICE have permitted the GDC to be controlled by those who are in collusion with highly questionable conduct, have interests which would predictably compete with the most effective diagnostic methods and treatment of patients, anti-trust issues preventing open competition for laboratories to market their tests on a level-playing-field, preconceived opinions about patients and outright abuse of those patient’s, their rights and needs. The whole thing reeks of a predefined agenda that has been facilitated and promoted by NICE, and which from all appearances will be endorsed and ‘validated’ by the auspices of NICE.

**CONCLUSION TO THE VIRAS STAKEHOLDER COMMENTS**

In view of the extraordinary number of opportunities that these NICE guidelines provide for putting doctors and patients at serious risk, it is essential for all interested parties to be aware that NICE take no responsibility for any misleading information or dangerous advice included in their guidelines. Here is a typical NICE Guidance disclaimer:

“Health care providers need to use clinical judgement, knowledge and expertise when deciding whether it is appropriate to apply guidances. The recommendations cited here are a guide and may not be appropriate for use in all situations. The decision to adopt any of the recommendations cited here must be made by the practitioners in light of individual patient circumstances, the wishes of the patient, clinical expertise and resources. The National Clinical Guideline Centre disclaims any responsibility for damages arising out of the use or non-use of this guidance and the literature used in support of this guidance.”


Whilst NICE have discarded a wealth of research and evidence as unsuitable in preparing their guidance,
that same evidence may nevertheless stand-up in court. Examples of foreseeable harms to patients are: if and when the restrictive treatment recommendations fail to eradicate a Lyme infection and a patient suffers injury as a result, or, if and when laboratory testing deprives a patient of a necessary diagnosis and treatment, and they suffer injury as a result. Then the evidence that has been ignored may receive a fair hearing in legal proceedings, especially as much of this information comes from very experienced scientists and physicians. Harms to patients and complaints against doctors are not just predictable, they are inevitable if doctors with Lyme disease patients follow the advice as presented in the draft form. However, none of this is any consolation to doctors who do not want to spend their time dealing with GMC complaints and law suits, but who simply want to help their patients based on a balanced presentation of the available pool of knowledge.

VIRAS and others have provided ample evidence of foreseeable harms resulting from misleading advice about Lyme disease. NICE may wash their hands of any responsibility by claiming that individual doctors are responsible for their clinical decisions, but they can and will be held to account for negligently misleading the public and government agencies, discriminating against sick and disabled patients, and permitting their procedures to be exploited by groups and individuals with competing interests.

Doctors do not have to follow NICE guidelines but they must be able to justify their clinical decisions. The USA Centers for Disease Control and Prevention (CDC) now estimate that they have over 300,000 cases of Lyme disease per year. Some of the most experienced and knowledgeable Lyme disease doctors and scientists in the USA have produced reliable and trustworthy advice on the management of diverse aspects of Lyme disease. For doctors who want a thorough understanding of Lyme disease medicine, including the limitations of current knowledge, VIRAS recommends the authoritative resources listed here:


VIRAS reject the NICE draft guideline as unfit for purpose. It contains some downright dangerous advice and too many contradictions to even form the basis of a semi-reasonable guideline. It is biased, discriminatory and appears to be designed to serve undeclared agendas. It implies certainty where there is none. Where it admits uncertainty it omits to provide balanced views to allow doctor’s and patients to make informed choices or permit informed consent. This makes the draft unethical. It evades awkward and potentially embarrassing issues such as the inaccuracy of testing provided by the NHS, which it misrepresents with false assurances. The guideline is neither quantitative or qualitative or a rational amalgam of both. It is bereft of scientific discipline or basic humanistic and medical values.
NICE should have halted the process and rejected the task of producing a guideline when it became apparent that the vast majority of research did not meet the threshold for inclusion. Instead, it has produced a draft based on just a tiny and biased proportion of decades of research. The draft guideline is irrelevant to 99% of UK Lyme patients who would be harmed by its publication. The number and nature of the Research Recommendations clearly shows that not enough is known to produce a guideline that could remotely approach the required standards for a NICE Guidance. These Research Recommendations relate to absolutely basic medical science concerned with the diagnosis, treatment and management of Lyme disease. Without good data to work with, or a balanced presentation of the evidence available, the end product could only ever be a self-contradictory and impractical mess.

Thousands of UK Lyme disease patients have been obliged to take matters into their own hands due to the ignorance and incompetence of Public Health England. PHE (incorporating the HPA) have actively obstructed the diagnosis and treatment of Lyme disease patients for decades. The victims of this discrimination have been forced to either accept terrible illness which for many, represents a life-sentence of loss and suffering, or to seek medical help elsewhere. Patients spend their often meagre income and all their savings to get accurate tests and treatment that have been denied to them by the NHS. The outcome of the treatment that they are forced to pay for, may not always be the cure that they sought. This is partly due to the incompetence that has delayed their diagnosis and treatment for months, years or even decades. Yet for many, their treatment brings great relief. Some of the appalling chronic symptoms improve or resolve completely. Physical and mental functioning which could have been reduced to just a tiny percentage of their pre-Lyme infection levels, are substantially improved and can be maintained with treatment. These patients KNOW what PHE policies have done to them and are doing to others. They will recognise the PHE official position on Lyme disease permeating the NICE draft guideline. They are not paranoid or conspiracy-theorists, they know from their own lived experience that Lyme disease is a national health threat that is being controlled by vested interests that disregard their Human Rights and the most basic tenets for the practice of medicine. It is in spite of PHE that many of these patients have improved health, and such is the suffering that many have endured, they do not want others to have a similar experience. With the finest motives that grace humanity, even though their health and fitness may still be just a sad remnant of the energy they once enjoyed, they give of that time and energy to help others who will otherwise be doomed by PHE to the living hell of chronic Lyme disease.

The draft guideline shames UK medicine and will bring the good names of the NHS and NICE into
Lyme disease

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<td>.disrepute. The danger to patients is obvious. This confused and confusing guide will predictably harm patients and threaten the reputation and values of doctors who place their trust in it.</td>
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**Checklist for submitting comments**

- Use this comment form and submit it as a Word document (not a PDF).
- Where commenting on one of the 15 guideline chapters, please enter the number only in the document column (essential so we know which document you are commenting on), and the page and line numbers.
- Complete the disclosure about links with, or funding from, the tobacco industry.
- Include page and line number (not section number) of the text each comment is about.
- Combine all comments from your organisation into 1 response. We cannot accept more than 1 response from each organisation.
- Do not paste other tables into this table – type directly into the table.
- Underline and highlight any confidential information or other material that you do not wish to be made public.
- Do not include medical information about yourself or another person from which you or the person could be identified.
- Spell out any abbreviations you use.
- For copyright reasons, comment forms do not include attachments such as research articles, letters or leaflets (for copyright reasons).
  
  We return comments forms that have attachments without reading them. The stakeholder may resubmit the form without attachments, but it must be received by the deadline.

You can see any guidance that we have produced on topics related to this guideline by checking NICE Pathways.

**Note:** We reserve the right to summarise and edit comments received during consultations, or not to publish them at all, if we consider the comments are too long, or publication would be unlawful or otherwise inappropriate.

Comments received during our consultations are published in the interests of openness and transparency, and to promote understanding of how recommendations are developed. The comments are published as a record of the comments we received, and are not endorsed by NICE, its officers or advisory Committees.

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