Commission on Human Medicines

Isotretinoin expert safety review – a plain-language summary of the recommendations

26 April 2023

This is a summary of the 'Report of the Commission on Human Medicines' Isotretinoin Expert Working Group'. It is written in plain English and can be used by anyone who wants to understand the recommendations arising from the expert safety review of the suspected psychiatric and sexual side effects of isotretinoin.

The full scientific report is available at https://www.gov.uk/government/publications/report-of-the-commission-on-human-medicines-isotretinoin-expert-working-group.

The Medicines and Healthcare products Regulatory Agency (MHRA) is the regulator of medicines, medical devices and blood components for transfusion (such as red blood cells, platelets, and fresh frozen plasma) in the UK. The MHRA is responsible for making sure these meet acceptable standards for safety, quality and efficacy (effectiveness).

The Commission on Human Medicines (CHM) advises the government about medicines safety. The CHM is independent – it is not part of the government or the pharmaceutical industry.

The MHRA gets advice from the CHM and its expert groups. The MHRA created and published this summary as part of that role.

Key recommendations of the expert safety review

A working group of experts considered the available scientific data and safety information relating to suspected psychiatric and sexual side effects associated with isotretinoin. It also considered information provided by patients and their families. The members listened carefully to both positive and negative feedback from people with experience of isotretinoin, and carefully considered the feedback when making their recommendations. The working group concluded that the balance between the benefits and risks of isotretinoin for severe acne remains favourable (that is, the benefits outweigh the risks), but better information, better monitoring, and additional oversight of the start of treatment in young patients under 18 would further help to minimise the possible risks.

Key recommendations from the expert safety review are summarised below.

1. Better information
Patients and their families should receive better information about the risks of isotretinoin so that they can make an informed decision before using this medicine.

2. Better monitoring
There should be more consistent monitoring of a patient's psychiatric and sexual health so that any problems are spotted earlier and there are defined routes for patients to receive help.

3. Better checks
There should be tighter controls on first prescribing isotretinoin to young people (aged 12 to 18) so that it is only started when doctors agree the acne is severe enough to justify it and that other standard treatments have been sufficiently tried and haven't worked.

4. Better communication
Patients should receive information about the risks of isotretinoin earlier, before they have a full discussion with a specialist dermatologist (an acne specialist). Patients and their families will then have more time to fully consider the benefits and risks of isotretinoin. All healthcare professionals involved in the care of patients should keep each other informed about any suspected side effects they become aware of in a particular patient.

5. Better knowledge
More research should be carried out into the risks of psychiatric and sexual side effects associated with isotretinoin. This includes the need for safety studies to gather more information about what happens to patients who take isotretinoin (for example, a database (registry) to record possible side effects and other information during and after treatment).

More information on these recommendations is included later in this report.

The working group reported its recommendations to the CHM, which endorsed them. The CHM has set up a special group to advise on putting the recommendations into practice.

Introduction

What is isotretinoin and what are the benefits and risks?

Isotretinoin is an effective treatment for severe types of acne, especially if there is a risk of permanent scarring. Brand names for isotretinoin in the UK are Roaccutane and Reticutan. Isotretinoin is used when acne has not got better with other treatments, including antibiotics and skin treatments.

Isotretinoin has helped many people with severe acne, and some patients have told the MHRA that it greatly improved their skin and their wellbeing. Patients emphasised the effect severe acne has on their lives, and were concerned about the possibility of isotretinoin being taken off the market as a result of the review.

Like every medicine, isotretinoin is associated with a risk of side effects.

Common side effects linked to isotretinoin include dry skin, dry eyes, joint pains, and sore or chapped lips. Serious side effects associated with isotretinoin include problems with muscles, blood and the immune system, but these are very rare. Isotretinoin can also seriously harm unborn babies if it is taken during pregnancy.

Isotretinoin has also been suspected of being associated with mental health problems, such as depression or anxiety. We refer to these suspected problems as psychiatric side effects. And some patients have also told the MHRA that they have had sexual problems while taking isotretinoin (such as trouble getting and maintaining an erection, vaginal dryness and reduced sex drive). We refer to these suspected problems as sexual side effects.

Serious side effects when using isotretinoin are infrequent and do not affect all patients. We don’t always know whether suspected side effects are actually caused by isotretinoin. However, these effects can be unpredictable and serious in some people. It is important that any patient on isotretinoin who has a serious side effect stops taking their tablets and talks to a doctor.

Because of the risk of serious side effects, isotretinoin should only be used when acne has not got better with other treatments, including antibiotics, creams and gels. The doctor prescribing isotretinoin will talk to patients about the risk of side effects before they start treatment and then monitor them closely.

The expert safety review

Why was there an expert safety review of isotretinoin?

The MHRA and the CHM have kept a close eye on the safety of isotretinoin for a long time. This includes asking a previous expert working group to review the risk of psychiatric side effects. Advice for healthcare professionals and patients has been updated as new information became available.

Patients and members of the public have raised concerns about some side effects suspected of being associated with isotretinoin, particularly whether suspected psychiatric and sexual side effects may continue after treatment with isotretinoin has stopped. The MHRA has also continued to receive reports of serious suspected side effects through its safety monitoring systems (the MHRA's Yellow Card scheme).

Who carried out the expert safety review?

The expert safety review was carried out by the Isotretinoin Expert Working Group (the working group). CHM formed the working group in September 2019, and asked it to look into the safety of isotretinoin. This followed concerns from patients about the risks of psychiatric and sexual side effects.

A list of the members of the working group is published online. All members had to declare any financial and personal interests in isotretinoin and follow rules on such interests.

Members included:

- medical and scientific experts
- representatives of the public (lay members), and
- observers from clinical organisations like the NHS and NICE (the National institute for Health and Care Excellence).

What were the aims of the expert safety review?

The aims of the expert safety review were published online. In summary, it aimed to do the following.

1. Review all information available on the psychiatric (mental health) side effects suspected to be associated with isotretinoin.
2. Review all information available on the sexual side effects (side effects affecting sexual function) suspected to be associated with isotretinoin.

3. Consider whether the available information changes the balance of benefits and risks associated with using isotretinoin.

4. Consider what sort of research could be done to find out more about the risks and what reduces them.

5. Make recommendations to the CHM to improve the balance of benefits and risks for isotretinoin, to raise awareness of the associated risks, and for further research to find out more about the risks.

How were people able to contribute?

The experiences of patients and their families were vital to the review. It was important to consider both positive and negative feedback. The views of other stakeholders (people with an interest in or concern about isotretinoin) were also considered.

As well as patients and families, important stakeholders for isotretinoin included:

- healthcare professionals like dermatologists and GPs
- groups representing healthcare professionals, such as the British Association of Dermatologists and the Royal College of GPs, and
- healthcare organisations such as the NHS and NICE.

To get peoples' feedback on their experiences, the expert safety review issued a 'call for information'. This was open for 14 weeks (from 10 November 2020 to 16 February 2021). Patients, members of the public and stakeholders were invited to give their views on:

- whether isotretinoin is being used correctly to treat acne (both positive and negative views)
- any risks associated with taking isotretinoin, particularly possible effects on mental health and sexual health
- the measures in place at the time to minimise the risks, and
- whether further measures are needed to make treatment with isotretinoin safer and to raise awareness of potential risks.

A total of 710 complete responses were received. These included 659 responses that provided views. The remaining 51 registered their interest in only receiving updates about the review. Of the responses received, 595 were from people treated with isotretinoin, the family or friends of people treated with isotretinoin, and charities and patient organisations. In addition, 150 were from healthcare professionals or healthcare organisations. Some people were in more than one grouping.

The working group also held meetings to hear directly from patients and stakeholders about their experiences of isotretinoin and how they felt the risks should be managed. A total of 84 people registered to attend meetings. Of the 84 people, 72 were patients or their friends and family members, and 12 were other stakeholders.

All of the people who registered were invited to one of the meetings held in July 2021.

The working group heard seven hours of presentations. The presentations were given by 29 patients or family members, and 10 were given by other stakeholders. People were invited to contribute by email if they could not attend a meeting.

What else did the working group consider?

The working group considered all the available information on psychiatric and sexual side effects suspected to be associated with isotretinoin, including information:

- on suspected side effects reported by patients and healthcare professionals through the MHRA's Yellow Card scheme
- from research into the risks and the scientific mechanisms that may explain these events,
- from published studies about patients taking isotretinoin, and
- about how isotretinoin safety is managed in other countries, such as in the USA.

What did patients and stakeholders say and how did this influence the review?

The importance of gathering the views of patients, their families and other relevant stakeholders was emphasised from the start of the expert safety review.

Patients and other stakeholders were given the opportunity to present information to the working group. The level of interest in getting involved was greater than anticipated. Three sessions were held to give everyone who wanted to get involved the opportunity to present their views to the working group.

Some patients who had used isotretinoin spoke of the positive effect it had on their severe acne and how this had improved their skin and their wellbeing.

Other patients spoke about psychiatric and sexual side effects they had while taking isotretinoin. Patients and their families spoke about how seriously these side effects had affected them.

Patients and their families called for clearer information about side effects. Many also felt that patients should be monitored more consistently to spot these problems. Some stakeholders felt that isotretinoin was used inappropriately (for example, in people who did not have severe acne).

Some patients emphasised the effect severe acne has on their lives and were concerned about the possibility of isotretinoin being taken off the market after the review. Others did not consider isotretinoin to be safe enough for any patients to be prescribed it.

Some other stakeholders raised concerns about whether isotretinoin was suitable for younger patients, who may not fully understand the risks. There were calls from these patients and family members to restrict the use of isotretinoin in people under the age of 18.

The experiences and views expressed by stakeholders were of primary importance to the working group's final recommendations. More information about the contributions of patients, and how they influenced the review, can be found in the later sections of this summary.

What did the working group recommend?

The working group made recommendations for actions to minimise the risks of isotretinoin. The recommendations are explained in detail in the sections later on. These recommendations included that patients should be made aware of all risks so they can make an informed choice before treatment. The recommendations also include that patients should be monitored more effectively for side effects.

The working group considered the complex relationship between isotretinoin, severe acne, mental health and sexual health. It concluded that gaps in the available information meant that it was not possible to say that isotretinoin definitely caused many of the short-term or long-term psychiatric and sexual side effects, but that this cannot be ruled out. However, the individual experiences of patients and families continue to cause concern. This supports the need for patients to be informed about the risks before starting isotretinoin treatment, for there to be greater oversight of prescribing in young patients, and for patients to be monitored more regularly for side effects.

It was agreed that the balance between the benefits and risks of isotretinoin for severe acne remains favourable but that better information, better monitoring, and additional oversight of the start of treatment in young patients would further help to minimise the risks. The recommendations aim to make sure that the benefits of isotretinoin as an effective treatment for severe acne continue to outweigh the possible risks.

What did the CHM conclude?

The CHM was presented with a report from the expert group, and its recommendations.

The report included the information on suspected side effects that the working group considered, and details of research into the risks. The report also included the current safety advice for isotretinoin in the UK and information on safety systems for isotretinoin in other countries, such as the USA.

The CHM took account of all the evidence presented by the expert safety review, including statements from patients and their families, and considered a range of possible options for regulatory action.

Patients and other stakeholders who had contributed to or had an interest in the expert safety review were invited to watch part of the CHM meeting in December 2021 and could provide comments and ask questions online.

After careful consideration and discussion, the CHM endorsed the recommendations from the expert safety review. The CHM agreed that the balance between the benefits and risks of isotretinoin for severe acne remains favourable, but action should be taken to make sure patients are fully informed about isotretinoin and are effectively monitored during and after treatment.

The CHM concluded that the product information and educational materials need to be updated because patients and their families need better information about the risks of isotretinoin so that they can make an informed decision before using this medicine. The CHM recommended that patients and their families should also have more time to fully consider the benefits and risks of isotretinoin before treatment starts.

For patients under 18, the CHM recommended that additional oversight from two prescribers is needed before the first use of isotretinoin. In addition, the CHM concluded there needs to be more consistent monitoring of all patients' psychiatric and sexual health.

Finally, the CHM concluded that more research needs to be carried out into the risks of psychiatric and sexual side effects suspected to be associated with isotretinoin, to gather more information about what happens to patients who take isotretinoin.

What happens next?

The CHM has formed an Implementation Advisory Group to:

- advise on how to put the recommendations into practice
- help develop communications and educational materials for patients,
- monitor the effectiveness of these new measures, and
- advise on future research and a registry.

The Implementation Advisory Group is made up of experts and representatives of the healthcare organisations who will be involved in putting these recommendations into practice. The group will report back to the CHM on the progress it is making.

The recommendations

1. Updates to the information on risks provided in the product information

Warnings about psychiatric side effects

Patients and stakeholders raised concerns about psychiatric side effects that have been associated with isotretinoin. These concerns included low awareness of the potential severity of side effects and the different types of effects that have been reported.

The working group found that the current warnings in the product information were consistent with the information available. The warnings were also consistent with case reports and the experiences of patients who contributed to the review. However, the working group noted that many of the patients and their families reported that they were not told about the warnings before they were given isotretinoin. This supports the need for patients to be provided with better information about risks before they start treatment (see section 2).

Frequency of psychiatric side effects (depression, a worsening of depression, suicidal thoughts, suicide and attempted suicide)

For all medicines, the product information includes frequencies of potential side effects (for example, 1 in 100 people). These frequencies help patients and healthcare professionals understand how likely side effects are.

Patients raised concerns that the current information on side effects for isotretinoin was not accurate. Some patients felt that side effects were more common than the current estimates because people did not always report side effects to the MHRA's Yellow Card scheme. Under-reporting was felt to be particularly likely for side effects of a sensitive nature, such as those affecting sexual function.

The working group looked at the information provided on how often certain psychiatric side effects, such as depression or suicidal thoughts, were likely to arise. The working group also considered the information this likelihood was based on. They felt that the available data was not strong enough to accurately say how often some side effects arose while taking isotretinoin.

The working group raised the issue that the product information suggested that the rate of a mental health condition arising while on isotretinoin was lower than the rate of that condition in the general population. For example, the product information said that depression may arise as a rare side effect, affecting up to 1 in 1,000 patients treated with isotretinoin. In the general population in the UK, a study estimated that around 4 to 5 people in 100 (equivalent to 40 to 50 in 1,000) experience depression.

The working group thought that saying ‘up to 1 in 1,000’ implies that a patient’s risk of depression is much lower if they take isotretinoin, which may not be the case. This could be particularly true for younger people, who have a higher incidence of mental health conditions.

The working group recommended that the frequency of psychiatric side effects (depression, a worsening of depression, suicidal thoughts, suicide and attempted suicide) in the product information should be changed to ‘not known’. This phrase is used in regulatory product information when it is not possible to give an accurate estimate of how likely side effects are. It does not mean that the side effects are very common or are rare, and it does not mean the frequency is lower than other side effects listed.

The working group recommended that further information about these risks, and the estimated frequencies of side effects in different age groups of the general population, should be provided to patients. The best way of explaining these risks should be explored with patients and other stakeholders, and these explanations should be supported by educational materials. This is because it will be important for patients and their caregivers to understand that the level of risk could be greater than was previously included in the product information and could be higher in younger age groups.

The CHM Implementation Advisory Group will help develop communications and educational materials for patients, and patient feedback and insights will be gathered to make sure these are appropriate.

Risk of sexual side effects, including after treatment with isotretinoin has stopped

Many patients and stakeholders were particularly concerned about low awareness of the risk of sexual side effects suspected to be associated with isotretinoin, and that these side effects may continue after stopping isotretinoin.

The working group recommended that the product information should include warnings about the possibility of sexual side effects continuing after a patient stops taking isotretinoin. These side effects include erectile dysfunction (trouble getting and maintaining an erection), vulvovaginal dryness (dryness of the vulva or vagina, or both), and reduced libido (lower sex drive).

Although the evidence is limited, the working group recommended that the warning about the risk of sexual side effects should include other sexual side effects that were reported. As a result, the product information will list orgasm difficulties (problems reaching orgasm or not being able to orgasm) and genital hypoaesthesia (lack of feeling in the genitals) as possible side effects.

Other side effects

Many patients were also concerned that some other side effects can be long term and continue after isotretinoin treatment has stopped.

The side effects of a medicine usually stop soon after a patient stops taking it. The product information includes a general statement that some side effects of isotretinoin can persist after the treatment with isotretinoin has ended.

The working group considered responses to the call for information about long-term side effects other than those affecting mental health or sexual function. However, a lack of sufficient information on these effects meant that it was not possible to define the risk for symptoms continuing long term or identify specific risk factors. This meant that the working group did not suggest changing the existing warnings about other side effects at this point.

Further research is needed to establish the extent of the risk of side effects, including psychiatric and sexual issues, continuing long term. This is discussed in section 5, ‘Further research’.

2. Improvements to counselling and monitoring

Isotretinoin is authorised for treatment of severe acne that has failed to respond to other treatments. It should not be prescribed for patients who have not already tried an adequate course of other treatments for acne or for patients who have mild or moderate acne.

The working group considered the complexity of the relationship between acne and possible psychiatric and sexual side effects. It also considered the importance of awareness so that patients know how to get help and receive appropriate support.

For the purpose of the expert review:

- counselling is where a healthcare professional has talked to the patient and provided information and materials about the benefits and risks of treatment, including a clear explanation of potential side effects, and
- monitoring means that a healthcare professional is assessing how a treatment is affecting a patient, both positively and negatively, over a period of time.

Patients and their families called for clear information about side effects to be provided to patients before they started treatment with isotretinoin. The request for clearer information about side effects was made by both people with positive experiences and people with negative experiences of isotretinoin. A number of stakeholders called for patients to be given enough time between receiving counselling on the risk of side effects of isotretinoin and needing to make a decision to start isotretinoin.

Many patients and families spoke of the need for regular monitoring of patients when they were taking isotretinoin, to spot problems earlier. Patients reported different experiences depending on the clinic they went to. This suggested a more consistent approach was needed across all clinics so that patients and their families know what to expect.

The working group recommended a number of measures to improve the counselling and monitoring of patients receiving isotretinoin. These included new recommendations for healthcare professionals plus new monitoring tools and new materials that should be used with patients and, where appropriate, their parents or caregivers.

Recommendations for psychiatric and sexual health

The product information should state that patients and their families (if appropriate) must receive counselling about the risk of psychiatric side effects and sexual side effects before they are prescribed isotretinoin, and ideally before any referral that might include considering treatment with isotretinoin. Patients should have their mental health and sexual function assessed before treatment starts and should then be monitored for developing psychiatric or sexual disorders.

To support consistent monitoring of psychiatric or sexual side effects, professional bodies and healthcare organisations should identify:

- the most appropriate tools (for example, questionnaires) to assess a patient's mental health or sexual function
- how often individual patients should receive monitoring, and
- clinical pathways (routes for care or support) for patients with serious or ongoing mental health conditions or sexual problems during or after treatment with isotretinoin.

Recommendations for better information

Patients and parents or caregivers should receive full information about the risks as well as the benefits of isotretinoin, so they can make an informed decision about treatment. The information provided should be clear and consistent.

The working group recommended that information should be developed in a range of formats to provide accessible, plain-language information to patients who are considering isotretinoin treatment. The information should include:

- the possibility of side effects continuing after treatment has stopped
- information on how patients can help themselves to manage common issues such as dry skin, and

- information to help patients and healthcare professionals discuss, understand and acknowledge the risks of treatment in a systematic way.

The working group recommended that after the first consultation, patients and their family or caregivers should be given enough time to read the educational materials, and ask any questions, before isotretinoin is prescribed.

Acknowledgement of risk form

An ‘acknowledgement of risk’ form is already used for female patients prescribed isotretinoin. This is because isotretinoin can seriously harm an unborn baby and should not be used during pregnancy. Female patients and healthcare professionals prescribing isotretinoin must sign this form to confirm they understand the risks to an unborn baby and the need to avoid getting pregnant. The working group felt that this form could be changed to be suitable for all patients to sign to confirm that they understand all the risks of using isotretinoin.

The working group recommended the following.

- The current acknowledgement of risk form for female patients on isotretinoin could be updated to include all side effects and used for all patients.

- Stakeholders, including patients, their family or caregivers, and healthcare professionals, should be involved in developing the form to make sure it meets their needs.

3. Greater oversight of isotretinoin being prescribed for young people

Isotretinoin should not be used for the treatment of acne before puberty. Isotretinoin is not recommended in children younger than 12 as there is not enough information on how well it works or how safe it is for them.

There were calls for the use of isotretinoin to be restricted in young people. Concerns were raised that young people may be more susceptible to side effects as their bodies and brains are still developing. There were also concerns that young people may not fully understand the risks before treatment.

Some stakeholders also felt that isotretinoin was prescribed inappropriately to patients who did not have severe acne or who had not yet tried alternative treatments.

The working group noted patients’ and other stakeholders’ concerns about side effects in young people (aged 12 to 18). It considered whether isotretinoin can be used safely in this age group.

The working group did not find enough evidence of an increased risk of adverse effects in young people compared to other age groups. Delaying treatment for severe acne in younger patients could increase the possibility of long-term scarring, which may cause significant psychological harm. So it was felt that the evidence available did not support restricting the use of isotretinoin in young people. However, the working group concluded that more must be done to support appropriate prescribing for young patients.

Although no specific increased risks were identified for young people, patients and other stakeholders who gave both positive and negative views about isotretinoin raised significant concerns about the information available for patients under 18. Concerns were also raised about how consistently people in this age group are monitored.

The working group recommended that there should be more oversight of patients under 18, and their treatment, until there is more information on the level of risk. The recommendations for oversight were as follows.

- Young people under 18 should be treated, where possible, by a healthcare professional with appropriate expertise in children's and young peoples' skin conditions, such as an appropriately trained dermatologist.
- Young people should be treated in a setting where appropriate counselling on risks, and an appropriate course of action if side effects arise, can be given to patients and their parents or caregivers.
- There should be additional oversight of the first prescription of isotretinoin for young people under 18, including the need for two different prescribers to confirm that the treatment is appropriate before it is started, and that patients and their families have been adequately informed of the potential risks.

The working group recommended that more information should be collected on the use of isotretinoin in young people under 18, including a study of long-term effects in adulthood. They also recommended that further research on the risks for young people was needed, and this should be highlighted in wider communications on the review (see section 5, 'Further research').

4. Healthcare professionals involved in the care of patients with acne

Stakeholders reported that some doctors did not accept that isotretinoin might be causing the side effects they were experiencing. They also reported a lack of support for people experiencing side effects.

Patients and stakeholders highlighted a need for clear pathways for support and care for those experiencing side effects.

Patients and stakeholders also reported that side effects can be unpredictable and arise suddenly. This can make patients feel vulnerable and the families lost, not knowing what to do.

The use of isotretinoin is currently restricted in a number of ways. It can only be prescribed by specialists, which in the UK is understood to mean a consultant dermatologist (a senior doctor for skin problems) or other healthcare professional with appropriate expertise working as part of a consultant-led team.

'GPwERs' (GPs with an extended role) are family doctors with extra training in particular fields. The working group noted that GPwERs in dermatology have experience in managing mental health and sexual health issues. There may be GPwERs who are prescribing isotretinoin independently, with secondary care provided by local dermatology consultants.

The working group recommended the following.

- The potential for GPwERs in dermatology to prescribe isotretinoin for adult patients should be explored further with the appropriate professional bodies.
- Dermatology services should tell GPs that their patient has started treatment with isotretinoin.
- A healthcare professional should let all involved healthcare professionals know if a patient taking isotretinoin experiences problems such as side effects.

5. Further research

Stakeholders called for more research on the side effects of isotretinoin and how they could be treated.

The working group concluded that more research is needed on the risks of psychiatric and sexual side effects. This includes how these possible side effects may be minimised, managed or treated. These studies are important and designing them can be challenging.

The working group welcomed the National Institute for Health Research's call for research on whether a smaller dose of isotretinoin could result in a lower risk of side effects while still treating severe acne effectively. This call for research, 'Benefits and harms of maintenance therapy for refractory acne vulgaris or previous relapses by reduced dose isotretinoin regimens', is published online.

The working group recommended the following.

More research needs to be carried out on the risk of side effects associated with isotretinoin, including:

- the frequency of side effects (how often they arise)
- biological mechanisms or pathways (what causes them to happen in the body), and
- biomarkers and genetic factors (biological or inherited factors which make patients more likely to get side effects).

More information about side effects of isotretinoin in people under 18 needs to be collected, including studying any potential long-term effects into adulthood. It was suggested that 'longitudinal studies' would be of benefit. These studies look at what happens to patients over a long period of time.

Further safety studies should gather more information about what happens to patients who take isotretinoin. These studies could:

- collect further information on suspected psychiatric and sexual side effects, including:
  - the types of side effects
  - how serious the side effects are
  - how long the side effects last
  - which groups of patients are affected, and
  - the relationship between psychiatric side effects and sexual side effects.
- identify any side effects not listed in the product information, identify the frequency of side effects reported, and gather information and understanding on side effects that continue or arise after isotretinoin treatment has stopped.

The working group also recommended that research is carried out to assess the effect of the new measures introduced with these recommendations. This is to make sure they have had the intended effect in minimising the risks of isotretinoin in UK patients.

Reporting side effects to the MHRA

All suspected side effects related to isotretinoin should be reported to the MHRA's Yellow Card scheme. This will help the MHRA to continue to monitor the safety of isotretinoin.

Side effects can be reported through the Yellow Card scheme website. Reports can also be made through the free Yellow Card app, which you can download from the Apple Store or Google Play.