



module 239

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for this module

GOAL

To assist pharmacists in assessing and correcting a patient's inhaler technique.

OBJECTIVES:

After studying this module you should be able to:

- Understand that inhaler devices are as important as the drug in managing respiratory disease
- Recognise common errors and discuss possible solutions to improve a patient's inhaler technique
- Describe best practice in the use of different inhaler devices.

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Optimising inhaler technique

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Introduction

Hippocrates is said to have designed one of the first inhaler devices in the fourth century BC – a jar with a hole in the lid, into which a hollow reed was inserted for inhaling the contents. Variations of this inhaler remained in use until the early 19th century. The first modern-style inhaler, the pressurised metered dose inhaler (pMDI), was launched in 1955¹ and is still one of the most commonly used devices for administration of respiratory drugs.

Worldwide, approximately 300m people have asthma² and 10 per cent of the adult population over the age of 40 years may have a diagnosis of chronic obstructive pulmonary disease (COPD).³ Inhaled therapies are the mainstay of delivering medicines for both these conditions. In England and Wales in 2011, 45m prescriptions for inhalers were issued at a cost of around £900m⁴.



When compared to systemic administration, if used correctly inhalers deliver a smaller effective amount of the drug directly to the site of action in the lungs, with a faster onset of effect and with reduced systemic availability that minimises adverse effects.

Despite being the preferred method of medication delivery to the lungs, the evidence suggests that many people are unable to use their inhalers effectively. Studies have consistently shown that up to 90 per cent of people with asthma and COPD do not use their inhalers correctly.^{5,6,7}

The NICE guideline for people with COPD⁸ and the British Thoracic Society guideline for asthma⁹ both recommend that, prior to being prescribed a new inhaler, patients should receive training and education in the use of the device. Both guidelines also advise that inhaler technique should be assessed regularly at each clinic visit.

Pharmacists can make a significant difference in this area by ensuring that any person prescribed an inhaler for the first time knows how to use the device correctly. However they should also recognise that people can pick up bad habits and ongoing technique should be examined at every opportunity.

Clinical consequences

The use of inhaled therapy is extremely important in the management of people with asthma, COPD and other respiratory conditions. An inadequate inhaler technique will lower drug deposition to the lungs, waste medication and may lead to poor disease control, reduced quality of life, increased emergency hospital admissions and higher treatment costs.¹⁰

Incorrect inhaler technique with inhaled corticosteroids (ICS) in people with asthma has been associated with increased reliever use, increased emergency hospital admissions and higher rates of asthma instability.¹¹

Furthermore, for people using ICS, the failure to maintain adequate oral hygiene (rinse, gargle and spit) after each inhaled dose increases the risk of oropharyngeal candidiasis (thrush) and hoarseness, caused by medication deposited in the mouth and pharynx. For those using a pMDI, the risk of these local side-effects can be reduced by using a spacer device.

In 2014, The National Review of Asthma Deaths (NRAD) reported that misunderstanding and misuse of inhalers was thought to have contributed to a significant number of the 195 asthma deaths¹². According to the NRAD report, only 49 per cent of the people reviewed

in primary care had had their inhaler technique checked in the year before they died, while 17 per cent of people admitted to hospital (n=83) did not have documented evidence that their inhaler technique had been checked during their admission.

Common problems and solutions

Despite considerable research into the ability of people to use their inhalers and the development of several new types of inhaler devices over the past 40 years, there has been no sustained improvement in how people use their devices.

Newer inhaler devices, such as the Turbohaler or Accuhaler, which were designed to improve ease of use, also have significant rates of incorrect use among people with asthma or COPD. Incorrect inhaler technique is common, regardless of the type of device prescribed. Patients may be given different inhaler types, receive minimal training, if any, and sometimes incorrect training on how to use the device.

The themes associated with incorrect inhaler use are fairly consistent within the literature. Failure to exhale prior to use, poor co-ordination of inspiration with actuation (timing) and incorrect rates of inspiratory flow are the most consistent errors with pMDIs.

Different devices require different techniques. There are, broadly speaking, two classes of inhaler devices:

- Aerosols, such as pMDIs, Easibreathe
- Dry powder inhalers (DPIs), such as the Accuhaler and Turbohaler.

It is important to understand the differences between these two types of inhalers, especially in terms of how fast the person inhales (inspiratory flow).

A significant proportion of patients with asthma and COPD have been shown to have an inspiratory flow rate too high for a pMDI, which will reduce lung deposition and consequently the clinical effectiveness of the drug.^{13,14}

Conversely, studies have demonstrated that lung deposition from DPI devices increases as inspiratory flow increases,¹⁵ but many patients have an inspiratory flow that is too slow (or have never been instructed to inhale fast), reducing the amount of drug deposited in the airways.



It is essential that pharmacists themselves can demonstrate correct inhaler technique

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Table 1: Common inhaler technique errors and suggested solutions

Common error	Explanation and suggested solutions
Not shaking the inhaler device before use	When the canister of an aerosol device is pressed, a precise volume of liquid is released into the inhaler's nozzle, which then rapidly evaporates to produce the aerosol "mist". If the contents of the canister, both propellant and medication, are not mixed thoroughly, then too much or too little of one component will be released. Not shaking the canister properly can lead to inconsistent dosing and poorly functioning inhalers. Shake all aerosol inhalers, such as a pMDI, before use. Most DPIs do not need shaking before use. One exception is the Easyhaler, which, according to the manufacturer, needs a shake before use (this must be performed before the dose is loaded to avoid dislodging the medication from the device).
Priming of inhaler device (aerosol-type devices only)	It is important to remind your patient that their inhaler may require priming to check that the spray is functioning before using for the first time or if he/she has not used it for a while (usually five to seven days). The protective cap should be removed, the inhaler shaken and sprayed twice into the air.
Not breathing out before inhaling	Breathing out fully (or as much as is comfortable) reduces the amount of air in the airways and increases the available space for air from the next breath. The result is a deeper-than-normal inhalation, maximising the opportunity to carry all of the medication to the site of action. This is particularly important for patients with hyper-inflated lungs, such as during an acute exacerbation of asthma or severe emphysema. It is important that when patients breathe out, it is not into the inhaler, as this may disperse the powder from the DPI or may introduce moisture into the device, both of which can reduce the clinical effect.
Positioning of the person and the inhaler device	Patients should be instructed not to hold a DPI with the mouthpiece pointing downwards during or after loading a dose as the drug can escape. The DPI should be kept horizontal or upright. The patient should keep his/her chin up or head slightly tilted back when using the inhaler, which should be placed correctly in the mouth and the lips should form a tight seal over the mouthpiece. The inhaler should not be aimed at the roof of mouth or tongue.
Incorrect co-ordination of pMDI actuation with inspiration	To deliver the medication to the lungs, the patient must co-ordinate breathing in with pressing the canister. <ul style="list-style-type: none"> Starting to breathe in too early can mean the breath in has finished before the canister has been pressed, particularly if the inhalation is very fast. The result is the medication is deposited into the mouth, with little or none to the lungs The time between pressing the canister and the final part of the medication leaving the inhaler device is less than half a second – any delay between pressing the canister and starting to breathe in means that lung deposition is significantly reduced, as the aerosol has already been released In both cases the risk of local side-effects is increased. The use of a spacer device will help overcome both scenarios. Alternatively, a breath-actuated inhaler, such as an Easibreathe or Autohaler, can help.
Delay in inhaling drug through spacer device	The medication stays suspended in the spacer for a short time only so if patients fail to take each dose immediately after loading the spacer, a proportion of the dose is deposited onto the inner surface of the spacer and therefore lost.
Inspiratory flow – breathing in either too fast or too slowly	The total lung deposition of an inhaled drug is strongly affected by the speed of inhalation. <ul style="list-style-type: none"> Aerosols, such as a pMDI, require a slow and steady inhalation to increase lung deposition. When the patient inhales, the drug particles will follow the path that the air takes until a change in direction occurs, at which time the particles will try to continue to move in the same direction they were travelling. Too fast an inhalation will increase the velocity of the drug particles, thus increasing inertial impaction at the points where the airways change direction significantly – particularly at the throat and where the main airways of the lung branch out. Think about this as a sharp bend at the end of a straight piece of road. Any vehicle that is travelling too fast will crash. The aerosol device generates its own propellant and releases the particles at speed, so a slower inhalation rate is required to guide the drug to the site of action. A pMDI is easy to inhale through as it has little resistance to airflow, which means it is relatively easy for patients to inhale too fast DPIs require a quick and deep inhalation to generate a large internal turbulent force to break up the formulation to optimise the particle size and lung deposition. The inhalation should be forceful from the start. Failure to achieve this high internal force increases the likelihood of the dose impacting in the mouth and throat. DPI devices have a high resistance to airflow, which limits the inhalation flow rate through the device, and consequently patients using a DPI need to apply greater effort to generate the necessary inspiratory flow to allow for optimum drug delivery.
Not continuing to breathe in after pressing the canister	Inhaling deeply maximises the opportunity for the drug particles to reach the small airways. By not continuing to breathe in after pressing the canister, the drug particles will remain in the larger airways, as no additional air is inhaled.
Not holding your breath after inhalation	Holding your breath after inhalation increases lung deposition through the process of sedimentation. By keeping the air still for a few seconds, a greater number of particles will sediment onto the receptor sites due to gravity. A 10-second breath hold is thought to be ideal, but if this is not possible, encourage the person to hold their breath after inhaling for as long as is comfortable.
Multiple actuations without waiting in between	Very rapid actuations can reduce the dose delivered per actuation, but salbutamol MDIs can be actuated immediately after a 10-second breath-holding pause without affecting the dose delivered.
Using an empty inhaler	Patients frequently fail to detect when the inhaler is empty, particularly when using reliever pMDIs. Dose counters may help overcome this but not for those with poor eyesight.
Poor maintenance of inhaler or spacer device	Spacers should be reviewed every six to 12 months to check the structure is intact (e.g. no cracks), the outer casing is clean and the valve is functioning.



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Reflection exercise 1

Think about the last time you counselled a patient regarding inhaler technique. How confident are you that you correctly assessed their technique? What went well and what could you improve?

The concurrent use of multiple types of inhaler devices with different techniques can confuse patients. Ideally patients should be prescribed one type of device or at least all aerosols or dry powder devices so that the same inhalation technique can be used.

There are, however, many other reasons why people are not able to use inhaler devices. Common examples of incorrect technique and recommendations on how to improve this are shown in Table 1 (see previous page).

Special groups

With all inhaler types, error rates increase with age and the severity of airflow obstruction. A substantial body of evidence has shown that inadequate inhaler technique is particularly common among older people, whether using a pMDI or a DPI.

Some older patients with advanced COPD may benefit from the use of a spacer with a pMDI but many will also have difficulties connecting the inhaler to the spacer. Providing more than one spacer device may help overcome this, so they can leave their inhaler and spacer connected at all times.

Patients with osteoarthritis and other dexterity problems may be unable to activate a pMDI



Face masks for spacers can overcome inhaler use problems in infants

Table 2: Potential barriers to why inhaler technique is not checked

Patient: "I do not have the time"	Ensuring optimal inhaler technique may reduce future exacerbations and loss of disease control
Pharmacist: "I do not have the time"	
Patient: "Someone else has already checked my technique"	Health professionals should not assume that patients are being trained in inhaler use by others. Reinforcement of inhaler technique may help optimise drug administration to the lungs and improve disease control
Pharmacist: "Someone else has already checked it"	
Pharmacist: "I am not confident in discussing inhaler technique with my patient"	All healthcare professionals should ensure they are competent and confident to provide advice to people using inhalers
Patient: "I'm fine – I've used an inhaler for years"	Patients' perceptions of their inhaler skills have been found to correlate poorly with their ability to use the device correctly. Inhaler technique has been found to deteriorate over time (possibly after as little as two to three months), so instruction needs to be repeated at intervals. In an Australian study, 75 per cent of patients using an inhaler for an average of two to three years reported they were using their inhaler correctly but, on objective checking, only 10 per cent demonstrated correct technique. Most patients will have received instruction only at the time of their first prescription
Pharmacist: "The patient has used these inhalers for years"	
Pharmacist: "The patient can read the information leaflet"	Patient information leaflets may not be written in suitable language and appropriately illustrated and the print may be too small for some patients. Verbal instruction is required in addition to written material. The manufacturer's instruction sheet alone is ineffective in achieving correct technique

easily and may benefit from the fitting of a Haleraid onto the inhaler or a breath-activated inhaler. Mechanical difficulties can usually be overcome by checking each individual's technique and helping the person identify which inhaler they can use best.

Inability to achieve a firm seal around the mouthpiece can be a problem for infants or

people with cognitive impairment when using inhalers alone or with a spacer. A spacer facemask can overcome this problem. Those with cognitive impairment are likely to have problems retaining skills after instruction in the use of an inhaler. Lower education levels and people who do not understand English have been associated with increased rates of incorrect inhaler technique, due to difficulties understanding the instructions.

Healthcare professionals

It is perhaps not surprising that patients often use their device(s) incorrectly since healthcare professionals' understanding of the correct use of these devices is also poor. A recent paper in *Thorax* highlighted that only 7 per cent of healthcare professionals could demonstrate all the correct steps for a metered dose inhaler.¹⁶ Many other studies have found similar results with doctors, nurses and pharmacists having poor knowledge on the optimal use of different inhalers. It is essential that those providing patient training are themselves able to demonstrate a correct technique.

How to improve inhaler technique

Providing information and supporting patients to achieve correct inhaler technique improves asthma symptoms, quality of life and respiratory functional status, minimises short-acting beta-agonist use and reduces emergency hospital admissions. Training of patients by health professionals is an effective means of improving this situation¹⁷ but, as already mentioned, it needs to be repeated at intervals.

Even after training is provided and patients can demonstrate optimum inhaler technique, some patients will continue to have difficulties using inhalers properly and ongoing support should be provided. Studies have shown that almost everyone can learn proper inhaler technique with adequate training and practice.

A recent study suggested that up to 25 per cent of patients had not received any verbal instruction for the use of their prescribed inhaler.¹⁰ When it is given, instruction is often rushed, of poor quality and not reinforced. Only an estimated 11 per cent of patients receive follow-up assessment and education on their inhaler technique.

Health professionals should not assume that patients are being trained by others in inhaler use. Reinforcement of inhaler technique may help optimise drug administration to the lungs and improve disease control. Patients' perception of their inhaler skills has been found to correlate poorly with their ability to use the device correctly.



Up to 90 per cent of people with asthma and COPD do not use their inhalers correctly

Inhaler technique has also been found to deteriorate over time (possibly after as little as two to three months), so instruction needs to be repeated at intervals. In an Australian study, 75 per cent of patients using an inhaler for an average of two to three years reported they were

using their inhaler correctly but, on objective checking, only 10 per cent demonstrated correct technique.¹⁸ Most patients will have received instruction only at the time of their first prescription. Checking use is not about catching people out but optimising what is delivered.

Correct technique depends on the inhaler type, so patients need to understand the right steps for their own inhaler. A checklist-based assessment and correction of step-by-step technique is an effective strategy for improving inhaler technique (see Table 3).

Multimedia, audiovisual or telemedicine techniques may also prove useful in some cases for educating patients or evaluating their technique.

Table 3: Inhaler technique reminder checklist

Step 1	Prepare the device (e.g. remove the mouthpiece cover, open the device, hold the inhaler upright)
Step 2	Prepare the dose (e.g. shake all aerosols and Easyhaler devices and load dose for DPIs)
Step 3	Breathe out gently as far as is comfortable (not into the inhaler)
Step 4	Put the mouthpiece in the mouth and close lips around it
Step 5	Breathe in: Check co-ordination of breathing and actuation of MDI Think about the type of inhaler device. Is it an aerosol device or a DPI? • Breathe in slowly and steadily for all aerosol devices (including through a spacer). Use a training aid (e.g. In-Check DIAL inspiratory flow meter) for encouraging slow inhalation with pMDI devices • Breathe in quickly and deeply for all dry powder devices
Step 6	Remove inhaler from mouth and hold breath for up to 10 seconds
Step 7	Repeat dose (if applicable) Replace mouthpiece cover or close device

Reflection exercise 2

Use your PMR to flag up any excessive use of reliever medication (>12 canisters in a 12-month period). Invite these patients to your pharmacy to check and confirm their inhaler technique. Arrange a follow-up appointment to evaluate if your intervention has improved the patient's frequency of reliever use.



Prepare yourself

It is a good idea to learn how to use each inhaler type correctly yourself, especially new inhalers, and become aware of common errors with the different types so you can confidently demonstrate their use to patients and highlight where they could go wrong. Learn the rationale for each step of the instructions, so you can clearly explain its importance to patients.

Engaging with patients

- Introduce yourself to the patient
- Ask the patient if you can discuss their inhaler treatment with them. Do not ask: "Can you use your inhaler?". It is better to say: "Can you show me how you use your inhaler so that we

can see if we can improve the amount of medicine getting into your lungs?". Don't rely on the patient's assurance that they know how to use their inhaler. Most are unaware that their inhaler technique could be improved

- Initially, it is worth understanding what the patient knows about their lung condition
- Educating patients in correct inhaler use may also improve adherence to their treatments
- Discuss the inhaler with the patient, explaining what medicine it contains and how it should help their lung condition. For those instructed to use a spacer with a pMDI, ask in a non-judgmental manner whether they sometimes or often use the inhaler alone. Emphasise that using the spacer is an

important part of correct technique for achieving the best results

- Describe the steps that need to be followed when using the inhaler device (see Table 3 checklist)
- Once you have described the steps, show the patient how to do it yourself
- After you have demonstrated the optimal technique, ask the patient to show you how they would use the inhaler. Check they are doing it correctly and, if needed, explain how they can improve their technique. Non-availability of placebo devices can be a barrier to effective education. If a patient has his/her own inhalers, then an extra dose of these could be given if it is thought unlikely to cause undue harm.

If a patient is to be newly prescribed an inhaler, a judgement must be made to decide whether they should receive education, training and assessment on correct inhaler technique using a placebo inhaler prior to being given a prescription, or whether they can receive training and assessment using their new inhaler device after receiving their dispensed prescription. In these situations, using an In-Check DIAL inspiratory flow meter may aid this decision, as patients who inhale fast are more likely to be suitable for a DPI device, and those who inhale slowly are more likely to be suitable for a pMDI

- Ensure the patient knows how to keep their inhaler clean and in good working order. As every inhaler is different, ask the patient to follow the manufacturer's instructions. Make sure your patient knows how to recognise when their inhaler is empty or nearly empty
- Ask the patient if they have any questions or concerns about their medicine and the steps needed to optimise delivery to the lungs



Inhaler therapy is still the mainstay of treatment for most types of respiratory disease

Reflection exercise 3

Talk to patients who are on inhalers and ask them if they experience any adverse effects from their inhaled therapy (e.g. oral candida, shaking). Discuss, demonstrate and/or check the patient's inhaler technique, which may help reduce such adverse effects.

- Repeat instruction regularly. Inhaler technique must be rechecked and education reinforced on a frequent basis in order to maintain optimal drug delivery.

Resources

Resources that pharmacists may find helpful to make sure they know how to use different inhaler devices correctly and are competent to provide advice to patients include:

- 'Seven steps to success inhaler device reminder cards', which are designed for pharmacists to use with patients, and describe

how to use each of the commonest types of inhaler devices (simplestepeducation.co.uk)

- Videos, including podcasts from Greater Manchester Inhaler Technique Improvement Programme (<http://wires.wessexhiac/partnership.org.uk/video-series/inhaler-technique>)
- Guides on the Electronic Medicines Compendium website (medicines.org.uk/guides/pages/how-to-use-your-inhaler-videos)
- Two Asthma UK resources (asthma.org.uk/sites/healthcare-professionals/pages/)

inhaler-demos and asthma.org.uk/knowledge-bank-treatment-and-medicines-using-your-inhalers)

- Refresher courses on inhaler technique from CPPE (cppe.ac.uk).



Reflection exercise 4

If you have access to an inspiratory flow checking device, such as the In-Check DIAL, check the inspiratory flow of your patients prescribed pMDI inhalers. How many breathe in too fast?



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OPTIMISING INHALER TECHNIQUE

assessment questions

- Which statement is correct about spacer devices?
 - Only useful in children
 - Only useful for patients who experience oral candida from inhaled corticosteroids
 - Use with pMDIs and encourage a slow and steady breathing technique
 - To optimise delivery to the lung a quick and deep inspiratory flow is needed
- Which is the commonest patient error using DPIs?
 - Does not breath out slowly before using inhaler
 - Does not seal lips around mouthpiece
 - Holds inhaler in a downwards position before dose inhalation
 - Does not know how to tell if the device is empty
- Which of the following options is step 3 on the inhaler technique reminder checklist?
 - Prepare the dose
 - Breathe out gently as far as is comfortable
 - Breathe in
 - Remove inhaler from mouth and hold breath for up to 10 seconds
- Which aspect of an inhaler device has been shown to be associated with positive asthma control?
 - A dose counter
 - Patients using more than one type of inhaler device
 - The patient feels the drug works soon after inhalation
 - The inhaler is a DPI not a MDI
- With a good inhaler technique with a Clenil pMDI, what percentage of the dose reaches the small airways?
 - 10-20 per cent
 - 30 per cent
 - 40 per cent
 - >50 per cent
- Easibreathe is a breath-actuated inhaler. Which best describes how the drug is released?
 - Breathing in quickly and deeply releases the aerosol and the optimum dose is delivered to the lungs
 - Breathing in slowly and steadily automatically releases the aerosol and the optimum dose is delivered to the lungs
 - The patient should unscrew the inhaler and press the canister while breathing in quickly and deeply
 - Covering the vents on top of the inhaler with the fingers will not affect lung deposition
- A patient's intake of breath is too quick. Which device would be most appropriate?
 - Evohaler
 - Easyhaler
 - Autohaler
 - Easibreathe
- How often should you check a patient's inhaler technique?
 - Only when you give them a new inhaler
 - Every time you see them
 - Once a year at an annual MUR
 - Only if they say they are not sure how to use their inhaler

Use this form to record your learning and action points from this module on **Optimising Inhaler Technique** or record on your personal learning log at pharmacymagazine.co.uk. Any training, learning or development activities that you undertake for CPD can also be recorded as evidence as part of your RPS Faculty practice-based portfolio when preparing for Faculty membership. So start your RPS Faculty journey today by accessing the portfolio and tools at www.rpharms.com/Faculty

Activity completed. (Describe what you did to increase your learning. Be specific)
(ACT)

Date:

Time taken to complete activity:

What did I learn that was new in terms of developing my skills, knowledge and behaviours? Have my learning objectives been met?*(EVALUATE)

How have I put this into practice? (Give an example of how you applied your learning). Why did it benefit my practice? (How did your learning affect outcomes?)(EVALUATE)

Do I need to learn anything else in this area? (List your learning action points. How do you intend to meet these action points?)(REFLECT & PLAN)

You can also record in your personal learning log at pharmacymagazine.co.uk



* If as a result of completing your evaluation you have identified another new learning objective, start a new cycle. This will enable you to start at Reflect and then go on to Plan, Act and Evaluate. This form can be photocopied to avoid having to cut this page out of the module. You can also complete the module at www.pharmacymagazine.co.uk and record on your personal learning log

ENTER YOUR ANSWERS HERE Please mark your answers on the sheet below by placing a cross in the box next to the correct answer. Only mark one box for each question. Once you have completed the answer sheet in ink, return it to the address below together with your payment of £3.75. Clear photocopies are acceptable. **You may need to consult other information sources to answer the questions.**

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| 1. | a. | <input type="checkbox"/> | 2. | a. | <input type="checkbox"/> | 3. | a. | <input type="checkbox"/> | 4. | a. | <input type="checkbox"/> | 5. | a. | <input type="checkbox"/> | 6. | a. | <input type="checkbox"/> | 7. | a. | <input type="checkbox"/> | 8. | a. | <input type="checkbox"/> |
| | b. | <input type="checkbox"/> | | b. | <input type="checkbox"/> | | b. | <input type="checkbox"/> | | b. | <input type="checkbox"/> | | b. | <input type="checkbox"/> | | b. | <input type="checkbox"/> | | b. | <input type="checkbox"/> | | | |
| | c. | <input type="checkbox"/> | | c. | <input type="checkbox"/> | | c. | <input type="checkbox"/> | | c. | <input type="checkbox"/> | | c. | <input type="checkbox"/> | | c. | <input type="checkbox"/> | | c. | <input type="checkbox"/> | | | |
| | d. | <input type="checkbox"/> | | d. | <input type="checkbox"/> | | d. | <input type="checkbox"/> | | d. | <input type="checkbox"/> | | d. | <input type="checkbox"/> | | d. | <input type="checkbox"/> | | d. | <input type="checkbox"/> | | | |

Name (Mr, Mrs, Ms) _____

Business/home address _____

Town _____ Postcode _____ Tel _____ GPhC/PSNI Reg no.

I confirm the form submitted is my own work (signature) _____

Please charge my card the sum of £3.75 Name on card _____ Visa Mastercard Switch/Maestro

Card No. _____ Start date _____ Expiry date _____

Date _____ Switch/Maestro Issue Number _____

Processing of answers

Completed answer sheets should be sent to Precision Marketing Group, Precision House, Bury Road, Beyton, Bury St Edmunds IP30 9PP (tel: 01284 718912; fax: 01284 718920; email: cpd@precisionmarketinggroup.co.uk), together with credit/debit card/cheque details to cover administration costs. This assessment will be marked and you will be notified of your result and sent a copy of the correct answers. The assessors' decision is final and **no correspondence** will be entered into.