

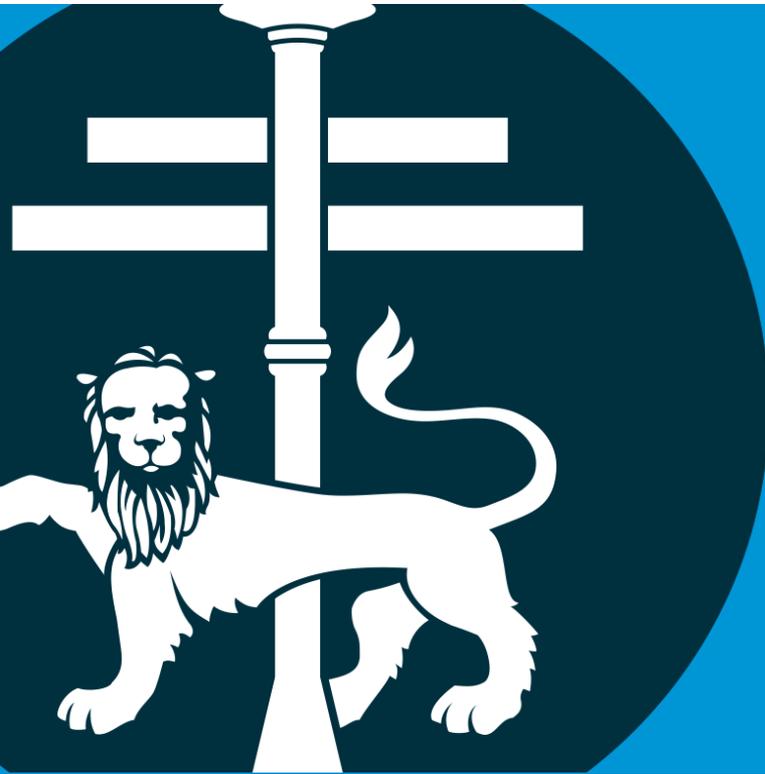


British
Thoracic
Society

Better lung health for all

Practical tips to delivering education in pulmonary rehabilitation

Dr Nicola Roberts
Associate Professor
Edinburgh Napier University



Learning Objectives: To explore...

1. What health literacy is and how we can recognise poor health literacy

2. How we can adapt our delivery of education for patients

3. Measuring educational outcomes in PR

4. What tools can be used to improve the delivery of education for patients

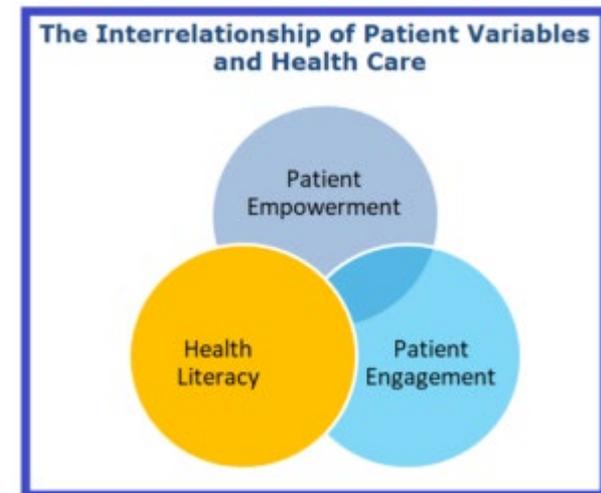
Health literacy

A close-up, dark-toned photograph of an elephant's face, showing its wrinkled skin and eye. The image is partially obscured by text and a white crosshair.

**THE
ELEPHANT
IN THE ROOM**

What is health literacy?

The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions



Literacy

- Oral literacy – speech and speech comprehension
- Print literacy – ability to read, write and understand written language
- Functional literacy – use of literacy to perform a particular task

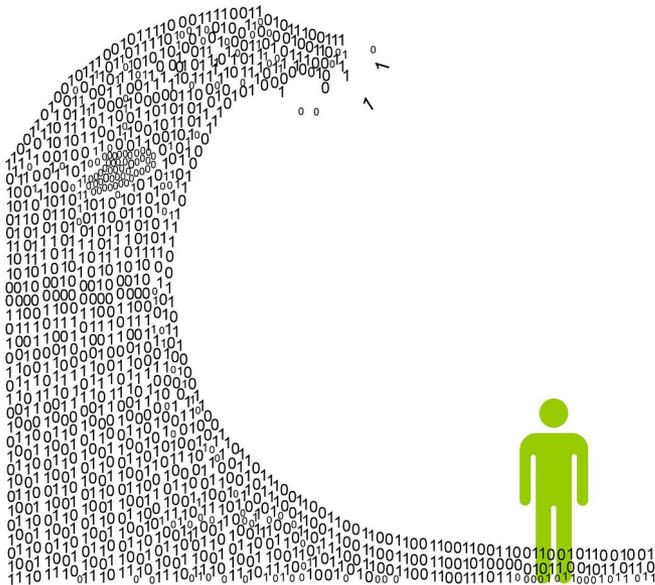


Literacy and Health



- People with limited literacy skills:
 - Report poorer overall health
 - Are less likely to make use of screening
 - Present in later stages of disease
 - Are more likely to be hospitalized
 - Have poorer understanding of treatment
 - Have lower adherence to medical regimens

- Health information is not often understood by patients
- Resulting in patients knowing and understanding less about their disease⁽¹⁻³⁾ and having poorer health outcomes⁽⁴⁻⁶⁾
- Patients with health illiteracy have more difficulty understanding and using medication properly^(2, 7,8)



1. Gazmararian et al Patient educ Couns 2003 51;267-275
2. Williams et al Chest 1998;114;1008-1015
3. Williams et al Arch Intern Med 1998;158:166-172
4. Gazmararian et al Arch Intern Med 2000;160;3307-3314
5. Schillinger et al JAMA 2002; 288:475-482
6. Weiss et al J Am Board Fam Pract 1992;5;257-264
7. Williams et al JAMA 1995;274:1677-1682
8. Youmans SL et al Ann Pharmacother 2003;37;1726-1729

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Shame and health literacy

- 202 African Americans underwent the TOFHLA
- 42.6% significantly impaired literacy (More likely to be elderly males with minimal high school education)
- 40% of those reported shame
- 67.2% had *never* told their spouses
- 53.4% had *never* told their children
- 19% had *never* told anyone



**How do you think you can
tell if a person has low
literacy skills?**



Red flags...



- Registration forms are filled out incorrectly or are illegible.
- Health questionnaires are skipped.
- Appointments are frequently missed.
- Repeated incidents of medication errors by the patient.
- The patient cannot name the medications they takes, is unable to explain why the medication was prescribed, or when and how to take it; T
- he patient has memorized instructions and can repeat them, but cannot answer questions i.e. when the last dose was taken.
- Patients identify their medications by opening the bottles and looking at the pills rather than looking at the label.
- Patients say they are taking their medication, but objective laboratory says otherwise
- Patients say, "Oh, I forgot my glasses," or "I want to take this [written material] home to discuss with my wife/husband/children"



THE EUROPEAN HEALTH LITERACY SURVEY: RESULTS FROM IRELAND.



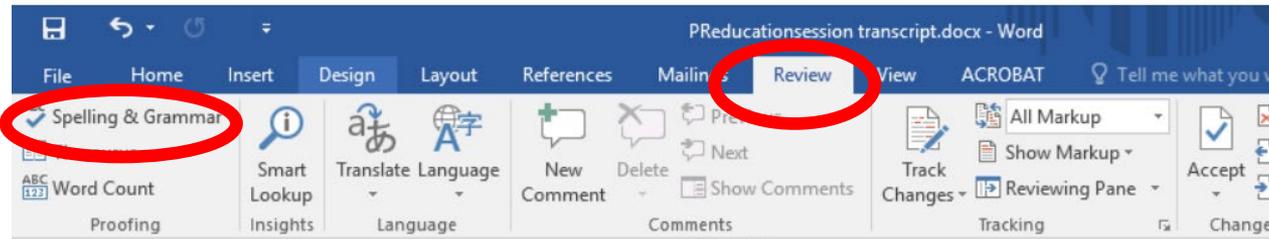
- 20% of respondents are not fully confident in their comprehension of information they receive from their medical healthcare professional.
- 20% of respondents do not fully understand information and instructions that appear on medical packaging.
- 20% of respondents were unable to correctly identify which part of the body ‘Cardiology Department’ related to.
- 15% of respondents could not explain what the term ‘Outpatients’ meant.
- 57% of respondents said they would only sometimes seek clarification if they did not understand instructions from a healthcare professional.
- 10% of respondents admitted taking the wrong dose of medication because of failure to understand instructions.
- 66% of respondents have difficulty understanding signs and directions in Irish hospitals some of the time, 20% stated they have difficulty most of the time.
- 60% of respondents were unable to correctly define the term ‘Prognosis’.

What do you think the average reading age of the UK is?





According to See a Voice and Content Design London: The average reading age of the UK population is 9 years – that is, they have achieved the reading ability normally expected of a 9 year old. The Guardian has a reading age of 14 and the Sun has a reading age of 8.



Flesch reading ease

Score	Notes
90-100	very easy to read, easily understood by an average 11-year-old student
80-90	easy to read
70-80	fairly easy to read
60-70	easily understood by 13- to 15-year-old students
50-60	fairly difficult to read
30-50	difficult to read, best understood by college graduates
0-30	very difficult to read, best understood by university graduates

Flesch-Kincaid grade level

Score	School level (US)	Notes
100.00-90.00	5th grade	Very easy to read. Easily understood by an average 11-year-old student.
90.0-80.0	6th grade	Easy to read. Conversational English for consumers.
80.0-70.0	7th grade	Fairly easy to read.
70.0-60.0	8th & 9th grade	Plain English. Easily understood by 13- to 15-year-old students.
60.0-50.0	10th to 12th grade	Fairly difficult to read.
50.0-30.0	College	Difficult to read.
30.0-10.0	College graduate	Very difficult to read. Best understood by university graduates.
10.0-0.0	Professional	Extremely difficult to read. Best understood by university graduates.

Readability Statistics ? X

Counts

Words 1,555

Characters 8,056

Paragraphs 85

Sentences 85

Averages

Sentences per Paragraph 1.0

Words per Sentence 18.2

Characters per Word 5.0

Readability

Flesch Reading Ease 44.4

Flesch-Kincaid Grade Level 11.5

OK

Hewitt committed to health reforms

Tuesday September 19, 2006 9:23 AM

Health Secretary Patricia Hewitt has refused to set "artificial limits" on the extent of controversial reforms to the NHS.

She said services would remain free at the point of need but added that all that mattered was getting the best for patients. Her comments came ahead of a speech on Tuesday in which she will vow to press on with "radical" reform.

"I am absolutely committed to pushing forward reforms that ensure that patients get the best possible services free at the point of need," she told the BBC Radio 4 Today programme.

Ms Hewitt went on to deny privatising the NHS, saying: "We are not privatising or marketising the NHS.

"The NHS has always used the private sector; indeed, the great majority of GPs have always been private businesses depending on profits."

Asked whether there was a limit to how far the Government would go with reforms, she said: "I don't think we should set artificial limits.

"The only thing that matters is getting the best for patients and getting the best value for the money that we've asked people to put in."

In a speech to centre-left think-tank the Institute for Public Policy Research (IPPR) later, Ms Hewitt will stress that the NHS's "core values" will never change.

She will say that recent improvements have come despite the structure rather than because of it, and drastic reform is still needed.

The minister's latest combative foray comes amid criticism that A&E units are being axed at hospitals in order to save money. It has also emerged that hundreds of NHS workers are to stage a second nationwide strike during next week's Labour Party conference

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Flesch Reading Ease 57.4
Flesch-Kincaid Grade Level 10.5
Age 16 readability

Simple steps to cutting down...

Know your strengths
Knowing the strength of your drinks is essential. Use the guide in this leaflet or look on the label – many brands state their unit content as well as their percentage strength.

Know your drinking pattern
Drinking is such a part of life it can be hard to figure out exactly how much we consume. Keep a drinking diary and note down what, how much and when you take a tipple.

Watch your measures
Drinks poured at home, at parties and in many foreign bars are often larger than standard UK pub measures. If you drink at home, consider investing in a set of measures. Avoid 'topping up' so you can keep track more easily.

Change your drink
Not all brands are the same strength – switch to a lower alcohol alternative. Make spirits into long drinks by adding mixers. Add soda water to wine or drink shandy instead of beer.

Change the scene
Instead of pubs or clubs, try meeting mates at the cinema, the five-a-side pitches, bowling alley, gym or theatre.

Use soft drink 'spacers'
When you're out, take a soft drink between alcoholic ones and drink less booze during the evening.

Slow down
Pace yourself. Sip, don't gulp! If you're really thirsty, take a soft drink or water.

Know how to refuse a drink
Decide for yourself when and how much you want to drink. Some people can be offended if you turn down a drink – that's their problem.

Avoid drinking in rounds
If you've had enough, insist on a soft drink. If it's your round, get yourself a glass of something alcohol-free.

Eat before and while you drink
Food makes the body absorb alcohol more slowly and so limits how quickly it gets into the bloodstream.

Drink to a budget
Take a limited amount of cash out with you – no more than you need to stay sober, in control and get a taxi home.

Be the designated driver
It's a perfect excuse to stay sober. Agree to drive everyone home and insist they buy your soft drinks and snacks for you!

Talk through problems and worries
Stress and worries can influence how much we drink. Talking about them can be a good first step to resolving problems with alcohol. To speak to someone in confidence call Breathing Space on 0800 83 85 87 (9pm - 2am daily).

Worried about your drinking?
Call **DRINKLINE** free on 0800 7 314 314 at any time.

Further information
Call **DRINKLINE** to order free copies of other leaflets in this series. Topics include stress, young people, women and alcohol, sensible drinking and how to recognise problem drinking.

For more tips and information about alcohol, visit www.infocotland.com/alcohol

Find out more about healthy living at www.healthyliving.gov.uk



Alcohol & healthy living

A guide to how you can enjoy alcohol and stay healthy.

We all need at least 2 days a week without alcohol.

Makes your night last longer, use soft-drink 'spacers' between alcoholic drinks.



We all need at least 2 days a week without alcohol.

Why does it matter?
Doctors agree that drinking more than the **sensible limit** damages health in the short and long-term.

When not to drink
Avoid alcohol

- during pregnancy
- when driving or operating machinery
- before exercising or playing sport
- when taking certain medications
- if you're feeling low or anxious

What's a 'unit'?
A unit equals 10ml of pure alcohol. That's the amount the body can safely get rid of in an hour.

How many units in a drink?

35ml measure gin/rum/vodka/whisky:	1.4 units
330ml bottle standard lager/beer:	1.7 units
1 pint medium strength lager/beer:	2.8 units
1 pint standard lager/beer:	2.3 units
1 pint strong cider:	3.4 units
700ml bottle whisky:	28 units
275ml bottle alcopop:	1.5 units
175ml glass standard wine:	2.1 units
750ml bottle wine:	9.8 units

Why drink less?
Too much drink damages the body and makes a healthy lifestyle harder to keep up:

- alcohol contains lots of calories and can contribute to weight gain
- hangovers mean we can't exercise properly and are less likely to try
- alcohol disrupts sleep (a vital part of good health)
- hung over and tired people tend to eat more junk food
- drinking to cope with stress, anxiety or depression only makes things worse
- drinking can affect your relationships with your partner, friends and family
- alcohol can affect your ability to conceive



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60.0–70.0	easily understood by 13- to 15-year-old students
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50.0–30.0	College	Difficult to read.
30.0–10.0	College graduate	Very difficult to read. Best understood by university graduates.
10.0–0.0	Professional	Extremely difficult to read. Best understood by university graduates.

Readability Statistics

Counts

Words: 814

Characters: 3807

Paragraphs: 73

Sentences: 45

Averages

Sentences per Paragraph: 1.6

Words per Sentence: 11.5

Characters per Word: 4.7

Readability

Passive Sentences: 0%

Flesch Reading Ease: 76.3

Flesch-Kincaid Grade Level: 5.4

OK

- Flesch-Kincaid Grade level 5.4
- Age 11/12
- Reading Ease 76.3
- Patient information leaflets normally written at 6th-8th grade or higher (12-14yrs) (1,2)

1. Larson et al Arthritis Care Res 5, 13-16, 1992
2. Bradley et al J Clin Pharm Ther 19, 7-15, 1994

Readability

How to produce clear written materials for a range of readers



2

For adults and young people to participate fully in work, learning and everyday activities, it is essential that they are able to read and understand written information.

This increasingly demands a high level of comprehension and the application of knowledge, rather than a simple ability to recognise letters and decode words.

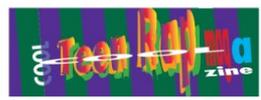
People who lack confidence in these crucial skills are often faced with an immediate barrier if the written information they are given doesn't take account of their difficulties.

It's possible to present written information in a way that makes reading easier, as part of a strategy to address this issue.

Both the design and the readability levels of texts determine how easy they are to read.

This leaflet outlines the principles that will help you to present written texts clearly, taking account of the needs of your readers.

1. Design



Difficulties with reading are often more to do with the look and layout of a text than with the complexity of the text itself. In their efforts to produce attractive, eye-catching material, designers are sometimes tempted to sacrifice clear layout. Complicated layout and design can confuse those with reading difficulties. Here are some of the elements to watch for.

• White space

It's important that readers can find their way around a text easily. Too much text on a page can be a deterrent to getting started on reading. Columns too close together can cause confusion, leading to reading 'over' from one to the next.

Anyone with reading problems needs short, clearly separated 'chunks' of text that they can work through at their own pace. This helps them to see how far they have to go, and reduces the chances of them giving up. Pages that have no margins, or little space between paragraphs, are generally more difficult to read.



3

• Line spacing

Lines and young people to be able to read fully to all some of the text. It is essential that they to read and understand written text. This demands a high level of comprehension and the application of knowledge, rather than a simple ability to recognise letters and decode words.

The spacing between lines is also an important factor in making reading easier. If they are too close the hesitant reader will tend to drop lines; when they are too far apart the reader will not be clear whether the lines relate to each other at all. Line spacing (leading) depends on type size but with normal 12pt type, a leading of 2pt is sensible.



• Font choice and size

There are endless debates about whether serifed or sans serifed types are easier to read and whether those with reading difficulties find it hard to recognise 's' or 'g' in the different types. Most people with reading difficulties can recognise and differentiate the letters of the alphabet. Types chosen need to be reasonably clear (Gothic not recommended, for example), and distinct (avoid types where 'm' can easily be mistaken for 'n', etc.). Much material is set in Century Schoolbook, Plantin or Helvetica, although Comic Sans is also popular. Arial is a good choice for documents created on a word processor.

Type size inevitably relates to the nature and purpose of the text.

4

It is worth watching for too large a type for booklets or leaflets produced for older readers. They may be put off if they feel the material appears to be childish.

• Use of upper and lower case

You may have noticed that major road signs use upper and lower case for cities and towns, whereas on minor roads the older signposts still show directions in upper case only. Upper and lower case is easier to read (for all of us) than upper case only. The shape of the word is an aid to the reading of the name of the town (e.g. The North, Sheffield, Leeds and Nottingham, as opposed to SHEFFIELD or LEEDS).



The same is true for reading texts: the overuse of upper case, for example to convey emphasis, is counter-productive. It is less likely that the text will be read, not more likely. Far better to use **bold type**, or boxing, to show the importance of a part of the text.

• Illustrations and overprinting

Illustrations and photographs break up the density of text. They work best if they relate directly to the surrounding text, so that a learner with reading difficulties can use the illustration as a clue to the text itself. The illustration should, wherever possible, come at the end of paragraphs or sentences, rather than in the middle of them.

Illustrations are sometimes used as background, with print running over them. This generally makes the text more difficult to read.



• Page layout and page breaks

In addition to the use of white space, look at the layout of pages. Ideally headings and new sections should come at the top of pages, and sentences and paragraphs should not run over columns or pages. Lines between columns can be helpful. Page numbering should be clear.

• Paper choice and paper colour

Paper should be thick enough to ensure that there is not a high degree of 'shadowing' from the text over the page. Some material is difficult to read because of this, and letters and words become difficult to distinguish. Obviously thicker paper is more expensive, but it is worth it to get the message across.

Darker colours generally provide more difficult backgrounds for reading. Blue and purple are worse than others.

However, some people with dyslexia tendencies find the contrast of black print on white paper difficult to cope with. They may find text easier to read if it is presented on cream or off-white paper, or even a pale pastel colour. Glossy paper causes glare.

The British Dyslexia Association Style Guide has helpful advice, including recommendations for making on-screen documents and websites easier to read. It can be found here: <http://www.bdyslexia.org.uk/extra352.html#presentation>

6

2. Readability

To match the text to the abilities of readers, consider these elements.

• Sentence length

The key to producing clear texts is often the way you write, rather than what you write about. Some subjects involve the use of difficult language and concepts – they can nonetheless be clearly communicated. Sentence length is an extremely important part of this. Sentences (like this one) that run for several lines, with several clauses (and asides including brackets), and that are probably several sentences shoved into one, are not easy for people with reading difficulties. It is far better to write sentences with one or two clauses. It is worth trying to include one main point only in each sentence. Use full stops rather than semi-colons.



Similarly, shorter paragraphs are in general easier to read. Lines and lines of dense print can be difficult for the eye to 'track'. Readers may forget the sense of the beginning of the paragraph by the time they get to the end.

• **Choice of words**
Some writers have a notion of style that leads them to use a certain kind of jargon. For instance, rather than repeat the word 'said', they will use 'stated', 'revealed', 'declared', 'claimed', etc. In most cases 'said' would do. For readers with

7

difficulties repetition can be very helpful, particularly with words that may be unfamiliar.

Choosing words that are easier to read is not always an option. All subjects have technical words which need to be read. For example, there is no easy way to write 'electricity' – 'power' that comes out of a plug is both confusing and inaccurate. A reader with difficulties will need to be taught strategies in order to recognise the word as it appears in a text. Try therefore to use the appropriate word, rather than trying to paraphrase simply.

The passive voice is often more difficult to understand. For example:

'The screw is placed in the securing hole.'

It may not always be possible to avoid the use of the passive voice, but in general the active voice is easier to understand.

'Put the screw in the securing hole.'

A noun and adjectives in large clusters are not easy to decode. For example:

'Middle East hostage release negotiation drama.'

Reading is much easier when the text either matches the ability level of the reader, or is only a little above it. A few simple, quick checks assist in finding out if this is the case.

8

• Readability tests

You may wish to check the readability of your texts. Readability is an attempt to match the reading level of written material to the 'reading with understanding' level of the reader.

A readability formula carries out calculations on a text, based primarily on sentence and word length, and results in a numerical score. However, other factors affect the understanding of what is being read, which cannot be measured in this way. These include the motivation of the reader, the size and type of print, the layout of written material, previous knowledge of the subject, and the style of the writer.

If you are using a word processor to produce your text there will probably be an option to calculate readability through the spelling and grammar check facility. You will need to tick the box 'show readability statistics' and the readability level will be shown when you have completed your spelling and grammar check.

Different readability formulae are likely to give different scores on the same piece of text, as they give different weightings to various aspects of the text, and may have been developed and tested on different types of text. It's important to use the same formula if you are trying to compare the readability level of a number of different texts.

If you want to check the readability level of a printed text, the simplified version of the SMOG (Simple Measure of Gobbledook) readability formula shown in the next section is easy to use.¹

¹ The original SMOG formula gave a score related to American school grade levels. In the version shown here the constant added at the end has been changed from 3 to 8, to give a readability level.

• SMOG Readability Formula – simplified

SMOG (Simple Measure Of Gobbledook) is much quicker and easier to work out by hand than other formulae.

1. Select a text
2. Count 10 sentences
3. Count the number of words that have three or more syllables
4. Multiply this by 3
5. Circle the number closest to your answer

1	4	9	16	25	36	49	64	81	100	121	144	169
---	---	---	----	----	----	----	----	----	-----	-----	-----	-----

6. Find the square root of the number you circled

1	4	9	16	25	36	49	64	81	100	121	144	169
1	2	3	4	5	6	7	8	9	10	11	12	13

7. Add 8 → ○ Readability Level

To obtain the most accurate readability level on longer texts you should carry out this test on three different sections of the document, for example, the beginning, the middle and the end, and take the average of the three scores.

10

• Interpreting the simplified SMOG readability score

You may find it helpful to relate your simplified SMOG result to these average scores for newspaper editorials:

The Sun: under 14

The Daily Express: under 16

The Telegraph and The Guardian: over 17

Alternatively, it may be helpful to relate this readability score to levels in the National Adult Literacy Standards. As a rough indication:

- 9–10 = approx. Entry Level 3;
- 11–12 = approx. Level 1; and
- 14–15 = approx. Level 2.

However, it's far from an exact science and a readability test should only be taken as one indicator among many for the suitability of a text.

Readability tests were developed from normal running text (prose). They are not really suitable for use on text with very different structures such as poetry, labels on bottles or text messages.

11

Plain English Campaign

Fighting for crystal-clear communication since 1979



You are here: [Home](#) ► How to write in plain English

Free guides

General guides

How to write in plain English

The A - Z of alternative words

Glossaries

A to Z of legal phrases

Special subjects

Bibliographies

Design and layout

Forms

Medical information

Proofreading

Reports

Websites

Writing business emails

Writing CVs

Writing letters

Grammar guides

Basic grammar - parts of speech

Capital letters

Punctuating bulleted lists

How to write in plain English

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Contents

This guide begins with an introduction called, 'So what's plain English?'

The guide then looks at the main ways to make writing clearer.

- Keep your sentences short
- Prefer active verbs
- Use 'you' and 'we'
- Use words that are appropriate for the reader
- Don't be afraid to give instructions
- Avoid nominalizations
- Use lists where appropriate

The guide then looks at the difficult subject of apologising, and deals with some of the myths that can get in the way of clear communication.

The guide finishes with a summary and a list of words to avoid.

So what's plain English?

First let's say what plain English isn't and destroy some of the myths about it.

- It's not 'cat sat on the mat' or 'Janet and John' writing. Almost anything - from leaflets and letters to legal documents - can be written in plain English without being patronising or oversimplified.
- It doesn't mean reducing the length of your message or changing its meaning. Most of the UK's biggest insurance companies produce policies that explain everything fully in plain English.

A-Z of alternative words

Choose a word:

Plain English tools

- Free guides
- Drivel Defence
- Grammar quiz
- Gobbledygook generator



Box 2. Plain-language initiatives

The European Commission launched a Clear Writing campaign in 2010 to make all types of documents, in all languages, shorter and simpler. In the United Kingdom, the plain-English movement has existed since the late 1970s. Many government offices, such as the Office of Fair Trading, have encouraged the spread of plain language by requiring it in certain consumer contracts. The other main actors in plain English include local authorities, health services and large financial corporations. In Finland, the new government, installed in 2011, is promoting plain language in legislation, administration and communication with citizens. Other countries such as Sweden, the United States of America, Germany and Australia also have plain-language initiatives and/or legislation.



Can all patients read?



- 127 patients with RA attending a UK Hospital clinic... 15% were functionally illiterate (1).
- 100 COPD patients attending COPD clinic in UK hospital 15% were functionally illiterate (2)
- 483 people with asthma attending a US hospital... 13% read at below 3rd Grade (3)

1. Gordon et al Rheumatology 2002;41:750-754
2. Taylor et al . ERJ 2005;26:57s
3. Williams MV et al Chest 1998 114;1008-15

Health literacy tests

- Word recognition tests
 - Rapid estimate of adult literacy in medicine
- Reading comprehension tests
 - Test of functional health literacy in adults (TOFHLA)

REALM

- Medical-word recognition and pronunciation test
- 66 words arranged in complexity
- Score 0-66
- 0-18 3rd grade (9yrs)
- 19-44 4th-6th grade (10-12yrs)
- 45-60 7th-8th grade (13-14yrs)
- 61-66 9th grade (15yrs)

**RAPID ESTIMATE OF ADULT LITERACY IN MEDICINE
(REALM)©
Terry Davis PhD° Michael Crouch MD° Sandy Long PhD**

Patient Name _____	Date of Birth _____	Grade Completed _____
Date _____	Examiner _____	Reading Level _____

List 1	List 2	List 3	
fat _____	fatigue _____	allergic _____	
flu _____	pelvic _____	menstrual _____	
pill _____	jaundice _____	testicle _____	
dose _____	infection _____	colitis _____	
eye _____	exercise _____	emergency _____	
stress _____	behaviour _____	medication _____	
smear _____	prescription _____	occupation _____	
nerves _____	notify _____	sexually _____	
germs _____	gallbladder _____	alcoholism _____	
meals _____	calories _____	irritation _____	
disease _____	depression _____	constipation _____	
cancer _____	miscarriage _____	gonorrhoea _____	
caffeine _____	pregnancy _____	inflammatory _____	
attack _____	arthritis _____	diabetes _____	
kidney _____	nutrition _____	hepatitis _____	
hormones _____	menopause _____	antibiotics _____	
herpes _____	appendix _____	diagnosis _____	
seizure _____	abnormal _____	potassium _____	
bowel _____	syphilis _____	anaemia _____	
asthma _____	haemorrhoids _____	obesity _____	
rectal _____	nausea _____	osteoporosis _____	
incest _____	directed _____	impetigo _____	

SCORE
List 1 _____
List 2 _____
List 3 _____
Raw Score _____

Test of functional health literacy in adults (TOFHLA)

- Measures functional literacy levels of patients
- Numeracy and reading comprehension
- 67 items
- 50 item reading comprehension (3 prose passages) and 17 item numerical ability test
- Takes up to 20 minutes to complete
- There is also a shortened form available S-TOFHLA

Parker RM et al J Gen Intern Med 1995 ;
10:537-541

Medscape® www.medscape.com

Item for Assessment of Numeracy

Normal blood sugar is 60-150

Your blood sugar today is 160

QUESTION: If this were your score, would your blood sugar be normal today?

Item for Assessment of Prose Literacy

Your doctor has sent you to have a _____ x-ray.

- a. stomach
- b. diabetes
- c. stitches
- d. germs

You must have an _____ stomach when you come for _____.

a. asthma	a. is.
b. empty	b. am.
c. incest	c. if.
d. anemia	d. it.

The x-ray will _____ from 1 to 3 _____ to do.

a. take	a. beds
b. view	b. brains
c. talk	c. hours
d. look	d. diets

Designing pulmonary rehabilitation sessions

1. Tailor to the group
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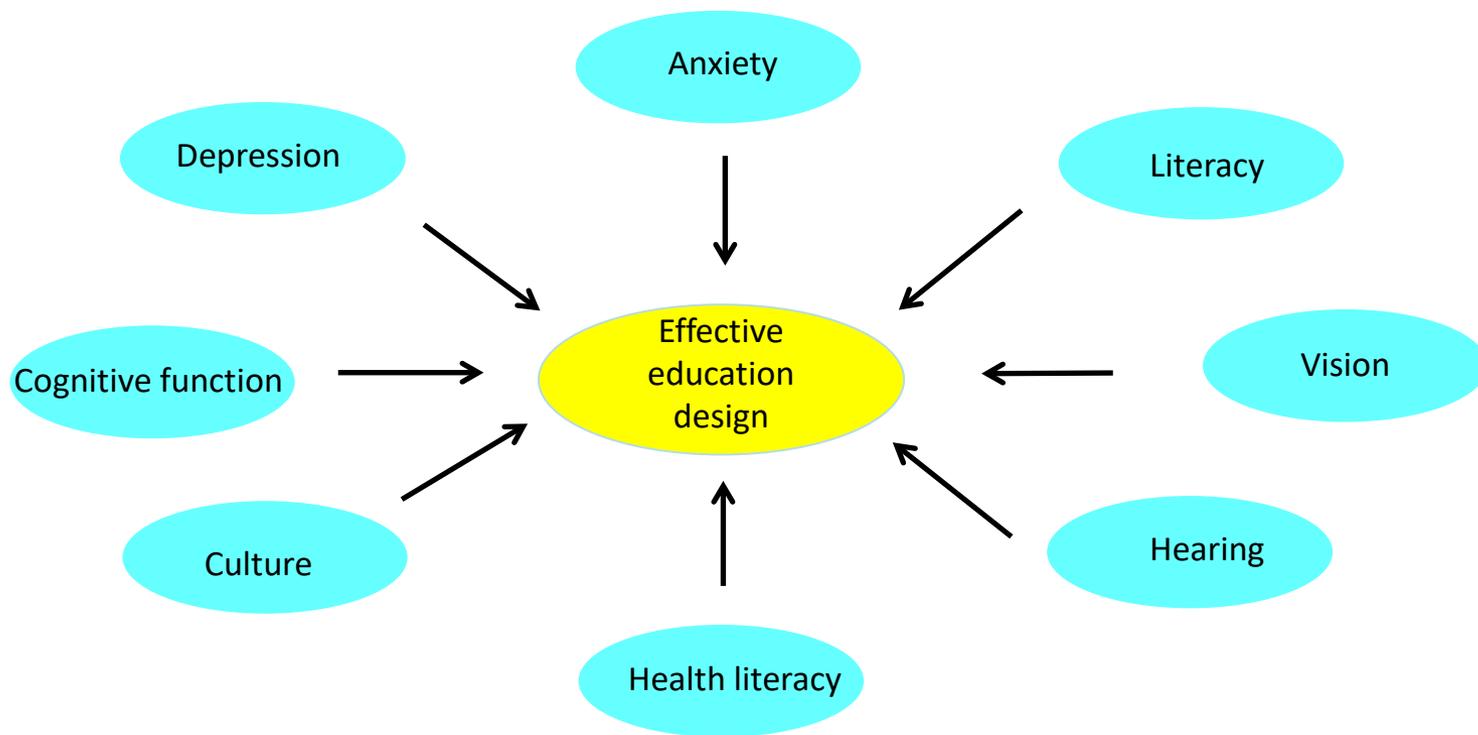
Are we tailoring pulmonary rehabilitation to participant's needs?

- around 15% of the population -literacy issues (1)
- Informal literacy assessment in some areas
- healthcare professionals may overestimate literacy levels (2,3)
- different learning styles such as VARK (4) educational materials should use different formats
- participants prefer a group environment with practical demonstrations of treatment strategies with models and visual aids (5)
- There may be cognitive issues in older adults
- participants felt “too tired to learn” after exercise, something that is not acknowledged in the structure of the programmes examined in this study.



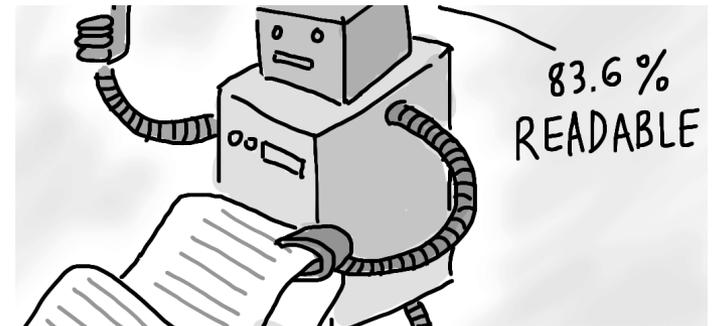
1. Taylor R et al. Functional illiteracy amongst those with chronic obstructive pulmonary disease (COPD) Eur Respir J. 2005;26: 57s.
2. Dickens et al. Journal of Health Communication. 2013; 18: 62–69.
3. Rogers ES et al. Cancer Control. 2006; 13 :225-9
4. www.vark-learn.com
5. Wilson et al Archives of Physical Medicine and Rehabilitation; 2007; 88:1704-1709

Create objectives tailored to learner needs



Consider health literacy

- Use of printed resources which includes pictorial images to reinforce spoken words
- Checking patient comprehension
- Involvement of family support
- Avoidance of medical jargon and professional terms
- Use of various sources
- Having sufficient number of skilled personnel
- Written material should be tested for readability, and pictures should be of adequate size



Don't assume that everyone is confident about reading, writing and using numbers.

Be prepared to explain things in a different way, using real-life examples.

Avoid jargon – it confuses everyone at times. Don't assume that everyone understands words such as "coronary" or "diagnosis".

Don't assume that everyone has the same grasp of English as you do.

Use clear language - and don't be afraid to check the person has understood.
"Would you like me to go over it again?"

If you realise someone might need your support, be sensitive and discreet – but don't be afraid to ask a direct question: *"Would you like some help with the forms?"*

Avoid information overload by giving information in small chunks.

Use information that is easy to understand.





'Belonging'. 'Patients' experiences of social relationships during pulmonary rehabilitation

Anne-Grethe Halding, Astrid Wahl & Kristin Heggdal

To cite this article: Anne-Grethe Halding, Astrid Wahl & Kristin Heggdal (2010) 'Belonging'. 'Patients' experiences of social relationships during pulmonary rehabilitation, *Disability and Rehabilitation*, 32:15, 1272-1280, DOI: [10.3109/09638280903464471](https://doi.org/10.3109/09638280903464471)

To link to this article: <https://doi.org/10.3109/09638280903464471>

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Published online: 15 Feb 2010.

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Article views: 1527

Citing articles: 24 View citing articles



- Support from peers and health-care personnel
- Provided opportunities for patients to share their knowledge
- Encouraged mutual trust
- Support and increased self-confidence
- Motivation for self-care
- Furthers social participation.
- Made coping and adaptation easier
- Positive effect on quality of life.

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Assess educational outcomes in PR

- Lung Information Needs Questionnaire:
<http://www.linq.org.uk/>
 - Assesses a patient's need for information about their COPD to guide clinical encounters
 - Self-complete: Six minutes
 - 17 items with six domains: disease knowledge; medicines; self-management; smoking; exercise; diet
 - MCID: 1 point (informal)
 - Free for clinical use and not-for-profit research: rupert.jones@pms.ac.uk,
mhyland@plymouth.ac.uk

LINQ

Version 11 Dr or Nurse- 26/10/2021 Lung Information Needs Questionnaire

1. Do you know the name of your lung disease?

Yes

No

2. Has a doctor or nurse told you how this disease affects your lungs?

Yes

No

3. Has a doctor or nurse told you what is likely to happen in the future?

Yes

No

4. Which of the following statements best describes what will happen to you over the next few years?

I will get worse

Now that my disease is being treated, I will probably stay the same

Now that my disease is being treated, I will probably get better

I have no idea

True False Don't know

1. In COPD:

- a. In COPD the word "chronic" means it is severe. True False Don't know
- b. COPD can only be confirmed by breathing tests. True False Don't know
- c. In COPD there is usually gradual worsening over time. True False Don't know
- d. In COPD oxygen levels in the blood are always low. True False Don't know
- e. COPD is unusual in people less than 40 years old. True False Don't know

2. COPD:

- a. More than 80% of COPD cases are caused by cigarette smoking. True False Don't know
- b. COPD can be caused by occupational dust exposure. True False Don't know
- c. Longstanding asthma can develop into COPD. True False Don't know
- d. COPD is commonly an inherited disease. True False Don't know
- e. Women are less vulnerable to the effects of cigarette smoking than men. True False Don't know

3. The following symptoms are common in COPD:

- a. Swelling of ankles True False Don't know
- b. Fatigue (tiredness) True False Don't know
- c. Wheezing True False Don't know
- d. Crushing chest pain True False Don't know
- e. Rapid weight loss True False Don't know

4. Breathlessness in COPD:

- a. Severe breathlessness prevents travel by air. True False Don't know
- b. Breathlessness can be worsened by eating large meals. True False Don't know
- c. Breathlessness means that your oxygen levels are low. True False Don't know
- d. Breathlessness is a normal response to exercise. True False Don't know
- e. Breathlessness is primarily caused by a narrowing of the bronchial tubes. True False Don't know

- Bristol Knowledge COPD Questionnaire
 - Assesses a patient's knowledge about topics related to COPD
 - Self-administered; 15 to 20 minutes
 - 65 items with 13 categories: epidemiology and physiology, aetiology, common symptoms, breathlessness, phlegm, chest infections, exercise, smoking, immunization, inhaled bronchodilators, antibiotics, oral steroids and inhaled steroids
 - MCID: not known
 - Free to use: roger.white4@virgin.net

Education in PR: assessment

- Quizzes and tests after individual learning sessions
- Simulated scenarios
- Review of information



Assessing impact and outcomes of education

- Quizzes and tests after individual learning sessions
- Simulated scenarios
- Review of information (use teachback)



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WHAT TOOLS AND RESOURCES DO PULMONARY REHABILITATION TEAMS USE TO DELIVER EDUCATION?



European Respiratory Journal 2020 56: 898;
DOI: 10.1183/13993003.congress-2020.898

Topic area	Organisational resources suggested (non-specific)	Specific recommended CHSS resources	Local resources	Other resources
1. Medication management	CHSS	What is COPD; Living with COPD; Traffic lights; Managing breathlessness	NHS posters; Tailored PR info book	My lungs my life
2. Anatomy and physiology	CHSS	What is COPD; Living with COPD	NHS posters; Tailored PR info book	My lungs my life
3. Pharmacology	CHSS	What is COPD; Living with COPD	Local info; NHS formulary info	video emailed to patient afterwards; BNF; My lungs my life
4. Pathophysiology of chronic respiratory disease	CHSS; BLF	What is COPD; Living with COPD	Lung models and posters	pictures of airways; video emailed to patient afterwards; My lungs my life
5. Medical tests (and interpretation)	CHSS; BLF	What is COPD; Living with COPD	Tailored PR info book	My lungs my life
6. Coping with lung disease	CHSS; BLF		Tailored PR info book	My lungs my life; Leaflets/ relaxation CD
7. Activities of daily living	CHSS; CSP		Tailored PR info book	My lungs my life; various equipment publications; OT leaflet
8. Energy conservation/pacing	CHSS; BLF;CSP		Tailored PR info book	My lungs my life; Energy conservation leaflet; OT leaflets; Self management diary
9. Travel & Leisure activities	CHSS	What is COPD	Local resources	Leaflets; self management diary; various publications; My lungs my life
10. Use of inhalers/ nebulisers - techniques	CHSS; BLF	Living with COPD	Tailored PR info book	inhaler demonstrations; placebo devices; Videos; My lungs my life
11. Oxygen / NIV		What is COPD Living with COPD	Local resources	Practical demos; relevant publications; Dolby materials
12. Early recognition of infection & treatment of exacerbations	CHSS; BLF	What is COPD Living with COPD Traffic lights	Local info NHS formulary posters Tailored PR info book	self management plan self management leaflets; My lungs my life
13. Dyspnea and symptom management including Breathing strategies	CHSS; ACPRC	Managing breathlessness	Local patient information leaflet Tailored PR info book	breathing control leaflet; breathing control chart/score; breathing exercise booklet Picture poster; practical demonstration My lungs my life
14. Indoor & outdoor pollution - smoking cessation	CHSS; BLF	What is COPD	local smoking cessation info; Tailored PR info book	smoking cessation phone numbers
15. Smoking cessation	CHSS; BLF		local smoking cessation info; Tailored PR info book	quit for good visual aids, jar of tar; smoking cessation phone numbers
16. Chest clearance techniques			local info; patient information leaflet	autogenic drainage and ACBT leaflet; Poster of ACBT cycle; Youtube clips; picture posters; oscillating pep devices; My lungs my life video emailed of PT demonstration
17. Benefits of exercise	CHSS		Local resources; Tailored PR info book	Exercise booklet; exercise diary; BLF exercise diary; My lungs my life
18. Strengthening exercises	ACPRC		patient information leaflet Tailored PR info book	Practical session Breathing exercise booklet My lungs my life
19. Breathing exercises				Exercise booklet Home exercise diary IMT devices videos of exercise
20. Communicating with your healthcare provider				self management diary
21. Nutrition and Health food intake	CHSS		Tailored PR info book	Eat well guide Nutrition in COPD; eat well poster; leaflets on gaining weight & losing weight
22. Sleep			Tailored PR info book	Leaflets; relaxation CD

WHAT TOOLS AND RESOURCES DO PULMONARY REHABILITATION TEAMS USE TO DELIVER EDUCATION?



23. Sexuality	CHSS; BLF			Leaflets
24. Family role				
25. Home adaptation		What is COPD	in house energy management checklist; Tailored PR info book	role of OT; self management diary
26. End of life decisions				Leaflets; national document; ACP available to look at; Video emailed
27. Advance directives				Leaflets; national document
28. Anticipatory care planning				Leaflets; national document; national tool; ACP available to look at; Video emailed
29. Swallowing & COPD (Swallow screening)			local	local leaflet from SLT colleagues
30. Benefits system and welfare rights			Local info, DWP info	info leaflets from benefits; Leaflet about service cash in your pocket; Welfare right info
31. Support groups	CHSS		local leaflets	Info on BLF support group, poster and handouts
32. Psychological impacts and minimising their effects			Information on cheerful <u>chesters</u> Tailored PR info book	steps to recovery
33. Anxiety and panic control (relaxation & stress management)	CHSS		Tailored PR info book	Anxiety management leaflet relaxation cd; coping with stress CD; www.physiotherapyforbpd.org square breathing
34. How to equip the individual to improve confidence	CHSS			RELAXATION TECHNIQUES - relaxation CD; My lungs my life
35. Identifying and changing beliefs and behaviour	CHSS	What is COPD Traffic lights		My lungs my life
36. Depression and mood	CHSS			My lungs my life; Relaxation CD
37. Self management				
38. Action plan for exacerbations	CHSS	Traffic lights	<u>tayside</u> self management plan	booklet patients fill out
39. Goal setting	CHSS	What is COPD Traffic lights	Tailored PR info book	
40. Making a change plan				fill out sheet



How to stop smoking

It's never too late to quit

bif.org.uk/smoking



COPD: living with chronic obstructive pulmonary disease

Endorsed by
 Royal College of General Practitioners

bif.org.uk/COPD




 Chest Heart & Stroke Scotland  

Chest Heart & Stroke Scotland

Traffic Lights for COPD



 **NO LIFE HALF LIVED**

About COPD

Chronic obstructive pulmonary disease or COPD is the name given to a group of health conditions that cause long-term damage to your airways. In COPD, your airways are narrowed. This makes it harder for air to move freely in and out of your lungs. COPD includes:

Chronic bronchitis: long-term inflammation of your airways leading to the production of too much mucus.

Emphysema: damage to the air sacs in your lungs affecting your lungs' ability to transfer oxygen into your bloodstream.

Sometimes your COPD can suddenly get worse. This is called a flare-up or exacerbation. In some cases, medical treatment is needed as soon as possible to prevent further damage to your lungs.

Further support

Chest Heart & Stroke Scotland offers a range of support for people living with COPD. This includes:

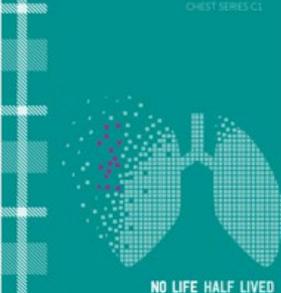
- Confidential information and support from the Advice Line nurses
- Printed and online information about chest conditions
- An air quality & weather text alert service
- Support groups for people living with a long-term chest condition

To find out more, call the Advice Line nurses on **0800 801 0899**, visit www.ches.org.uk/copd or email advice@cheshs.org.uk



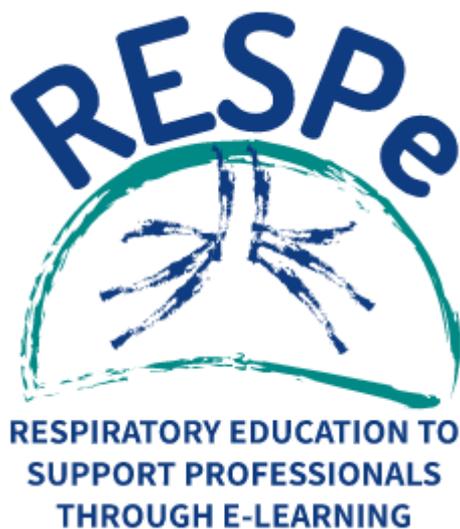
Living with COPD

CHEST SERIES C1



NO LIFE HALF LIVED

<https://www.respelearning.scot/>



Respiratory Education to Support Professionals through eLearning

RESPe is a free, interactive, e-learning resource which provides a basic knowledge of common respiratory conditions. The aim of the resource is to improve patient/client care by increasing the knowledge and skills of any member of health and social care staff working with people living with respiratory conditions in health, social or private care settings.

Intended users are:

- Staff and students who are new to working with respiratory patients/clients.
- Staff who wish to refresh or extend existing respiratory knowledge.
- Staff who have a mixed caseload which includes some respiratory patients/clients.
- Staff working in the private sector who have limited access to specific respiratory training.

RESPe has been developed in collaboration with NHS Scotland respiratory clinicians, Chest Heart & Stroke Scotland and the University of Edinburgh Digital Learning Applications & Media team as part of our e-learning for chest, heart and stroke conditions. RESPe was funded by the Scottish Government and aligns with the National Clinical Strategy for Scotland, Realistic Medicine and is supported by the National Advisory Group for Respiratory MCNs and Chest Heart & Stroke Scotland No Life Half Lived strategy.



Anatomy and Physiology

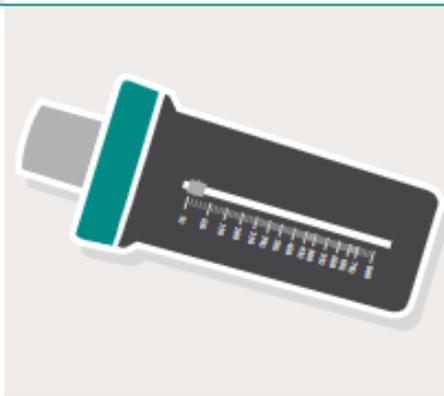
In this section you will see interactive anatomical diagrams which show the structures within the lungs from the mouth and nose down to the smallest vessels. The chest wall and the muscles involved in breathing.

[View Topic](#)

Assessment and common lung diseases

In this section you will learn about what happens during a basic respiratory assessment. Even if you are not familiar with some of the terms these will be explained. This will help you to observe your patients/clients for any changes in their respiratory health and know what to do next.

[View Topic](#)



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Going forward - Things to think about for your education sessions – changing / improving practice

- Do not assume literacy skills!
- Assessment of learning needs – individual, group, measurement of self-efficacy
- Interactive lecturing
- Embed demonstration techniques - use of inhalers, breathing strategies, chest clearance, breathing and strengthening exercises.
- Use aids, posters, models, videos to supplement your education
- Use motivational interviewing
- Use peer observation/participation
- Implement group discussions/activities
- Provide alternative resources i.e. handouts – check for literacy
- Use of printed resources which includes pictorial images to reinforce spoken words
- Checking patient comprehension
- Involvement of family support
- Avoidance of medical jargon and professional terms
- Use of various sources
- Having sufficient number of skilled staff
- Written material should be tested for readability, and pictures should be of adequate size

Resources

- ATS PR Assembly Journal club webinar:

Blackstock et al. "Chronic obstructive pulmonary disease education in pulmonary rehabilitation. An official American thoracic society/thoracic society of Australia and New Zealand/Canadian thoracic society/british thoracic society workshop report." *Annals of the American Thoracic Society* 15.7 (2018): 769-784:

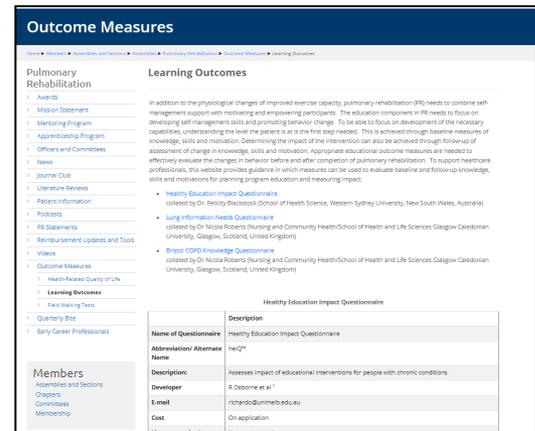
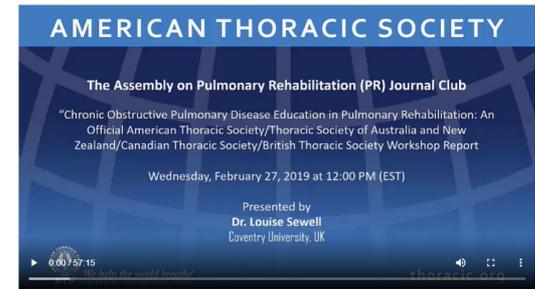
<https://www.thoracic.org/members/assemblies/assemblies/pr/journal-club/chronic-obstructive-pulmonary-disease-education.php>

- Summary of above paper:

<https://www.thoracic.org/members/assemblies/assemblies/pr/quarterly-bite/education-in-pulmonary-rehabilitation-learning-about-learning.php>

- Information on outcome measures:

<https://www.thoracic.org/members/assemblies/assemblies/pr/outcome-measures/learning-outcomes.php>



Any Questions?



Nicola Roberts 
@DrNRoberts