

LifeGuide:

**flexible software for creating web-based
support for patient self-management**

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What opportunities does the Internet offer for health-care interventions?

- For policy-makers – cost-effective healthcare delivery
(for meta-analysis of effectiveness see Webb, Joseph, Yardley & Michie, Journal of Medical Internet Research, 2010, 12, 4)
- For patients – convenient 24/7 access to personalised health-care for all problems from worldwide resources
- For clinicians – detailed longitudinal patient monitoring, automation of routine care
- For scientists – potential to collect detailed longitudinal data on large samples

LifeGuide: core funding from the ESRC as part of national Digital Social Research programme
- set of software tools that allows non-programmers to create interactive web-based interventions

Health psychologists:

Lucy Yardley

Susan Michie

Judith Joseph

Sarah Williams

Leanne Morrison

Computer scientists:

Dave de Roure

Gary Wills

Mark Weal

Adrian Osmond



Advantages of the LifeGuide

- easy to quickly modify interventions (e.g. during development, after feedback, when circumstances change), speeds up modification/evaluation cycle
- reduces time and costs caused by duplication of programming for each intervention
- open source, free – opens up use by new researchers, developing countries, allows collaborative development
- facilitates sharing interventions/components, allowing modification for different contexts (e.g. translation into different languages, adding context-specific advice)

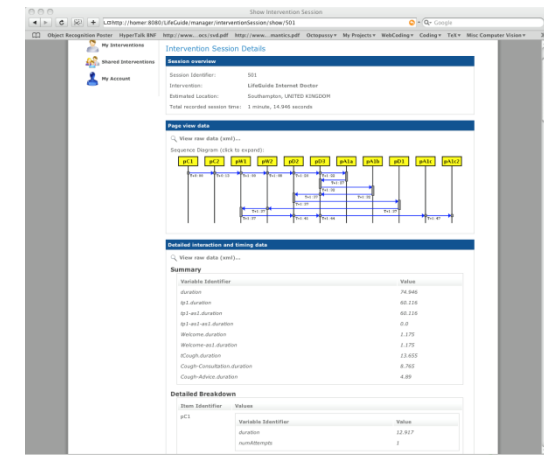
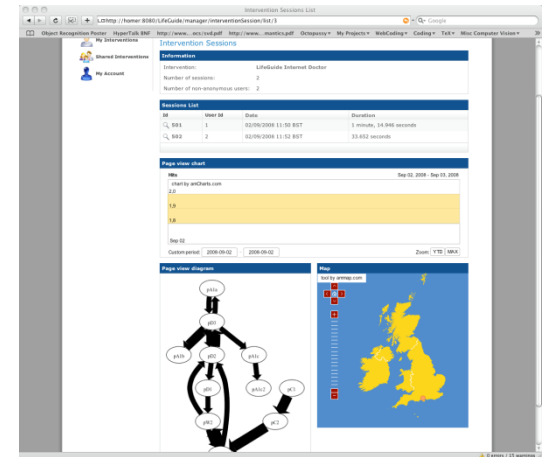
What can you do in LifeGuide?

- Deliver tailored advice based on diagnostic questions, charted progress
- Create questionnaires, change look and feel, add images and videos, graphs of users' progress over time
- Send automated emails and text messages (e.g. reminders)
- Provide social support (e.g. discussion board, forums)



What can you do in LifeGuide?

- screening and multi-user registration
- stratified randomisation
- automated baseline and follow-up assessment
- monitoring throughput and adherence (all website usage recorded in detail)
- output all data to Excel, SPSS etc.



Interventions in development (funded by MRC, NIHR, EC, DoH)

- stroke rehabilitation
- smoking cessation, weight reduction (diet and physical activity promotion)
- cognitive-behavioural therapy (8 sessions) for irritable bowel syndrome
- e-learning and assessment for NHS staff (smoking cessation trainers)
- intervention to reduce antibiotic prescribing in GPs across Europe
- many more in preparation ...

More information is
available at:
www.lifeguideonline.org

‘Internet Dr’:
intervention to help people
self-care for cold/flu symptoms

Principal collaborator: Paul Little

Challenge: How much information should be presented, to whom, and in what way?

- Theory and research on preferences for information-seeking suggest some people prefer less information (often men, older people, lower education)
- Developed website in which detailed information optional, to maximise accessibility to all
- Carried out second study to elicit views of website of men and women with low/high education levels

Windows Internet Explorer

eguideonline.org/player/play/doctor?thiz=pW2

Tools Help

Consultation

Home RSS Print Page Tools



Click on the symptom you would like advice for:

Welcome Cough **Sore Throat** Runny/Stuffy Nose Fever

[How to consult the Internet Doctor](#)

So that we can give you the right advice, we need you to answer a few questions about your symptoms.

After you click 'Next' at the end of the page, all your answers and advice will be saved during this session. This means you can go back to check or change your answers if you want to.

 Doctor's Questions

How long have you had your sore throat for?

- Less than 4 weeks
- More than 4 weeks

Over the last week has your sore throat got better, worse or stayed much the same?

- My sore throat is getting a little better, but too slowly
- My sore throat is not getting better at all
- My sore throat is steadily getting worse

Do you have any difficulty swallowing?

- None, slight or some
- Yes, I find it very difficult to swallow - I am not able to drink enough to stop being thirsty and I have a dry mouth
- I can't swallow at all (not even my own saliva)

[Common Questions](#)

Internet | Protected Mode: Off 100%

Internet Doctor :: Advice - Windows Internet Explorer


http://beta.lifeguideonline.org/player/play/doctor?thiz=st_pD3


File Edit View Favorites Tools Help


Internet Doctor :: Advice

Your Symptom Advice

[How to consult the Internet Doctor](#)

 Doctor's Questions

 Symptom Advice

 Treatment Options

 Printable Advice

[Common Questions about Colds and Flu](#)

Symptoms of a sore throat (pharyngitis is the medical name), are most commonly caused by viruses and can be quite painful and uncomfortable. You may get a burning feeling in your throat and it can be painful to swallow, especially hot foods and drinks. Your voice may sound hoarse and broken and sometimes may disappear for a day or so. You may feel as if your throat is closing up if your tonsils are swollen.

The glands in your neck can feel sore or can swell up when you have a sore throat. Your glands are an important part of your immune system – they produce the white blood cells and antibodies that fight infection – so swollen glands are just a sign of the body fighting infection. Your glands will gradually go back to their normal size when the infection is over.

The sore throat symptoms you have described are not a sign of a serious illness and you do not need to contact your doctor about them at present. You do not need a prescription for the treatment of your sore throat – just click on 'Treatment Options' for advice.

If your symptoms get worse or do not get better, or if you have any other symptoms, then check this website again for advice on whether to contact your doctor.

Click on any of the questions below to find the answers
The answers to the questions will appear right away and will also be included in your printable advice.

Ask the Internet Doctor

- [What is causing my sore throat?](#)
- [When should my sore throat clear up?](#)
- [Could going to see a doctor help my sore throat get better?](#)
- [How can I tell when I need to contact my doctor?](#)

Done

Internet | Pro

tor :: Advice - Windows Internet Explorer

http://beta.lifeguideonline.org/player/play/doctor?thiz=st_pA1c

Internet Doctor :: Advice

Click on the symptom you would like advice for:

Welcome Cough **Sore Throat** Runny/Stuffy Nose Fever

[How to consult the Internet Doctor](#)

Are you still unsure whether your symptoms may be a sign of a serious illness that needs to be seen by a doctor?

We have listed the serious conditions that can cause some similar symptoms (although these are much less common causes of a sore throat).

If you would like further information to help you decide whether you might have any of these conditions, and whether you need to contact your doctor, click on any of the conditions below to read about them.

Click on any of the conditions below to read about them. The information will appear right away and will also be included in your printable advice.

Ask the Internet Doctor

- [Tonsillitis](#)
- [Glandular fever](#)
- [Bronchitis](#)
- [Meningitis](#)
- [Empysema and chronic bronchitis](#)

Click 'Next' to find out about your Treatment Options

NEXT ➔

[Common Questions](#)

Doctor's Questions
Symptom Advice
Treatment Options
Printable Advice

Internet | Protected Mode: Off

Click on the symptom you would like advice for:

Welcome

Cough

Sore Throat

Runny/Stuffy Nose

Fever



[How to consult the Internet Doctor](#)

Your treatment options

We have put together advice for coping with your symptoms based on doctors' experience, medical evidence and what has been found useful by people with similar symptoms.

You can click on any other symptom at the top of the page that you want advice for.

Click on any of the advice below to read about it. The information will appear right away, and will also be included in your printable advice.



Doctor's Questions



Symptom Advice



Treatment Options



Printable Advice

Ask the Internet Doctor

[Click here for advice on how you can ease your symptoms without any medication](#)

You do not need to take any medication – the medication we suggest below is just to ease symptoms and not to cure you. Click here for ways to ease your symptoms without having to take medications.

[Click here for advice on what to ask for from the chemist, if you are happy to take medication](#)

You do not need to worry that taking the medication we suggest could harm you. All the medicines we suggest are safe, and our treatment advice gives details of any side effects.

Don't forget to click on:



Printable Advice to see and print all the advice you have selected for all your symptoms.



Common Questions about Colds and Flu if there is anything else you would like to know about – we have put together answers to some more questions that people often ask.

[Common Questions about Colds and](#)

[Click here for advice on how to boost your immune system, and help your body to recover naturally](#)

Click 'Next' to see your Printable Advice

Qualitative study

- ‘think aloud’ study in 26 adults aged 18-63
- internet use ranged from 0-63 hours/week
- 12 graduates, 14 non-graduates including people with minimal qualifications

Findings from qualitative study

- *“There was a lot of information available, which I found was very good information.”* [female, pharmacist, PhD]
- *“I am quite impressed about how informative it is.”* [male, unemployed, vocational qualification – NVQ level 2]
- *“My general feeling is, there’s a lot of really useful information on here.”* [female, student]
- *“The information that was there, that was good information, so the content I suppose you could say I like, the information was good.”* [male, shop worker, GCSE]
- *“I did like the site and I certainly will go to the site again.”* [female, home-maker, Portugese high school certificate]

332 people completed 48-hour follow-up

Website satisfaction items	Internet Dr group <i>M</i> (s.d.)	Control group <i>M</i> (s.d.)	<i>p</i>
The website gave me all the advice I needed	6.40 (2.05)	5.63 (2.51)	.002
The website was helpful to me	6.41 (2.17)	5.72 (2.51)	.007
I felt I could trust the website	6.91 (2.21)	6.25 (2.54)	.01

Median patient enablement score (inter-quartile range 0-5)
= 3 Internet Dr group, = 2 in control group , $P = .03$).

11.6% Internet Dr group, 17.6% control group consulted health professional ($OR = 0.61$)

PRIMIT:
an intervention to reduce
infection transmission

Principal collaborator: Paul Little

Qualitative studies of draft web-pages

28 think aloud interviews

Findings: Format

Interaction – wanted quizzes and tables with feedback

Format – wanted more varied layout, larger font, bullet points, bolding to emphasise

Illustrations – feedback mixed re. cartoons or photos



Size 14+ font
for all text

Bolding
important
messages

Adding
credibility



VIRUS DEFENCE

Simple steps to reduce colds and flu

Simple Steps to Reduce Colds and Flu

This website is in 4 weekly sessions. You will receive an email to let you know when the next session is ready.

In each session you will find all the information you need to protect yourself and the people you live with from colds and flu.

This includes:

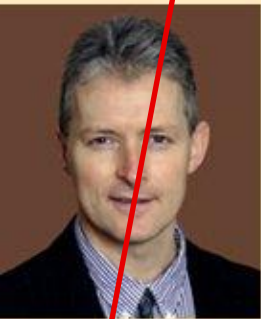
- **personalised information** for you and the people you live with
- **medical facts** about viruses to help explain how you catch them
- **simple advice** on how to protect yourself from cold and flu viruses
- **support and tips** on how to make these ideas easier
- **ongoing feedback** and help with your progress



Use of
photographs

Emphasizing
information

Using bullet points
for easy reading



This website has been put together by Professor Paul Little

[click here for more information](#)

Qualitative studies of draft web-pages

Findings: beliefs, barriers and facilitators

False transmission beliefs – viruses as airborne, don't need to wash hands after using a tissue

Social barriers/facilitators – didn't want to be seen as obsessive, or as having dirty hands!

Control barriers/facilitators – forgetting, not having time, dry skin, using hand gels



VIRUS DEFENCE

Simple steps to reduce colds and flu

Would You Shake This Hand?

Probably not!

The funny thing is that if your hands were this dirty you would feel too embarrassed to touch other people - or too disgusted to touch your own face.

But it is hard to know if hands are dirty just by looking at them - they can have lots of viruses on them but still look clean

It's a bit like cleaning your teeth - other people can't always tell if they are clean just by looking, but you know they feel smooth and shiny after they have been brushed.

When you wash your hands you can tell they are clean because they smell nice, and feel soft and smooth. That is when you can be confident that they are cleaner and safer.



Interim data from full pilot of web intervention

- In pragmatic design, 517 people randomised to prevention website (with or without advice on boosting immune system function) or control (no advice)
- Significant intervention effects on hand-washing rates at 4 weeks ($p < .001$, $d = .36$) and 12 weeks ($p < .004$, $d = .28$).
- Full trial will test effects of intervention on infection rates in $> 16,000$ people

LifeCIT:
supporting patients to carry out
stroke rehabilitation at home

Principal collaborator: Jane Burridge

Welcome to LifeCIT!

Click on whatever you would like to do first

- Plan today's activities
- Play a game
- Enter my progress
- Check my progress
- Check for or send messages

Future of the LifeGuide

- added functionality as desired (open source)
- added connectivity (remote monitoring, NHS links)
- different modalities (mobile computing)

To receive LifeGuide Community newsletters
email V.Hayter@soton.ac.uk

For more information about how you can use
LifeGuide go to www.lifeguideonline.org