PAINT®
Package Insert Test

Patient information via package inserts within the European Union

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Bonn, 29 November 2010

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Patient information via package inserts within the European Union

Content

- **Package inserts**
  - background
  - legislation
  - current situation
- **Readability tests**
  - legislation
  - readability test methods / bridging
  - current situation

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Information sources for medicines within the European Union

Patients

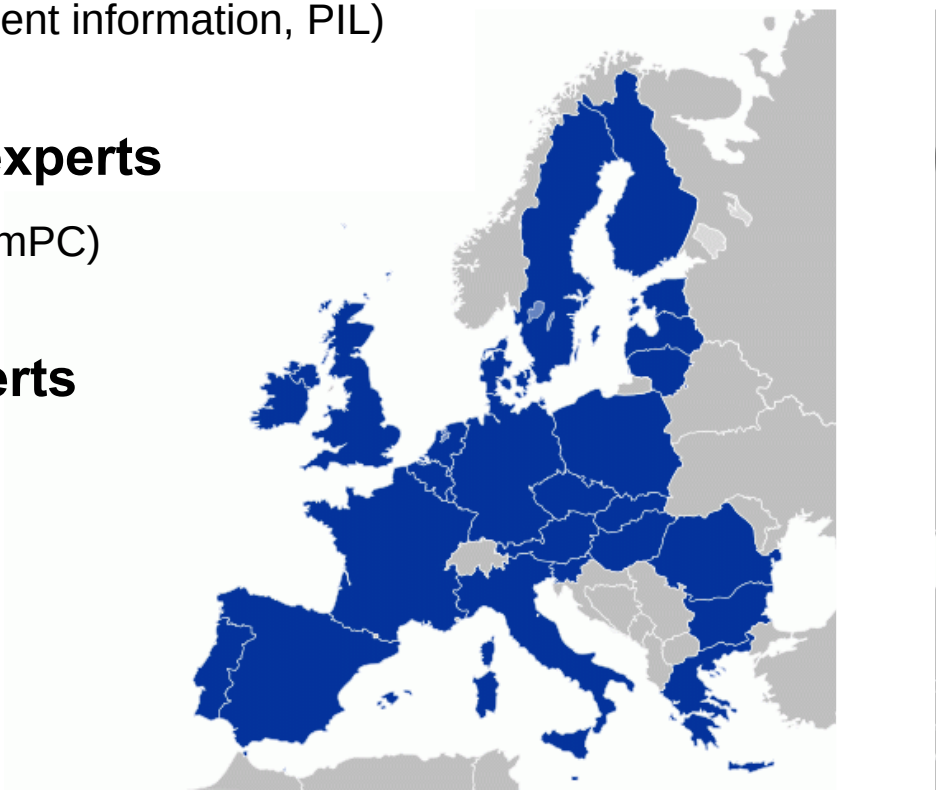
- package inserts (package leaflets, patient information, PIL)

Medical and pharmaceutical experts

- summary of product characteristics (SmPC)

Sources for patients and experts

- internet
- books, magazines, …
- pharmaceutical companies
- agencies
- scientific conferences, meetings
- organisations



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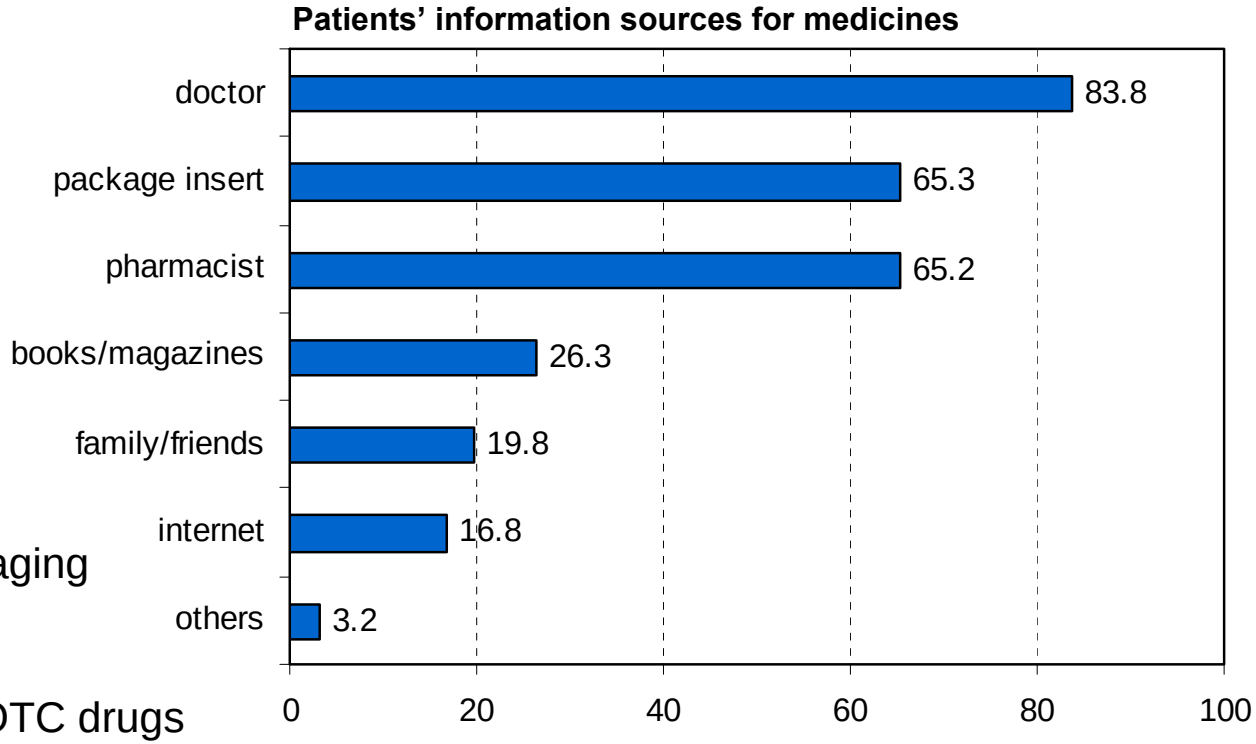
Patient information via package inserts

Aim

- safe and effective pharmacotherapy

Advantages

- officially approved
- in each medicine packaging
- patient information for
  - new medicines, e.g. OTC drugs
  - content, that could not be given during doctor's or pharmacist's advice
  - reinforce instructions



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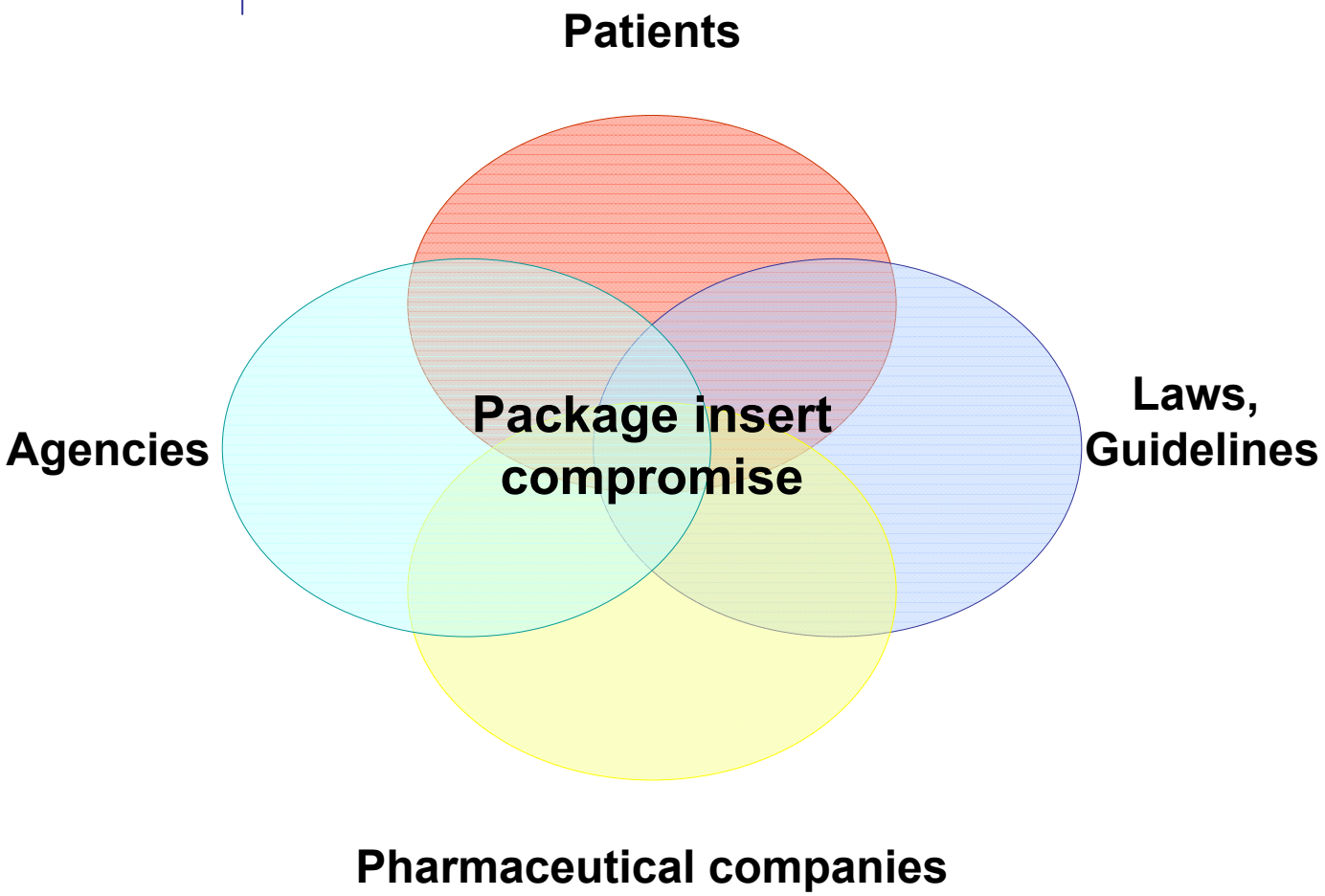
Patient information via package inserts



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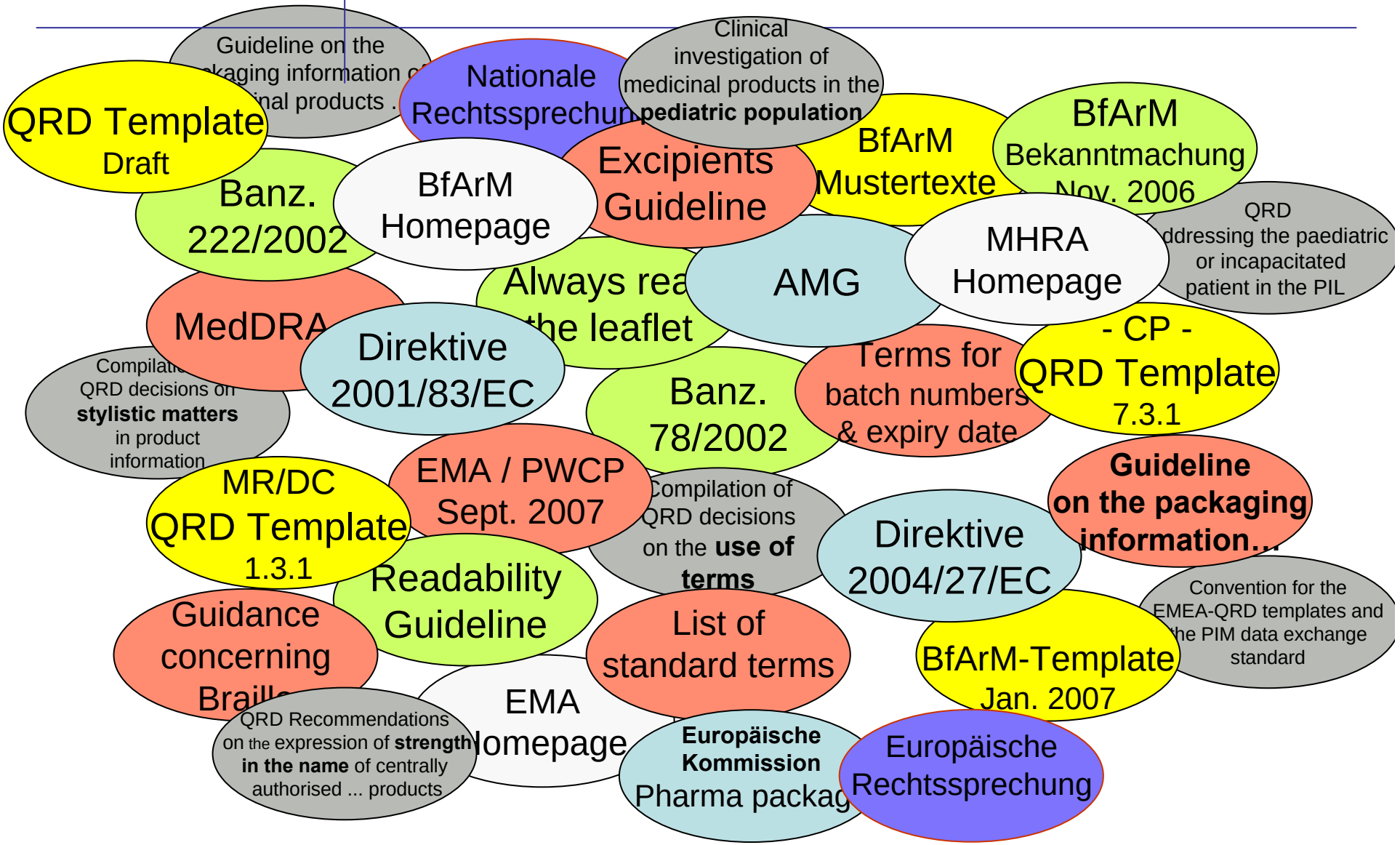
Package inserts and their European Union rules



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Package inserts and their European Union rules

- **European determined**
- **types of rules**
  - compulsory legislation
    medicines acts, such as Directive 2001/83/EC
  - recommendations (non-compulsory)
    guidelines, templates, …
- influenced by court decisions and medicine agencies

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European medicine act
- compulsory legislation -

Directive 2001/83/EC and amendments

such as Directive 2004/27/EC

Requirements relating to package inserts

- contained in all medicines
- in accordance with the summary of the product characteristics
- correct and up to date according to the medical and scientific knowledge
- legible, easy to understand and use
- readability testing
- without elements of promotional nature
- contents and their order

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Information order in package inserts within the European Union

Order since Directive 2004/27/EC		Patients' prefered order*		Order before Directive 2004/27/EC
Therapeutic group		Therapeutic indications		Ingredients
Therapeutic indications		Dosage instruction		Drug quantity
Contraindications		Ingredients		Therapeutic group
Precautions and warnings		Precautions and warnings		Manufacturer
Interactions		Contraindications		Therapeutic indications
Dosage instruction		Interactions		Contraindications
Application error tips		Possible side effects		Precautions and warnings
Possible side effects		Therapeutic group		Interactions
Storage		Application error tips		Dosage instruction
Ingredients		Drug quantity		Application error tips
Drug quantity		Storage		Possible side effects
Manufacturer		Manufacturer		Storage
Date of last update		Date of last update		Date of last update

Very important information for patients* is emphasised using bold print.

*Fuchs et al. PharmInd 4, 2003; n=855 participants

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Draft of updated European medicine act

Pharmacovigilance proposal

1st reading within the European Parliament, 22nd September 2010

- patients encouraged to report **possible side effects**

  new advice in package inserts
- **medicines that require additional monitoring**

  labelled with new black symbol
- **Eudravigilance database**

  package inserts in the official European Union languages available via this website

:

Next steps: • voting within the Council of the European Union, 6th December 2010

• afterwards, implementation in national laws within 18 months

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European medicine act
- compulsory legislation -

Directive 2001/83/EC amended by Directive 2004/27/EC
Article 65

“In consultation with the Member States and the parties concerned, the Commission shall draw up and publish detailed guidance concerning in particular:

(a) the **wording** of certain special warnings for certain categories of medicinal products;

(b) the particular information needs relating to non-prescription medicinal products;

(c) the **legibility** of particulars on the labelling and package leaflet;

(d) the methods for the identification and authentication of medicinal products;

(e) the list of excipients which must feature on the labelling of medicinal products and the way in which these excipients must be indicated;

(f) harmonised provisions for the implementation of Article 57.”

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Readability Guideline
- non-compulsory legislation -

Readability Guideline recommendations

January 2009

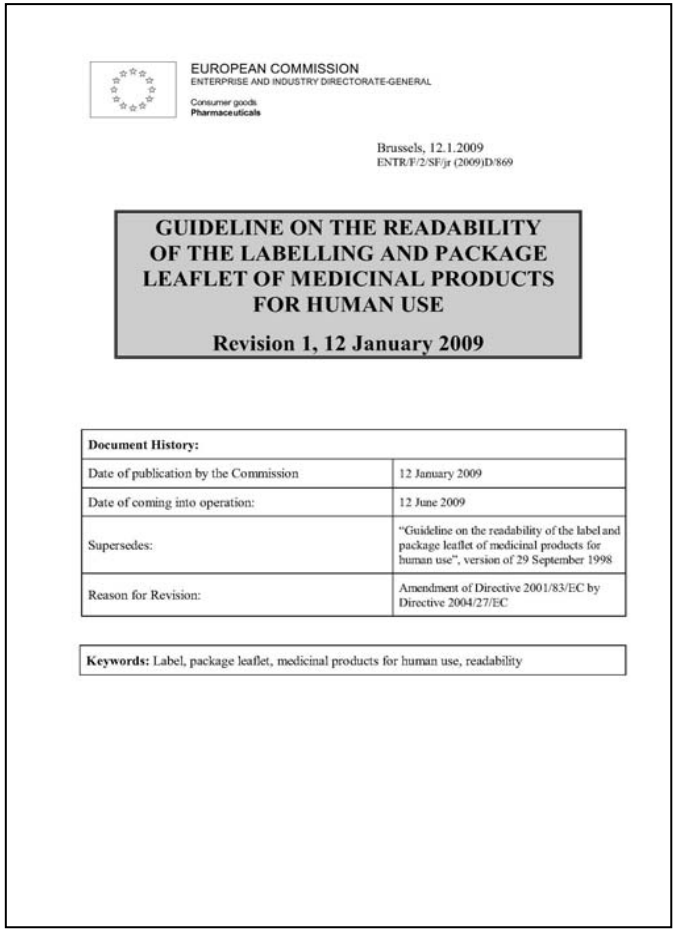
- **package insert**

  font size and type, design and layout, headings, print colour, syntax, speech style, paper, symbols and pictograms, templates

- **labelling**
- **information for blind and partially-sighted people**

  Braille-font

- **readability test**
- **bridging**



EUROPEAN COMMISSION
ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL
Consumer goods
Pharmaceuticals

Brussels, 12.1.2009
ENTR/F/2/SF/jr (2009)D/869

GUIDELINE ON THE READABILITY OF THE LABELLING AND PACKAGE LEAFLET OF MEDICINAL PRODUCTS FOR HUMAN USE

Revision 1, 12 January 2009

Document History:	
Date of publication by the Commission	12 January 2009
Date of coming into operation:	12 June 2009
Supersedes:	"Guideline on the readability of the label and package leaflet of medicinal products for human use", version of 29 September 1998
Reason for Revision:	Amendment of Directive 2001/83/EC by Directive 2004/27/EC

Keywords: Label, package leaflet, medicinal products for human use, readability

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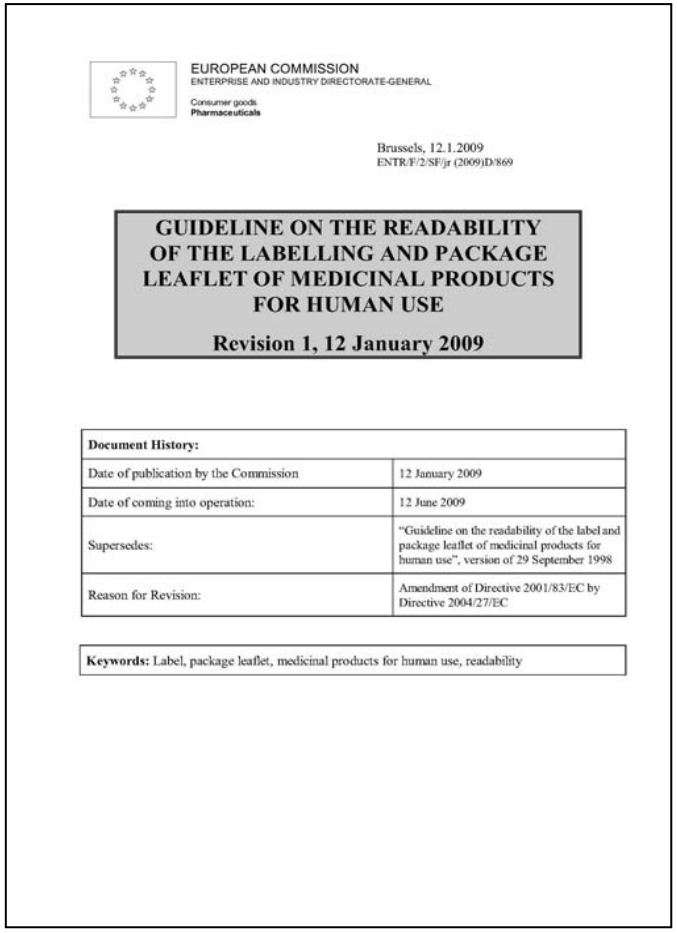
Readability Guideline
- non-compulsory legislation -

Positive changes e.g.

- providing possible side effects according to
  - frequencies
  - severity
- font size increase from minimum 8pt to 9pt

Readability Guideline, January 2009



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Font size study

Font size (Arial, pt)	Percentage of information not located (%)		Locatability rank	
	Original	Model	Original	Model
7	9.8	5.7	5	7
8	8.5	6.7	2	9
9	12.1	3.4	7	4
10	9.1	3.0	4	2
11	12.2	2.8	8	1
12	6.7	3.0	1	2
13	10.9	4.4	6	5
14	8.7	6.0	3	8
16	16.0	4.8	9	6

Volume of text: original 1359 words, model 579 words; n = 205 participants

Fuchs et al. PharmInd 5, 2008 and 12, 2010

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Font size study

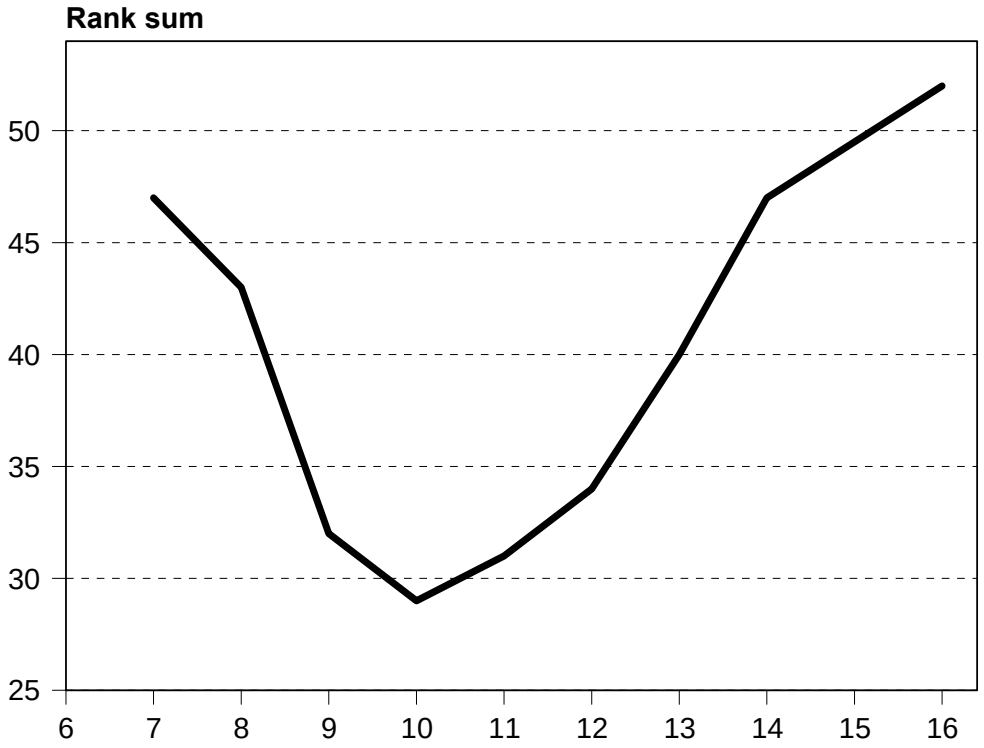
Rank sum of the
original + model =

locatability
(Percentage located contents)

+ comprehensibility
(percentage comprehended contents)

+ time to answer

+ participants' opinions
(17 statement, n = 205 participants)



Fuchs et al. PharmInd 12, 2010

Average font size in package inserts: 2.4mm (~7.5pt Arial)
(measured from ascender to descender line, PAINT2 study, n = 271 package inserts from the year 2005)

Readability guideline draft (2006): minimum 12pt
16 to 20pt in medicines frequently used by visually impaired patients

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Readability Guideline
- non-compulsory legislation -

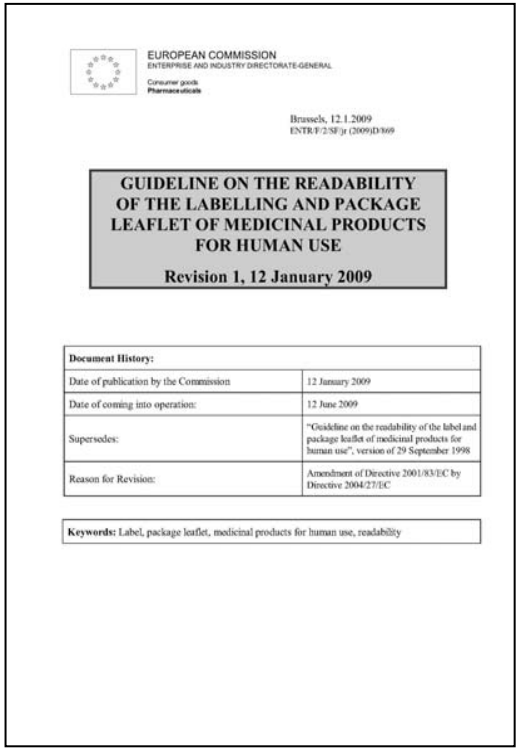
Positive changes e.g.

- providing possible side effects according to
  - frequencies
  - severity
- font size increase from minimum 8pt to 9pt

Negative changes e.g.

- more imprecise guideline recommendations
  - ‘sufficiently thick paper‘ instead ‘paper weight ≥ 40g/m²’
  - ‘avoid long sentences’ instead ‘sentences longer than 20 words’
- landscape format only is recommended

Readability Guideline, January 2009



EUROPEAN COMMISSION
ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL
Consumer goods
Pharmaceuticals

Brussels, 12.1.2009
ENTR/F/2/SF/jr (2009)D/369

GUIDELINE ON THE READABILITY OF THE LABELLING AND PACKAGE LEAFLET OF MEDICINAL PRODUCTS FOR HUMAN USE

Revision 1, 12 January 2009

Document History:	
Date of publication by the Commission	12 January 2009
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Keywords: Label, package leaflet, medicinal products for human use, readability

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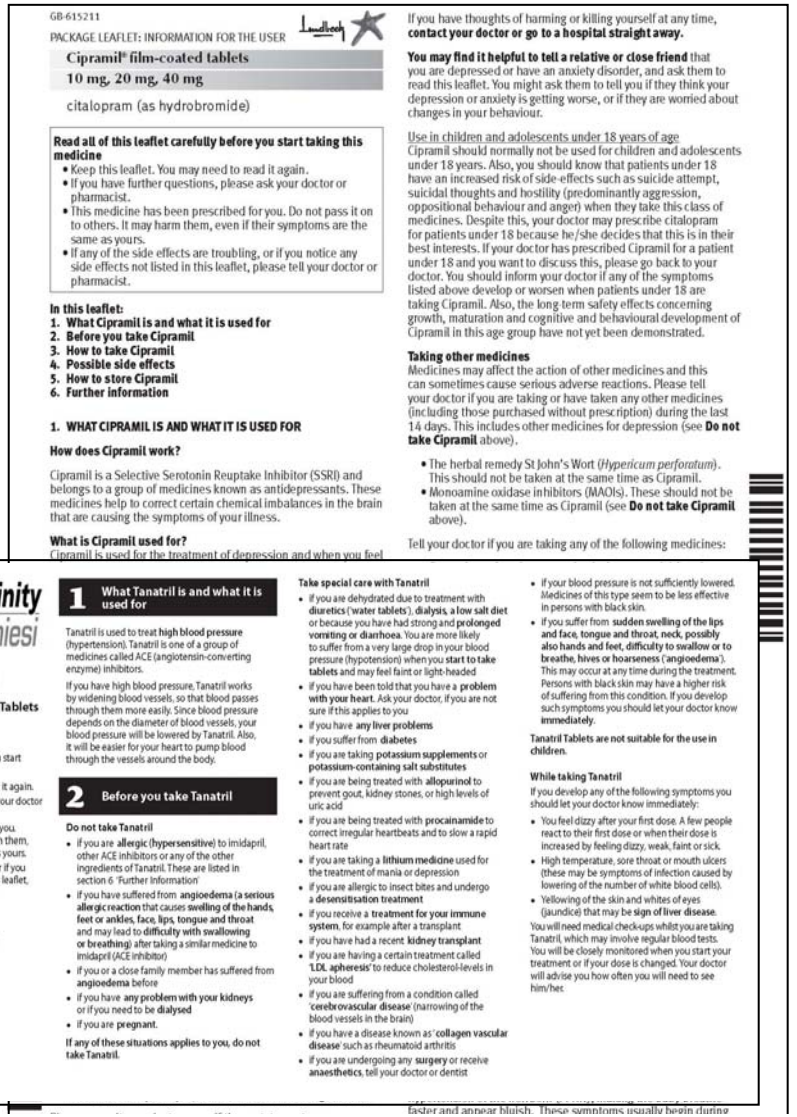
Package Insert Test

Package inserts' format

landscape format

- Readability Guideline recommendation
- WIdO recommendation (2005)
- Beil et al. PharmInd 11, 2008
  - 3 package inserts; each tested with 20 participants
  - percentage of located information
    98.7% portrait format, 8pt
    97.3% landscape format, 8pt
    98.3% landscape format, 11pt
  - percentage of comprehended information
    97.7% portrait format 8pt
    98.3% landscape format, 8pt
    97.3% landscape format, 11pt
  - 80% prefer landscape format



GB-615211

PACKAGE LEAFLET: INFORMATION FOR THE USER

Cipramil® film-coated tablets
10 mg, 20 mg, 40 mg

citalopram (as hydrobromide)

Read all of this leaflet carefully before you start taking this medicine
- Keep this leaflet. You may need to read it again.
- If you have further questions, please ask your doctor or pharmacist.
- This medicine has been prescribed for you. Do not pass it on to others. It may harm them, even if their symptoms are the same as yours.
- If any of the side effects are troubling, or if you notice any side effects not listed in this leaflet, please tell your doctor or pharmacist.

In this leaflet:
1. **What Cipramil is and what it is used for**
2. **Before you take Cipramil**
3. **How to take Cipramil**
4. **Possible side effects**
5. **How to store Cipramil**
6. **Further information**

1. WHAT CIPRAMIL IS AND WHAT IT IS USED FOR

How does Cipramil work?

Cipramil is a Selective Serotonin Reuptake Inhibitor (SSRI) and belongs to a group of medicines known as antidepressants. These medicines help to correct certain chemical imbalances in the brain that are causing the symptoms of your illness.

What is Cipramil used for?

If you have thoughts of harming or killing yourself at any time, **contact your doctor or go to a hospital straight away.**

You may find it helpful to tell a relative or close friend that you are depressed or have an anxiety disorder, and ask them to read this leaflet. You might ask them to tell you if they think your depression or anxiety is getting worse, or if they are worried about changes in your behaviour.

Use in children and adolescents under 18 years of age
Cipramil should normally not be used for children and adolescents under 18 years. Also, you should know that patients under 18 have an increased risk of side-effects such as suicide attempt, suicidal thoughts and hostility (predominantly aggression, oppositional behaviour and anger) when they take this class of medicines. Despite this, your doctor may prescribe citalopram for patients under 18 because he/she decides that this is in their best interests. If your doctor has prescribed Cipramil for a patient under 18 and you want to discuss this, please go back to your doctor. You should inform your doctor if any of the symptoms listed above develop or worsen when patients under 18 are taking Cipramil. Also, the long-term safety effects concerning growth, maturation and cognitive and behavioural development of Cipramil in this age group have not yet been demonstrated.

Taking other medicines
Medicines may affect the action of other medicines and this can sometimes cause serious adverse reactions. Please tell your doctor if you are taking or have taken any other medicines (including those purchased without prescription) during the last 14 days. This includes other medicines for depression (see **Do not take Cipramil** above).
- The herbal remedy St John's Wort (*Hypericum perforatum*). This should not be taken at the same time as Cipramil.
- Monoamine oxidase inhibitors (MAOIs). These should not be taken at the same time as Cipramil (see **Do not take Cipramil** above).

Tell your doctor if you are taking any of the following medicines:

Trinity Chiesi

PACKAGE LEAFLET:
INFORMATION FOR THE USER

Tanatril® 5 mg, 10 mg & 20 mg Tablets

Active substance: Imidapril

Read all of this leaflet carefully before you start taking this medicine.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- This medicine has been prescribed for you. Do not pass it on to others. It may harm them, even if their symptoms are the same as yours.
- If any of the side effects gets serious, or if you notice any side effects not listed in this leaflet, please tell your doctor or pharmacist.

In this leaflet:
1. What Tanatril is and what it is used for
2. Before you take Tanatril
3. How to take Tanatril
4. Possible side effects
5. How to store Tanatril
6. Further information

1 What Tanatril is and what it is used for

Tanatril is used to treat **high blood pressure** (hypertension). Tanatril is one of a group of medicines called ACE (angiotensin-converting enzyme) inhibitors.

If you have high blood pressure, Tanatril works by widening blood vessels, so that blood passes through them more easily. Since blood pressure depends on the diameter of blood vessels, your blood pressure will be lowered by Tanatril. Also, it will be easier for your heart to pump blood through the vessels around the body.

2 Before you take Tanatril

Do not take Tanatril
- if you are **allergic (hypersensitive)** to imidapril, other ACE inhibitors or any of the other ingredients of Tanatril. These are listed in section 6 'Further Information'
- if you have suffered from **angioedema (a serious allergic reaction** that causes **swelling of the hands, feet or ankles, face, lips, tongue and throat** and may lead to **difficulty with swallowing or breathing**) after taking a similar medicine to imidapril (ACE inhibitor)
- if you or a close family member has suffered from **angioedema** before
- if you have **any problem with your kidneys** or if you need to be **dialysed**
- if you are **pregnant.**

If any of these situations applies to you, do not take Tanatril.

Take special care with Tanatril
- if you are dehydrated due to treatment with **diuretics ('water tablets'), dialysis, a low salt diet** or because you have had strong and **prolonged vomiting or diarrhoea**. You are more likely to suffer from a very large drop in your blood pressure (hypotension) when you **start to take tablets** and may feel faint or light-headed
- if you have been told that you have a **problem with your heart**. Ask your doctor, if you are not sure if this applies to you
- if you have **any liver problems**
- if you suffer from **diabetes**
- if you are taking **potassium supplements** or **potassium-containing salt substitutes**
- if you are being treated with **allopurinol** to prevent gout, kidney stones, or high levels of uric acid
- if you are being treated with **procainamide** to correct irregular heartbeats and to slow a rapid heart rate
- if you are taking a **lithium medicine** used for the treatment of mania or depression
- if you are allergic to insect bites and undergo **a desensitisation treatment**
- if you receive a **treatment for your immune system**, for example after a transplant
- if you have had a recent **kidney transplant**
- if you are having a certain treatment called **'LDL apheresis'** to reduce cholesterol-levels in your blood
- if you are suffering from a condition called **'cerebrovascular disease'** (narrowing of the blood vessels in the brain)
- if you have a disease known as **'collagen vascular disease'** such as rheumatoid arthritis
- if you are undergoing any **surgery** or receive **anaesthetics**, tell your doctor or dentist
- if your blood pressure is not sufficiently lowered. Medicines of this type seem to be less effective in persons with black skin.
- if you suffer from **sudden swelling of the lips and face, tongue and throat, neck, possibly also hands and feet, difficulty to swallow or to breathe, hives or hoarseness ('angioedema').** This may occur at any time during the treatment. Persons with black skin may have a higher risk of suffering from this condition. If you develop such symptoms you should let your doctor know **immediately.**

Tanatril Tablets are not suitable for the use in children.

While taking Tanatril
If you develop any of the following symptoms you should let your doctor know immediately:
- You feel dizzy after your first dose. A few people react to their first dose or when their dose is increased by feeling dizzy, weak, faint or sick.
- High temperature, sore throat or mouth ulcers (these may be symptoms of infection caused by lowering of the number of white blood cells).
- Yellowing of the skin and whites of eyes (jaundice) that may be **sign of liver disease.**

You will need medical check-ups whilst you are taking Tanatril, which may involve regular blood tests. You will be closely monitored when you start your treatment or if your dose is changed. Your doctor will advise you how often you will need to see him/her.

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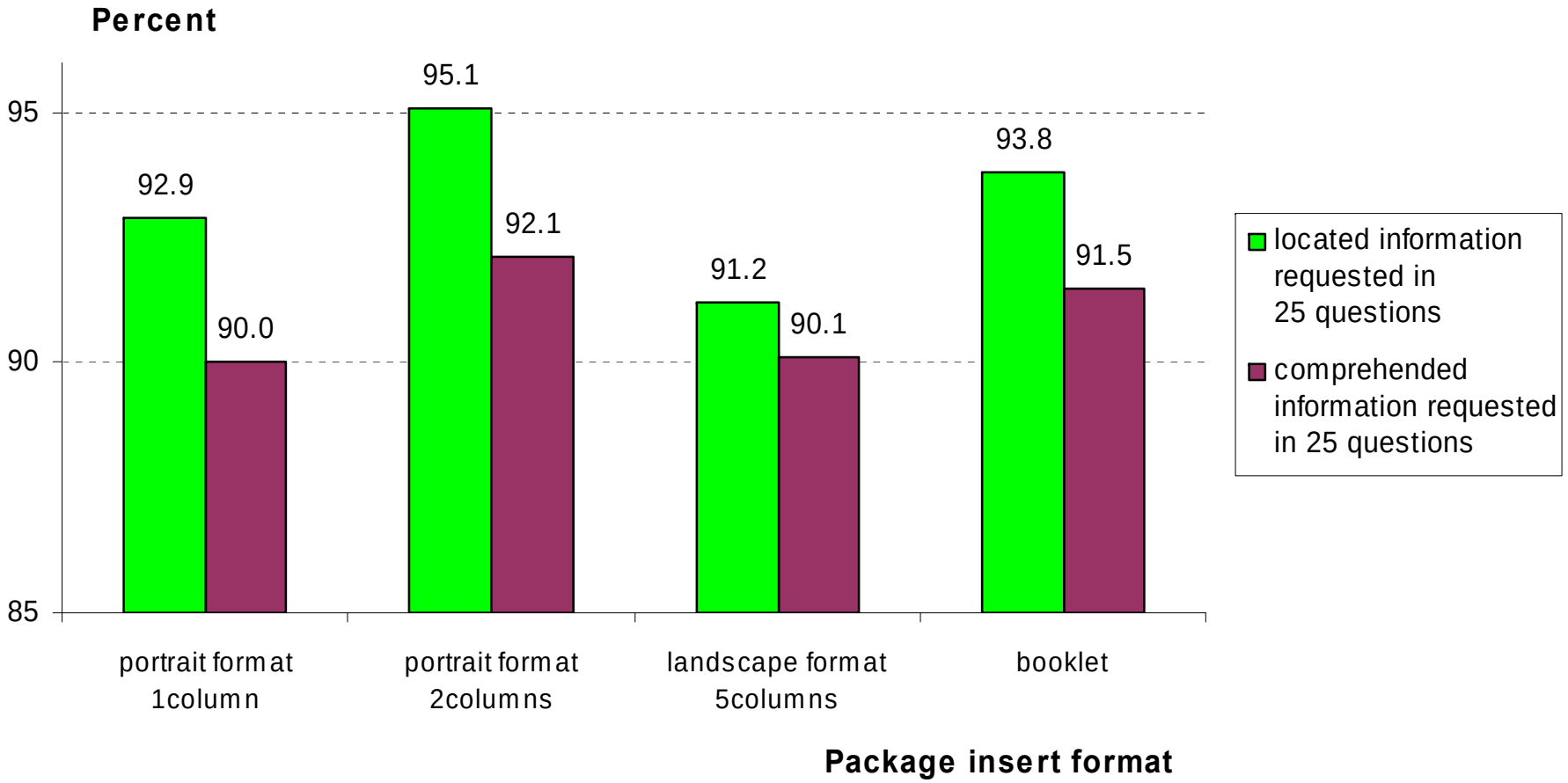
Package inserts' format
- readability test study -



Fuchs et al., PAINT3 study, publication in process; n = 200 participants

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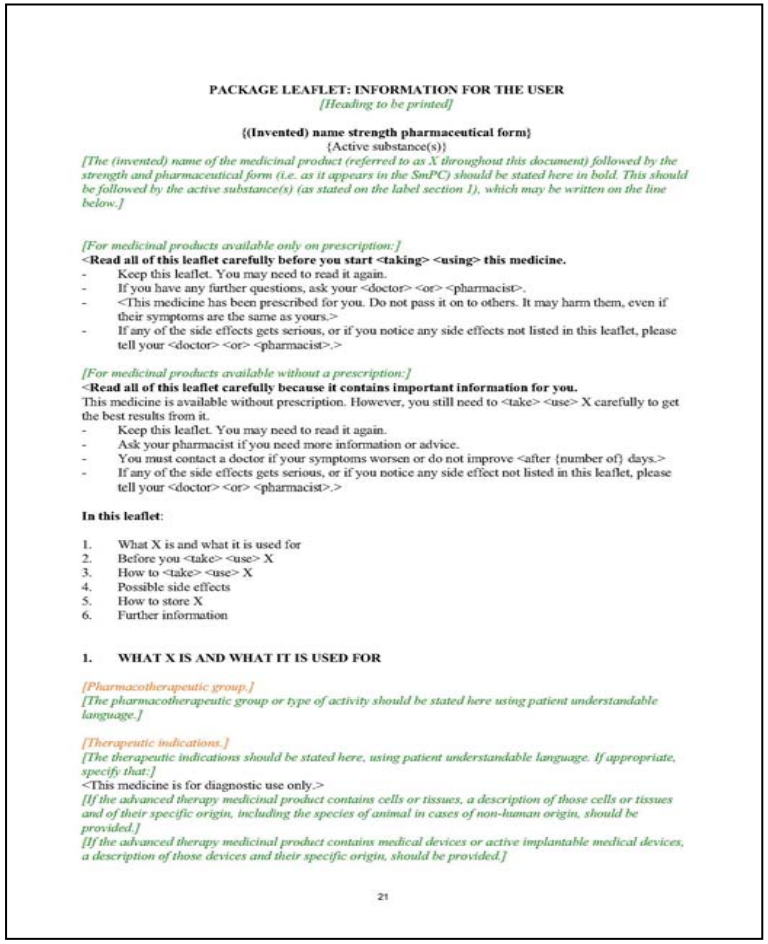
QRD template for package inserts
- non-compulsory legislation -

QRD templates

- text frame into which specific information about the medicine is inserted
- European and national templates

- **advantages**
  - identical wording in all EU countries: headings, general texts
  - uniform order of information
- **disadvantage**
  - volume of text: around 600 words



PACKAGE LEAFLET: INFORMATION FOR THE USER
[Heading to be printed]

{(Invented) name strength pharmaceutical form}
{Active substance(s)}
[The (invented) name of the medicinal product (referred to as X throughout this document) followed by the strength and pharmaceutical form (i.e. as it appears in the SmPC) should be stated here in bold. This should be followed by the active substance(s) (as stated on the label section 1), which may be written on the line below.]

[For medicinal products available only on prescription:]
<Read all of this leaflet carefully before you start <taking> <using> this medicine.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your <doctor> <or> <pharmacist>.
- <This medicine has been prescribed for you. Do not pass it on to others. It may harm them, even if their symptoms are the same as yours.>
- If any of the side effects gets serious, or if you notice any side effects not listed in this leaflet, please tell your <doctor> <or> <pharmacist>.>

[For medicinal products available without a prescription:]
<Read all of this leaflet carefully because it contains important information for you.
This medicine is available without prescription. However, you still need to <take> <use> X carefully to get the best results from it.
- Keep this leaflet. You may need to read it again.
- Ask your pharmacist if you need more information or advice.
- You must contact a doctor if your symptoms worsen or do not improve <after {number of} days.>
- If any of the side effects gets serious, or if you notice any side effect not listed in this leaflet, please tell your <doctor> <or> <pharmacist>.>

In this leaflet:

1. What X is and what it is used for
2. Before you <take> <use> X
3. How to <take> <use> X
4. Possible side effects
5. How to store X
6. Further information

1. WHAT X IS AND WHAT IT IS USED FOR

[Pharmacotherapeutic group.]
[The pharmacotherapeutic group or type of activity should be stated here using patient understandable language.]

[Therapeutic indications.]
[The therapeutic indications should be stated here, using patient understandable language. If appropriate, specify that:]
<This medicine is for diagnostic use only.>
[If the advanced therapy medicinal product contains cells or tissues, a description of those cells or tissues and of their specific origin, including the species of animal in cases of non-human origin, should be provided.]
[If the advanced therapy medicinal product contains medical devices or active implantable medical devices, a description of those devices and their specific origin, should be provided.]

21

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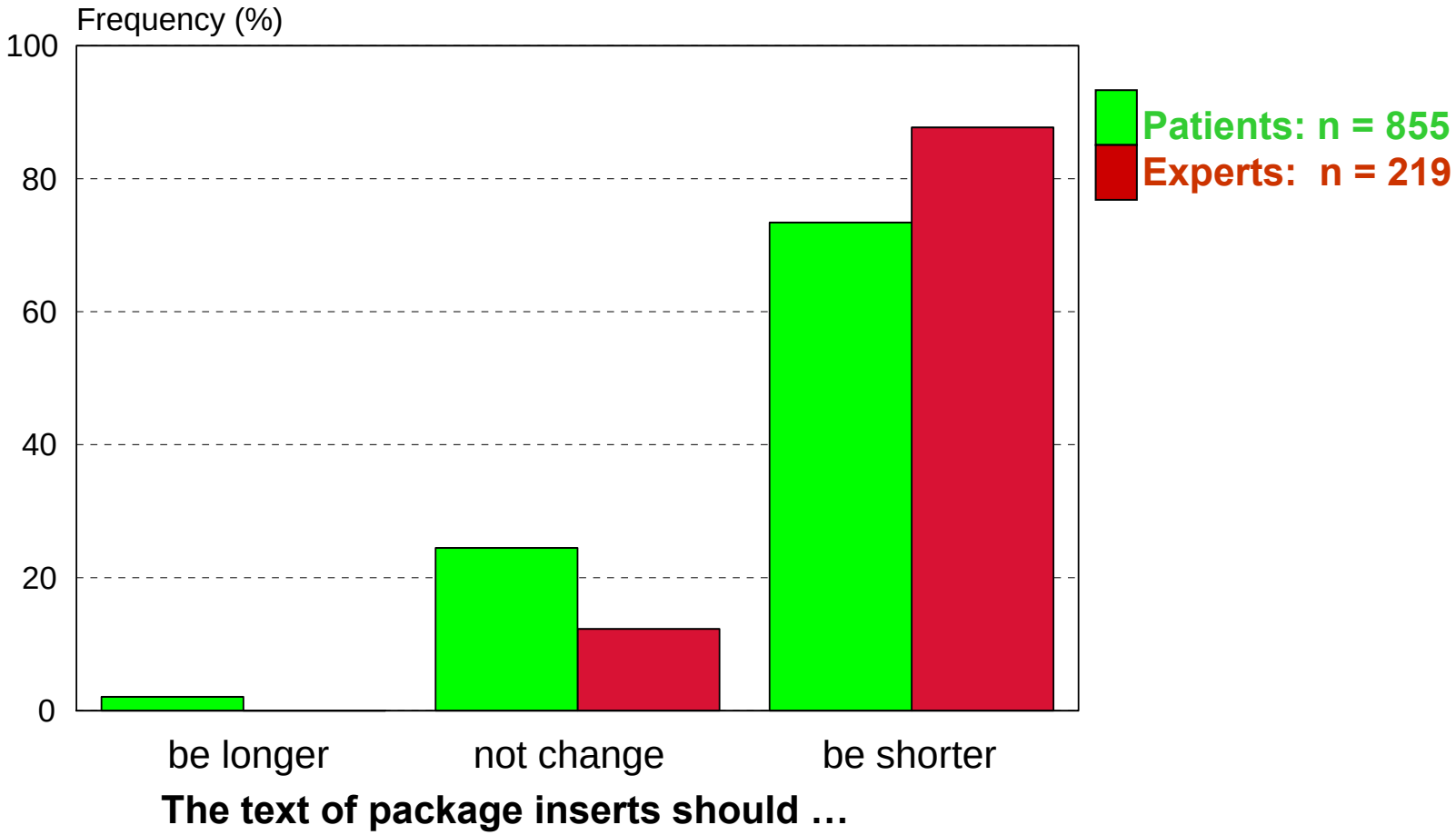
Opinions regarding text amount
- the unconsidered aspect in EU guidelines -



Fuchs et al. PharmInd 2, 2007

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PAINT2 and 3 studies

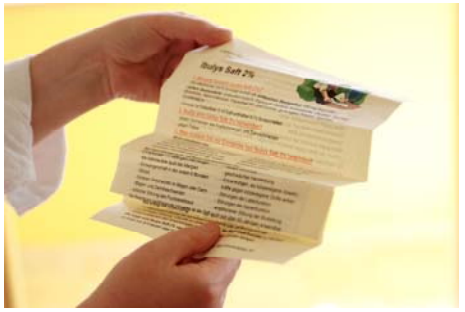
Analyses of 271 package inserts

- random selection of all German package inserts available in the year 2005

PAINT2 study (Fuchs et al. Int J Clin Pharmocol Ther, 12/2010)

- analysis using 152 quality criteria and 242 further measurements

PAINT3 study (Fuchs et al., publication in process)



- analysis using the written readability test
- PAINT2 package inserts
- 3 model package inserts, each in 8 forms
  - formats: portrait (1 and 2 columns), booklet, landscape
  - with and without QRD template
- 5091 participants, questioning: September 2008 to May 2009

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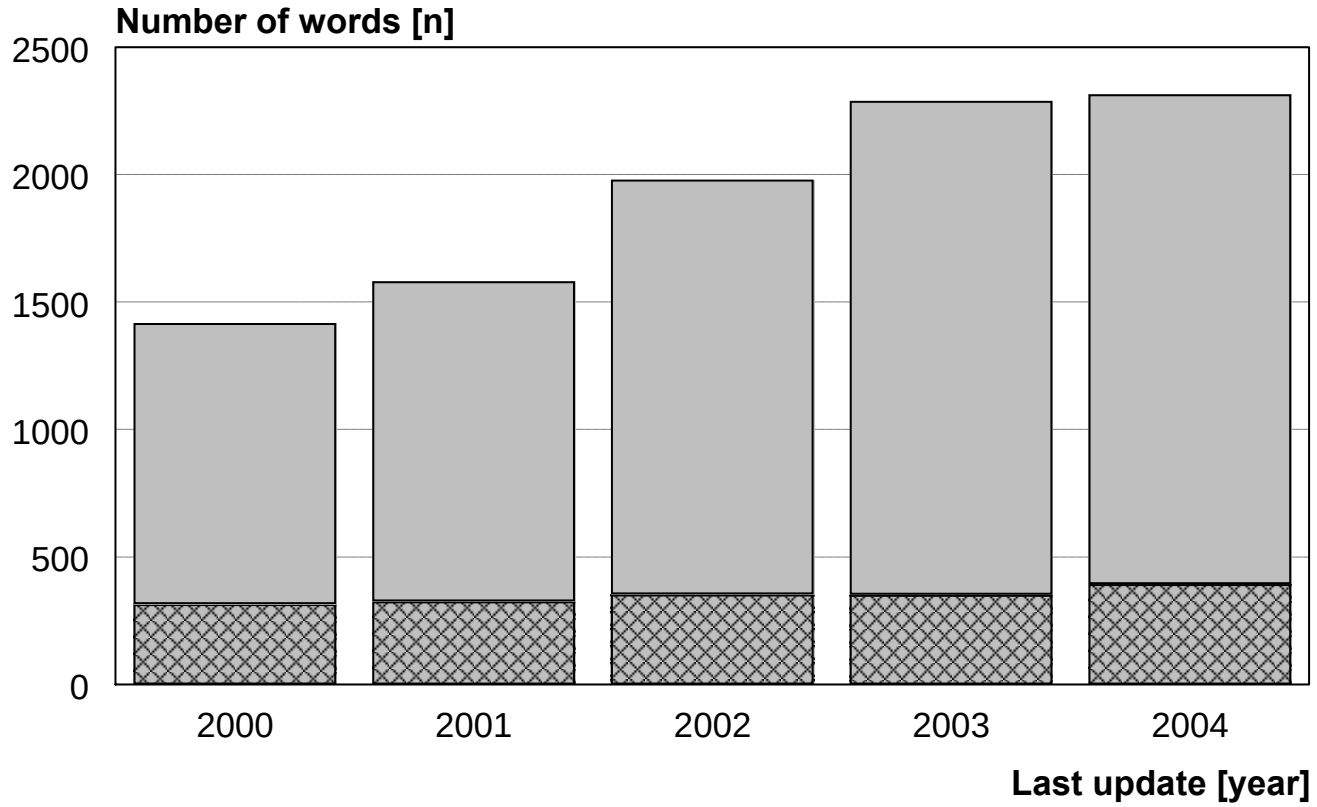
Amount of text is increasing



Average per package insert: 2005 words

Significant increase: $p < 0.001$
(from 2000 to 2004)

Fraction of QRD template

PAINT2 study: n = 271 package inserts
random selection from all German package inserts available in the year 2005
Fuchs et al. Int. J Clin Pharmacol 12, 2010

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Influences through text amount

Aspect	Average per package insert (n=271)	Number per 1000 words	
		PAINT2 package inserts (n = 271)	Correlation coefficient relating to the amount of text
Number of words	2005	-	-
Difficult words	114.1	**53.3**	**0.388** (p<0.001)
Abbreviations	22.2	**10.7**	**0.348** (p<0.001)
Text brackets	50.6	**22.3**	**0.557** (p<0.001)
Syllables per word	**2.3**		**0.326** (p<0.001)
Words per sentence	**16.3**		**0.776** (p<0.001)
Font size [pt]	**7.5**		**- 0.347** (p<0.001)

correlation: ≤0.2 very low, 0.21-0.5 low, 0.51-0.7 middle, 0.71-0.9 high, >0.9 very high
PAINT2 package inserts, year 2005
Fuchs et al. Int J Clin Pharmacol Therapeut, 12, 2010

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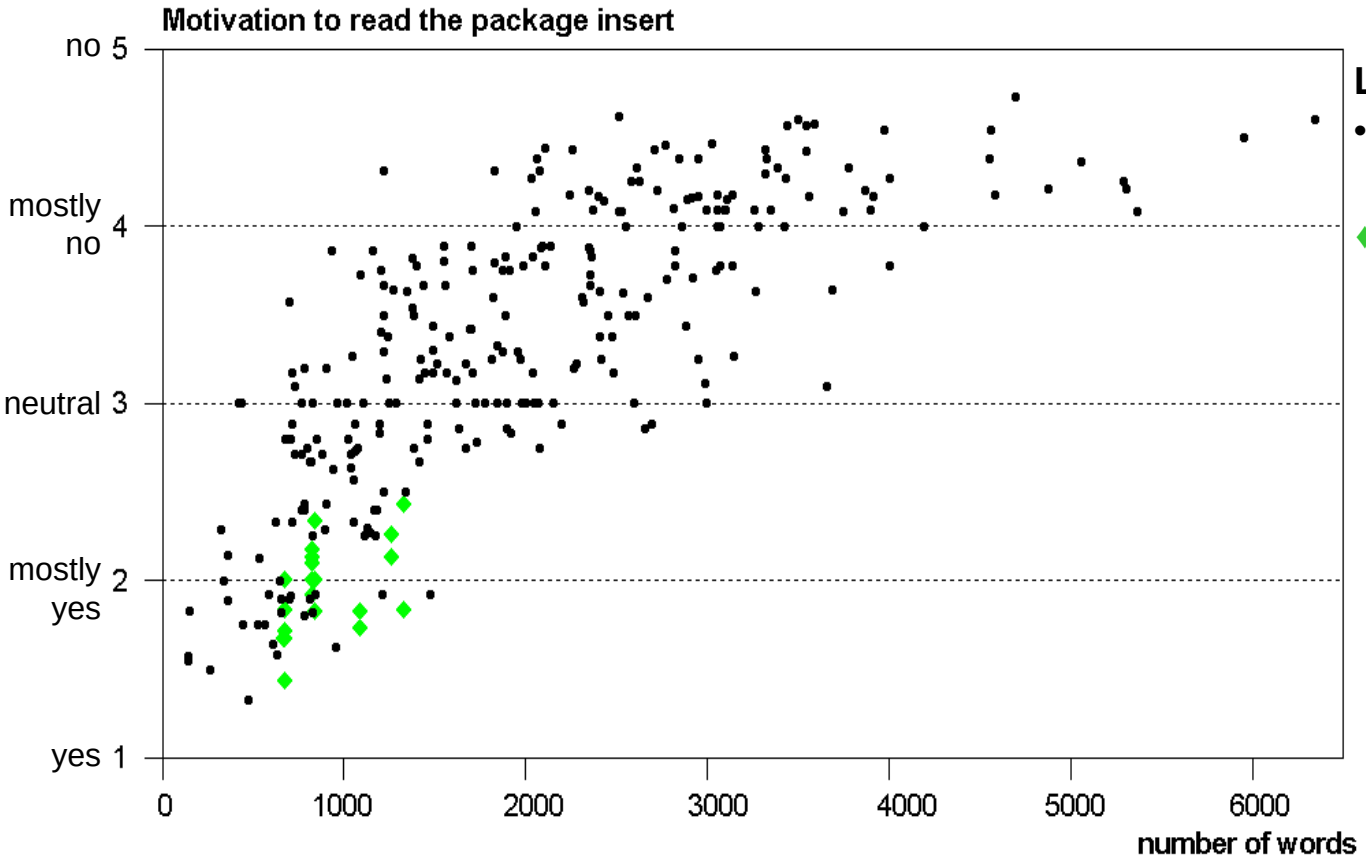
Package Insert Test

Motivation to read and text amount



Legend

- PAINT2 package inserts n=271 of the year 2005
- ♦ Models: n=24

(Enalapril, Insulin, Repaglinide each in 8 different versions, e.g. with or without QRD template)

n=4835 participants

significant correlation: p<0.001

PAINT3 study
Fuchs J; Bonn, 29 November 2010

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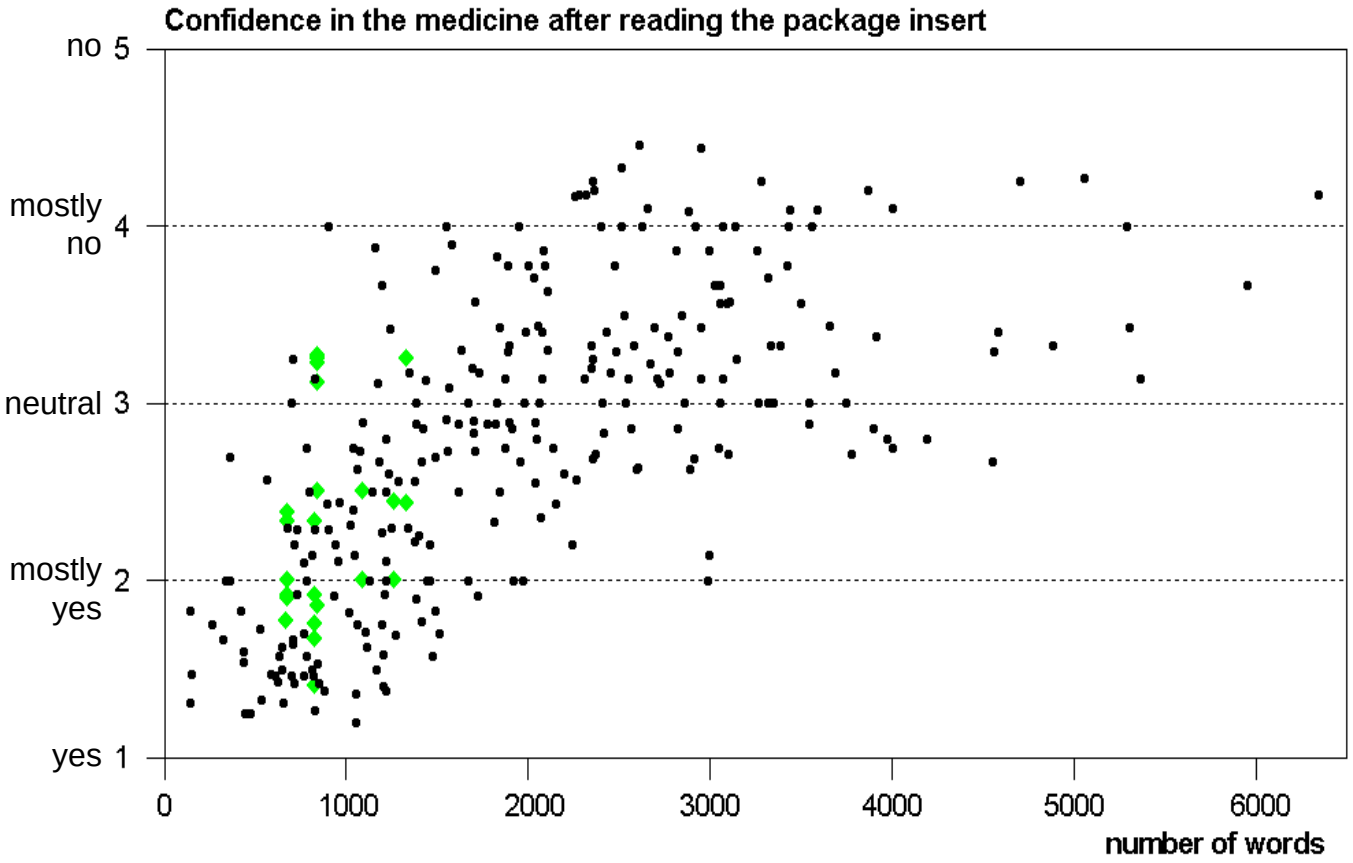
Confidence to use the medicine after reading the package insert



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PAINT3 study
Fuchs J; Bonn, 29 November 2010

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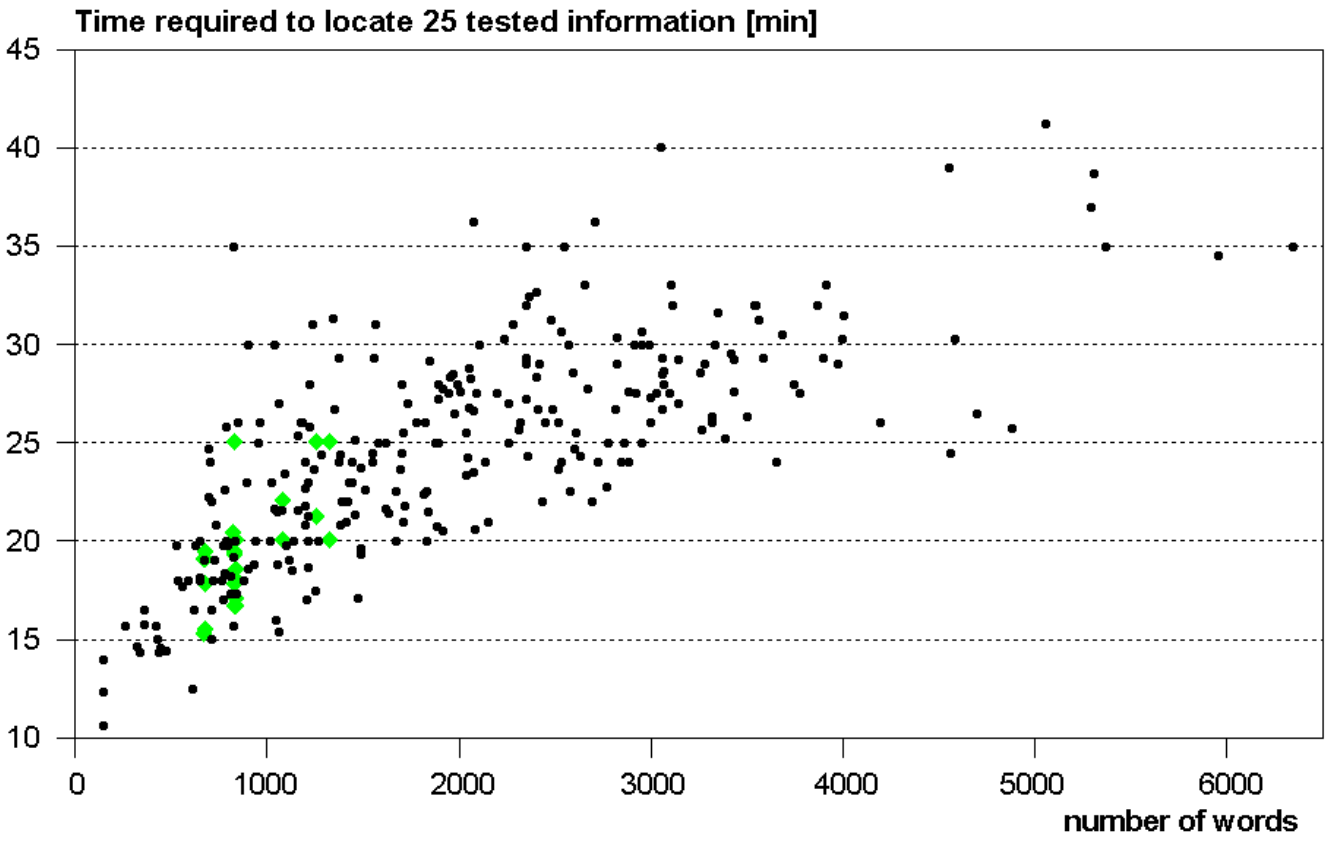
Locatability and text amount



Legend

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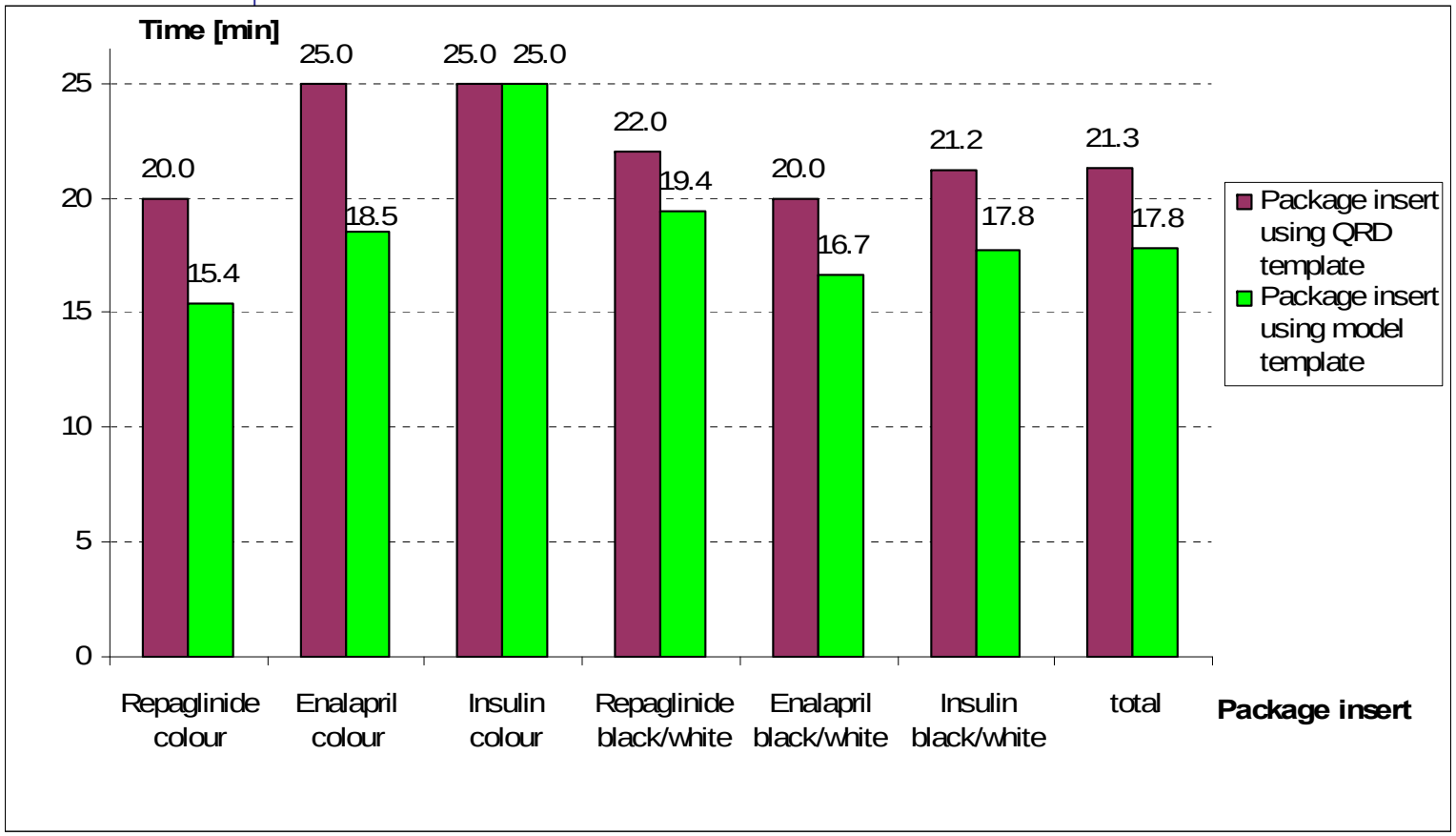
QRD template's influence on the time to find 25 requested information



On average, 20% more time was required using the QRD template with around 600 words, in comparison to the model template with less than 200 words (p=0.014, n=192 participants; PAINT3 study).

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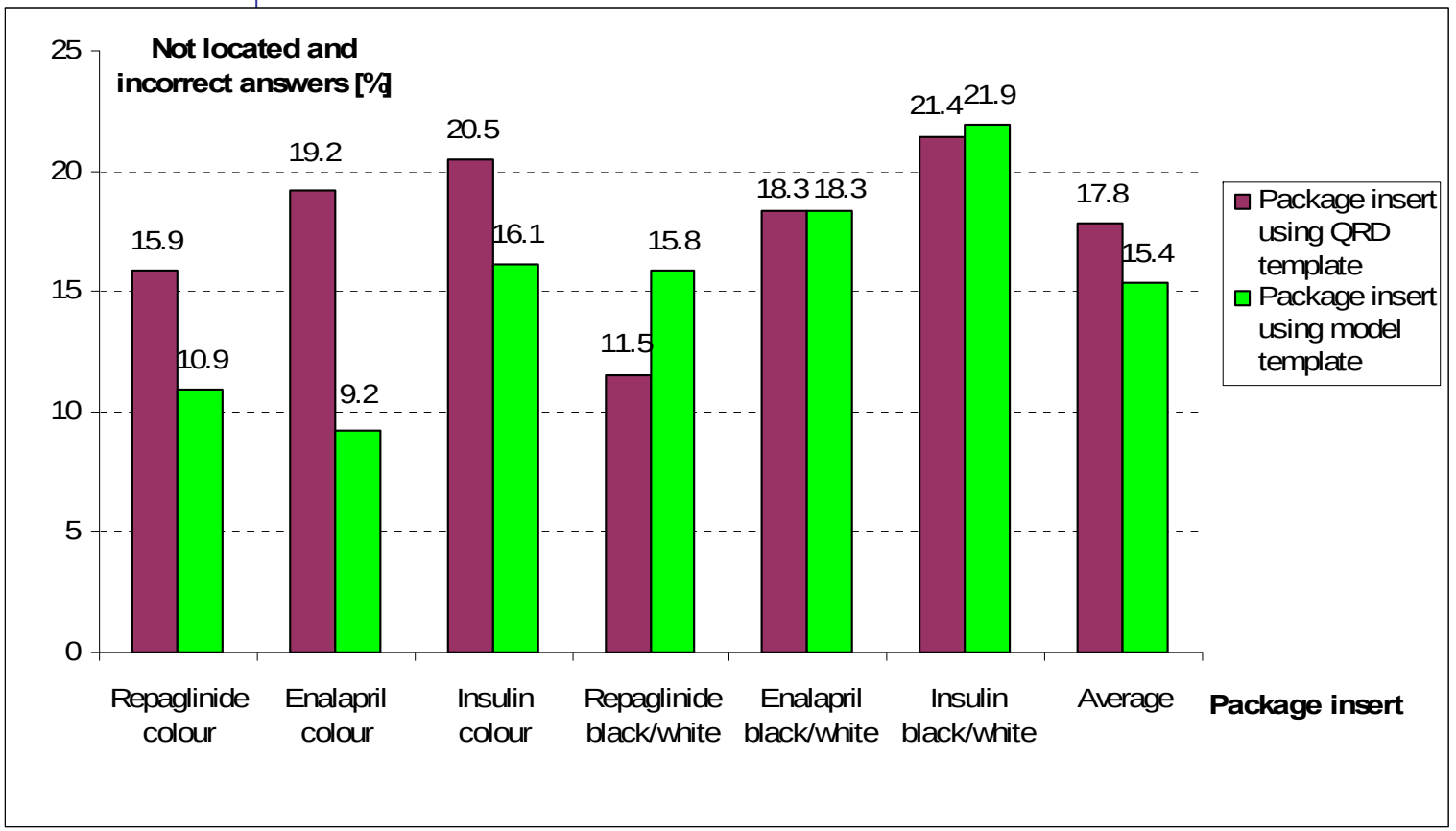
QRD template's influence on locatability and comprehensibility of 25 requested information



On average, 16% more not located or not understood information occurred using the QRD template, in comparison to the model template with less than 200 words (p=0.041, n=192 participants; PAINT3 study).

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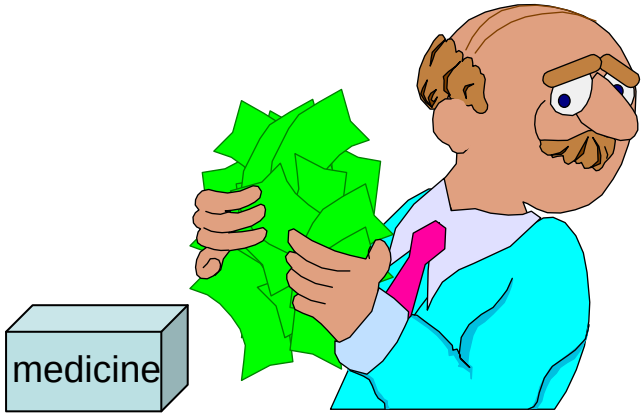
Outlook: QRD template



- current QRD template: around 600 words
- **QRD template draft**
  - February 2010: >700 words
  - September 2010: >800 words
- QRD template for radiopharmaceuticals July 2010: >1100 words

Many changes intended

- more template words caused by more repetitions, longer sentences, ...
- more specific information about medicines

  e.g. more information on the benefits, or information relating to children

However: Shortening QRD template is a better way forward!

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Patient information via package inserts within the European Union

Readability tests

Fuchs J, Bonn, 29 November 2010

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Readability tests
- legislation -

- **Directive 2001/83/EC** amended by Directive 2004/27/EC
- **Readability Guideline**, January 2009
- **national guidelines**

  e.g. - question and answer files of national agencies

  - BfArM: Which test methods are accepted?

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Readability test methods

Methods

- **verbal interview test**

  Australian method

- **written readability test**

  PAINT-Consult®'s method

- **communication science-based investigation**
- **psychological analysis** of patient information (P.A.P.I)
- **readability formulas**

  e.g. Flesch-Reading Ease

  FRE score = 206.876 – 1.015 x (words per sentence) - 84.6 (syllables per word)

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Readability test methods

Verbal interview test Australian Method	**Written readability test** PAINT-Consult® method
pilot test with 3-6 participants	**consulted** using quality criteria, study basis
verbal instructions via tester	**written** instructions via questionnaire
success criterion: **90/90% → 80%**	success criterion: **80%**
• minimum **2 test rounds** of 12-15 questions with 10 participants each • **monitoring** through tester • duration **4-6 weeks** • **protocol** • **accepted** by all European Union agencies	
based on **experiences**	**validation** in 4 studies, n=7270 participants

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Package Insert Test

Written readability test
- results -

Participant			Question													
Last occupation	**Age** (years)	**Answer time** (min)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Waiter	17	14	√	**NF**	√	√	√	√	√	√	√	√	√	√	√	√	√
Packing fruit	52	12	√	√	√	√	√	√	√	√	√	√	**NF**	√	√	√	√
No statement	49	10	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Priest	31	10	√	√	√	√	√	**W**	√	√	√	√	√	√	√	√	√
Student	20	12	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Receptionist	29	12	√	√	√	√	√	√	√	√	√	√	**NF**	√	√	√	√
Mechanic	69	20	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Media sales	24	12	√	**W**	**W**	√	√	**W**	√	**W**	**W**	√	**NF**	√	√	√	√
Engineer	35	10	√	√	√	√	√	**W**	√	√	√	√	√	√	√	√	√
Arts admin	74	23	√	√	√	√	√	√	√	√	√	√	**W**	√	√	√	√
Total correct answers (n):			10	8	9	10	10	**7**	10	9	9	10	6	10	10	10	10
Total correct answers (%):			100	80	90	100	100	**70**	100	90	90	100	**60**	100	100	100	100

Keys: √ = correct answer, **W** = wrong answer, **NF** = answer not found

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Package Insert Test

Readability test methods

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Written readability test
- scientific basis -

Validation

- locatability of the information
- comprehensibility of the information
- consistency of the data obtained
- selection of participants
- selection of tested key messages

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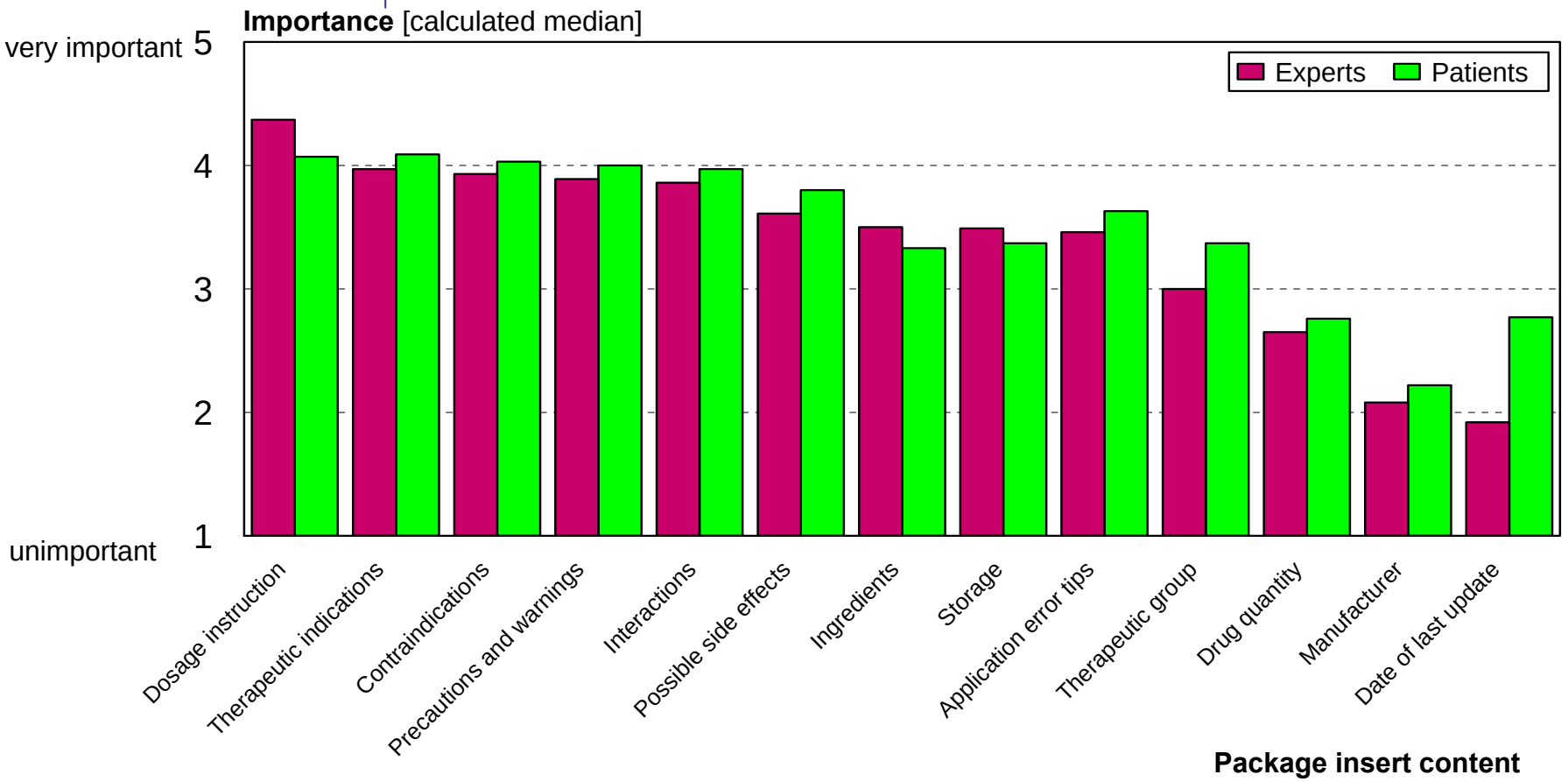
Written readability test
- basis of key message selection -



Questioning of patients and experts (n=855/219)

Fuchs et al., PharmInd 2, 2007

PAINT®
Package Insert Test

Written readability test
- consulting step -

Systematic optimisation based on

- directives, guidelines, summary of product characteristics
- PAINT-Consult's study results, with around 10.000 participants
- data from over 850 extern scientific and regulatory publications
- 179 validated quality criteria (2/3 assess specific contents, 1/3 global assessment)

Example of a specific quality criterion

No.	Quality criterion	Assessment	
		yes	no
32	All **doses** are provided in amounts of the ready to use medicine, such as the **number of tablets**.		

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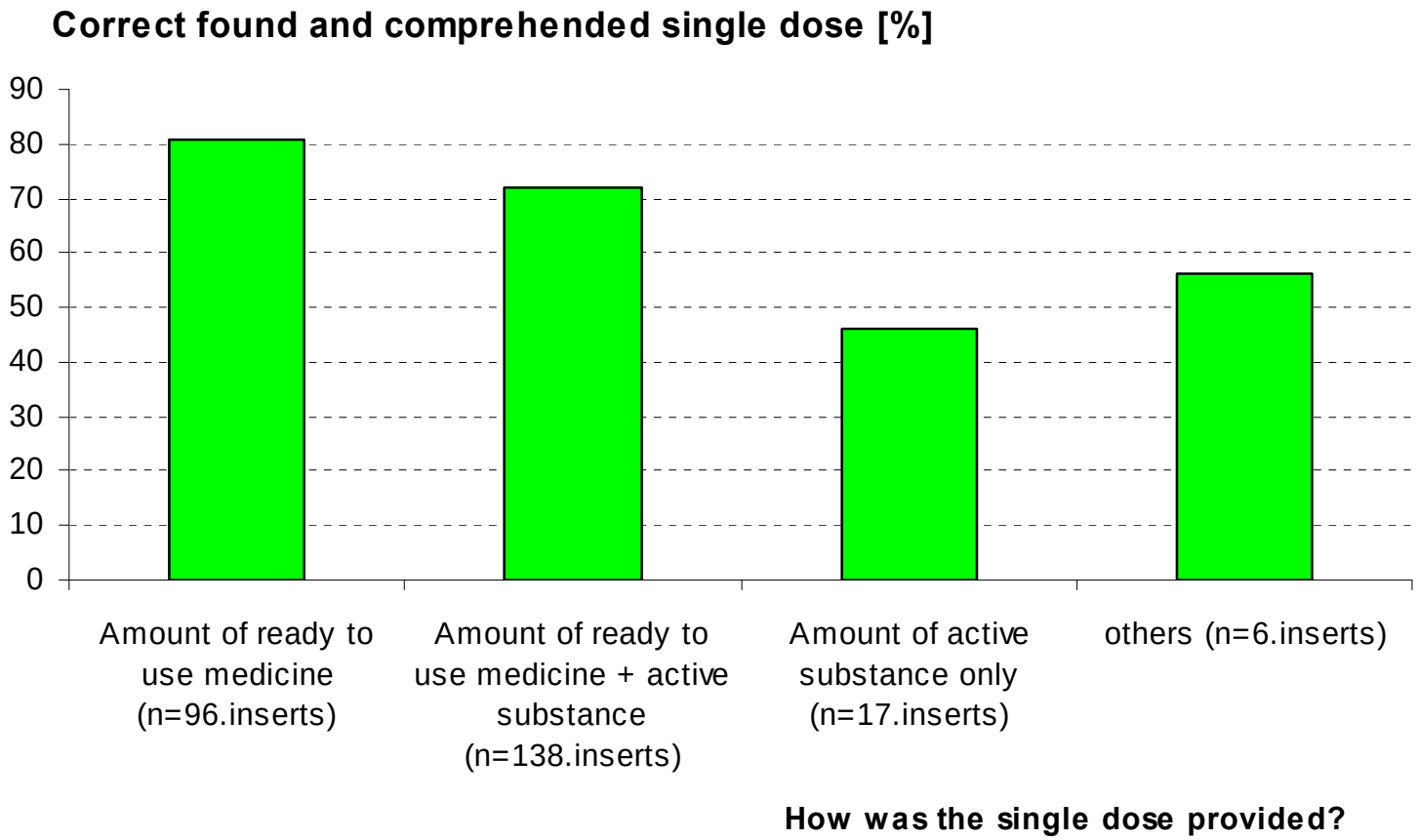
Locatability and comprehensibility of the single dose



PAINT3 study, n=4040 participants, p<0,001, Kruskal-Wallis one way analysis of variance

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Written readability test
- global quality criteria -

Quality criteria related to the entire package insert
e.g. font size, contrast, volume of text, non-quantifiable phrases, syntax

Example: **Quality criterion medical terms**

“May not contain unexplained incomprehensible words”

Database

- studies with over 1000 English and over 300 German checked medical terms
- study, how can medical terms most suitable explained
  explanations up to 50 characters are better (p=0.002)
- medical term example
  - **vasculitis** (English comprehensibility rate: 40.0%)
    (German comprehensibility rate: 7.1%)
  - transcription: inflammation of blood vessels
    comprehensibility rate: 95.5%

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Bridging

Bridging is the text and layout transfer of a successfully tested package insert to another package insert.

When is a Bridging acceptable?

- same route of administration
- same safety issues
- same class of medicine
- recently approved and successfully tested reference package insert
- same layout and design

Readability Guideline 2009; CMD(h) Guidance 2009

Advantages: saves costs and time for pharmaceutical company

Bridging is a case by case decision!

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Package Insert Test

Readability testing problems

Current situation

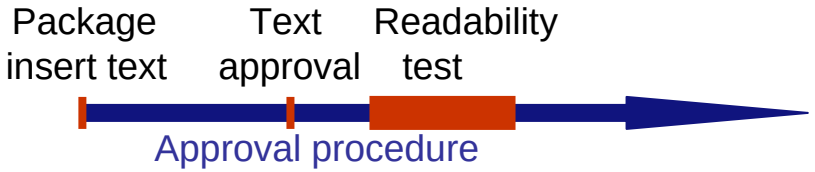
- readability tests before approval procedure

Problems

- package inserts change after readability tests, e.g. difficult words and paragraphs reoccur
- package insert harmonisation after readability tests
- readability test success criteria apply to selected contents

Possible way forward

- submission of optimised text and test after text approval by the agencies
- clear procedure for harmonisation
- focus on improving the complete package insert



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Package insert optimisations
n=40 written readability tests

Aspect		Original package inserts* (n)	Final package inserts* (n)	Difference (%)
amount of text (number of words)	**average**	**2505**	**2002**	**20**
	min.	841	834	1
	max.	6777	3758	45
long sentences (over 20 words per sentence)	**average**	**29**	**7**	**76**
	min.	4	2	50
	max.	140	13	91
difficult words	**average**	**86**	**14**	**84**
	min.	4	3	25
	max.	426	15	96

Fuchs J, Drug Information Journal 44(2), 2010

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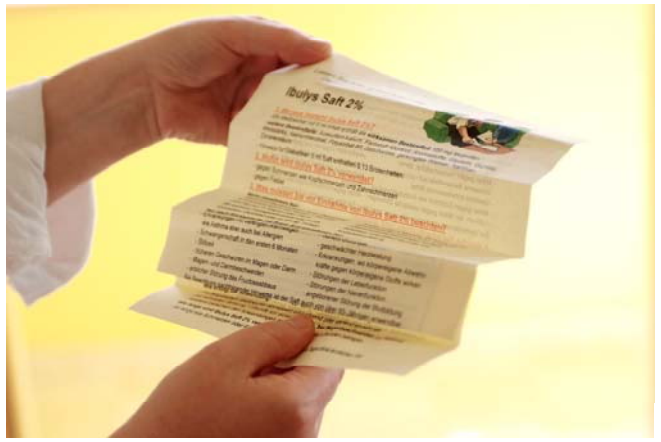
Summary

Package insert improvements e.g.

- new order of information
- uniform headings and universal texts
- larger font size
- readability tests



Package insert impairment

- increased volume of text

Readability testing, guidelines and templates

- require further development

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Conclusion

The way forward

- Greater consideration to patients' requirements
- Shortening package inserts

  40% reduction without losing required information is possible!
  Fuchs et al. International J Clin Pharmacol 12, 2010
- Focus more on package insert improvements

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Patient information via package inserts within the European Union

Thank you for your attention!

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Bonn, 29 November 2010