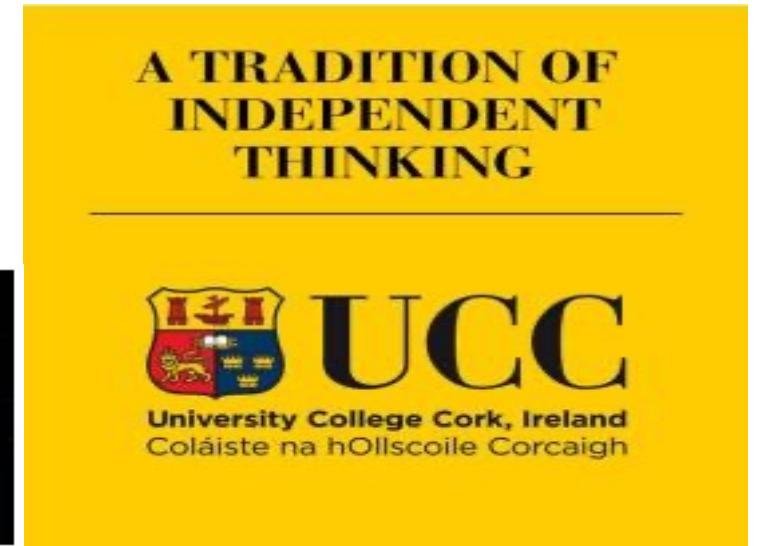




The role of a Hospital Pharmacist in addressing health literacy

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Conflicts of Interest

Nothing to disclose



Answer the following:

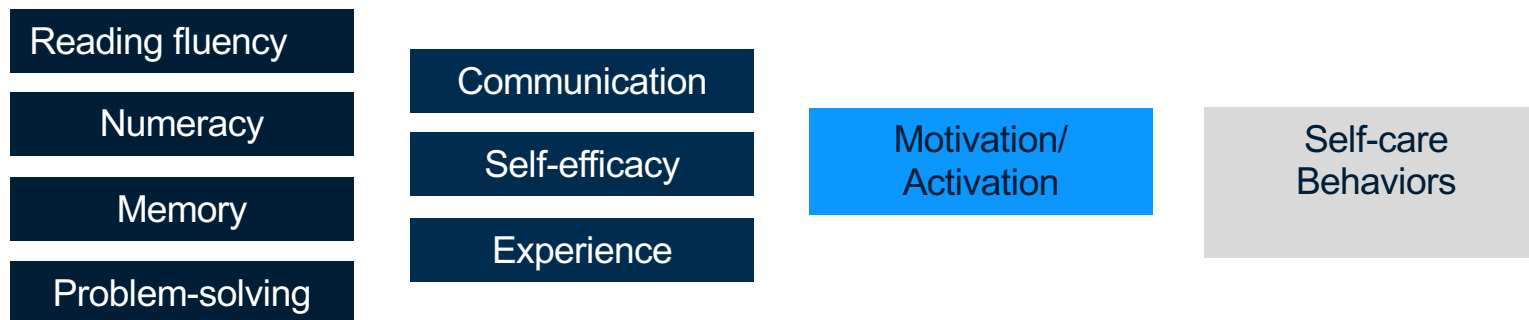
- In Europe it is possible that the 50% of people have limited health literacy: **True / False**
- Patient Information Leaflets are written at a reading level appropriate to most people's ability: **True / False**
- As a hospital pharmacist how I communicate with patients and / or healthcare professionals can affect outcomes: **True / False**

Health, Literacy, and 'Health Literacy'

Health Literacy...

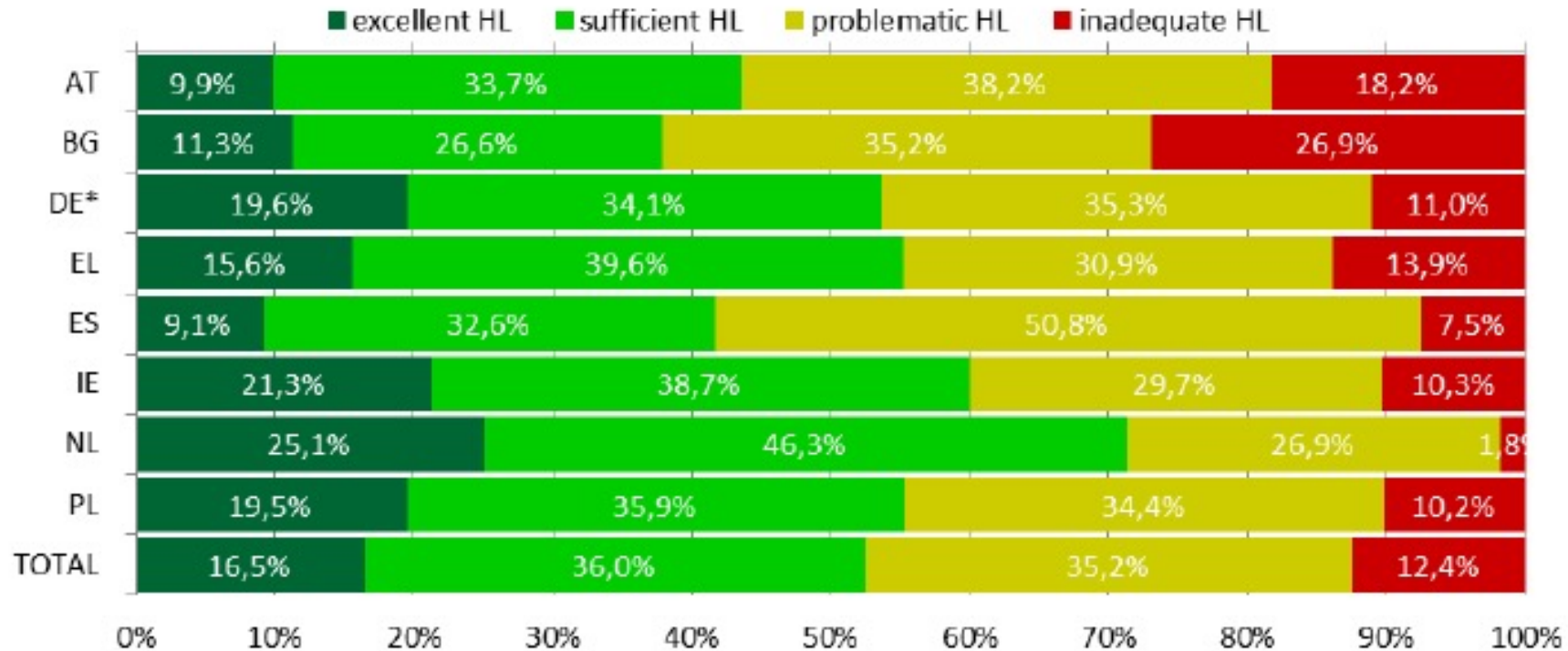
The cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand, and use information, in ways which promote and maintain good health. ¹

–World Health Organization



EU Health Literacy Survey ²

2: Sørensen K, Pelikan JM, Röthlin F et al; HLS-EU Consortium. Health literacy in Europe: comparative results of the European health literacy survey (HLS-EU). Eur J Public Health. 2015 Dec;25(6):1053-8. doi: 10.1093/eurpub/ckv043. Epub 2015 Apr 5. PMID: 25843827; PMCID: PMC4668324

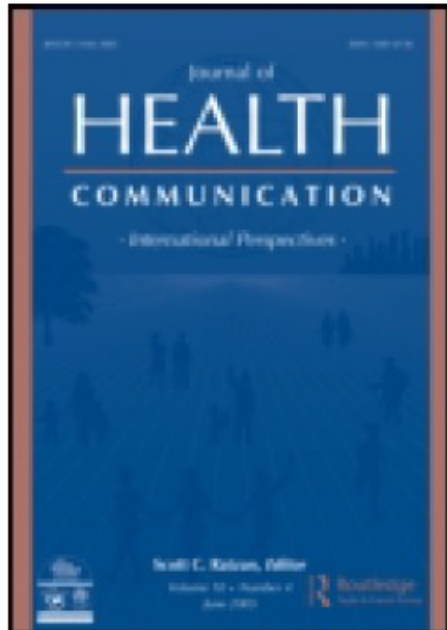


Range (1.8%-26.9%) Netherlands - Bulgaria

Limited health literacy : Almost half (47.6%) of the total sample had limited (inadequate or problematic) health literacy, with the prevalence ranging from 28.7% in the Netherlands to more than 62.1% in Bulgaria.

Functional HL

- The ability of an individual to read and understand health-related materials



Journal of Health Communication: International Perspectives

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/uhcm20>

Prevalence of Limited Health Literacy Among Irish Adults

Laura J. Sahm ^{a b}, Michael S. Wolf ^c, Laura M. Curtis ^c & Suzanne McCarthy ^a

^a School of Pharmacy, University College Cork, Cork, Ireland

^b Pharmacy Department, Mercy University Hospital Cork, Cork, Ireland

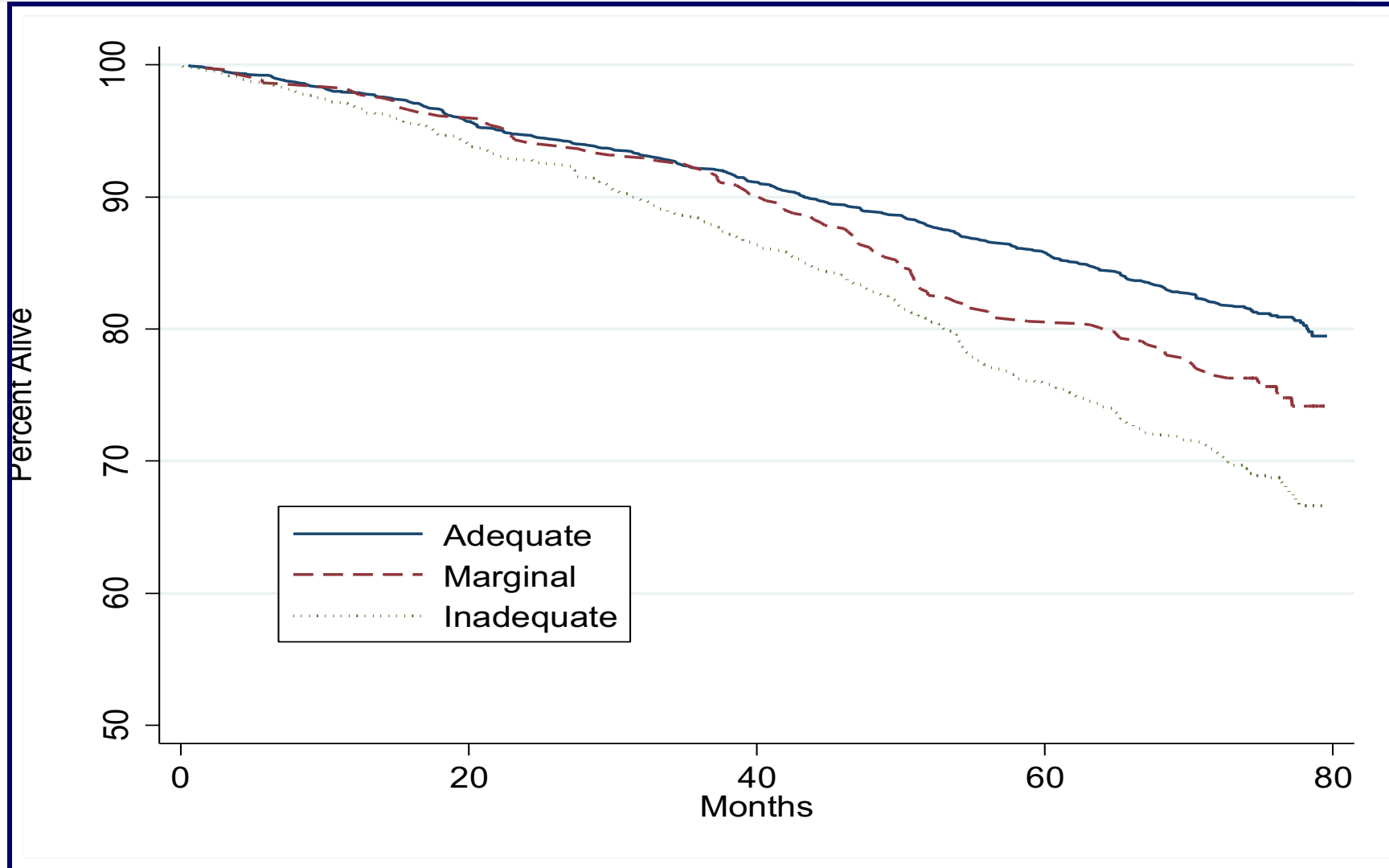
Key finding

- *At minimum, 1 in 7 Irish adults were found to have limited health literacy, which may affect their ability to promote, protect, and manage health. ³*

Direct link between individual health literacy and health outcomes

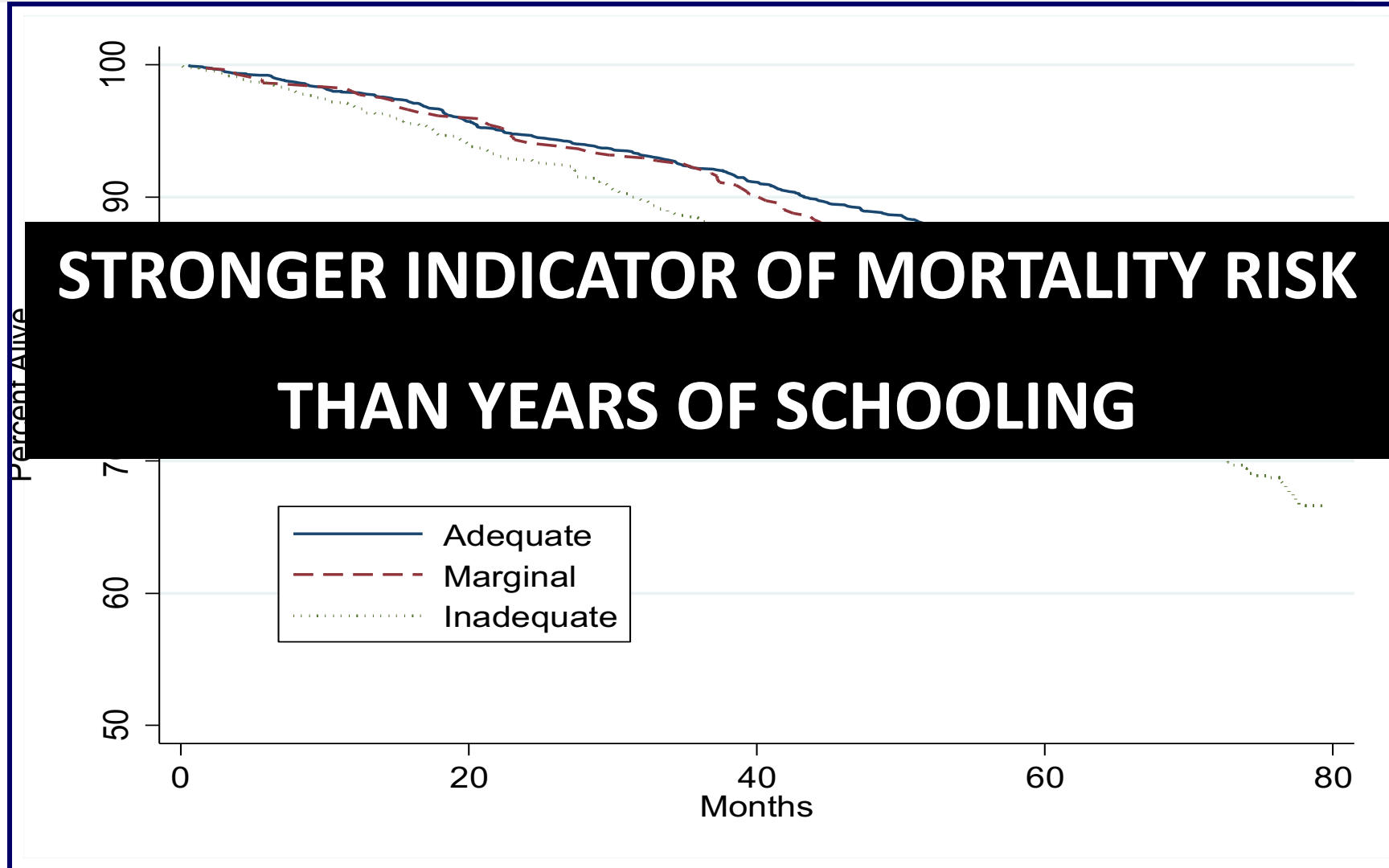
- less health knowledge⁴
- worse self-management skills⁵
- lower use of preventative services⁶
- higher hospitalisation rates⁷
- worse self-rated health⁸
- higher rates of mortality⁹
- poorer medication adherence¹⁰
- difficulty understanding prescription drug labels¹¹

Literacy and Mortality Risk.



Baker DW, Wolf MS, Feinglass J, Gazmararian JA, Thompson JA. *Arch Intern Med* 2007; 167: 1503-1509.

Literacy and Mortality Risk.



Baker DW, Wolf MS, Feinglass J, Gazmararian JA, Thompson JA. *Arch Intern Med* 2007; 167: 1503-1509.

What is Health Literacy?

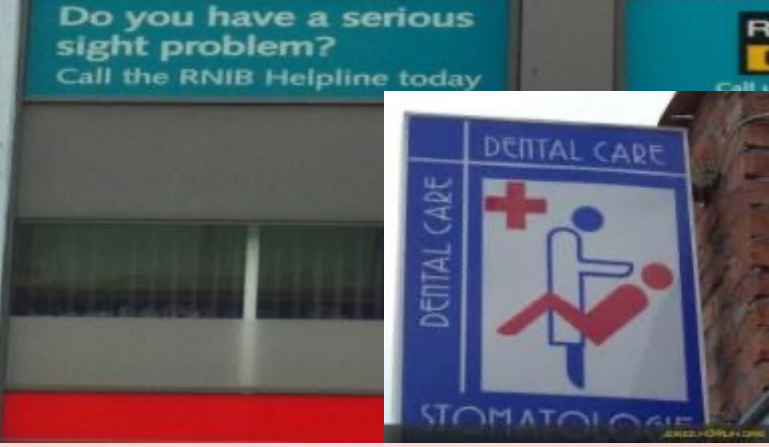
ON TEENAGERS, ADULTS:
Statistics show that teen pregnancy drops off significantly after age 25.
Mary Anne Tiberio, Republican state senator from Colorado Springs (contributed by Harry F. Pomeroy)

ATE?
EE HELP.



www.StrangeCosmos.com

FOR EXTERNAL USE ONLY



Rx Methyphenidate 5mg Tablet
 Sig: 1 Tablet(s) (5 mg) by mouth twice daily Take 2 tablets in the morning and 1 tablet at noon
 Disp: quantity sufficient for 30 day supply
 Refills: 0



DO NOT EXPECTORATE ON FOOTPATHS

Drug Facts

Active ingredient (in each tablet)	Purpose
Chlorpheniramine maleate 2 mg	Antihistamine

Uses temporarily relieves these symptoms due to hay fever or other upper respiratory allergies:
 ■ sneezing ■ runny nose ■ itchy, watery eyes ■ itchy throat

Warnings
 Ask a doctor before use if you have
 ■ glaucoma ■ a breathing problem such as emphysema or chronic bronchitis
 ■ trouble urinating due to an enlarged prostate gland

Ask a doctor or pharmacist before use if you are taking tranquilizers or sedatives

When using this product
 ■ You may get drowsy ■ avoid alcoholic drinks
 ■ alcohol, sedatives, and tranquilizers may increase drowsiness
 ■ be careful when driving a motor vehicle or operating machinery
 ■ excitability may occur, especially in children

If pregnant or breast-feeding, ask a health professional before use.
 Keep out of reach of children. In case of overdose, get medical help or contact a Poison Control Center right away.

Directions	
adults and children 12 years and over	take 2 tablets every 4 to 6 hours; not more than 12 tablets in 24 hours
children 6 years to under 12 years	take 1 tablet every 4 to 6 hours; not more than 6 tablets in 24 hours
children under 6 years	ask a doctor

Other information store at 20-25° C (68-77° F) ■ protect from excessive moisture

Inactive ingredients D&C yellow no. 10, lactose, magnesium stearate, microcrystalline cellulose, pregelatinized starch

VAMC PHOENIX, AZ 85012
 644 602- [REDACTED] (9010/)
 [REDACTED] 20,1996 Fill 1 of 4
 [REDACTED] 30-8972
 RECTALLY BY MOUTH EVERY DAY AS

DO NOT TAKE THIS DRUG IF YOU BECOME PREGNANT

Pharmacists and patients: Health numeracy

- Cancer Research UK recently found that 46% of people got the answer wrong when asked whether a risk of 1 in 100, 1 in 10, or 1 in 1000 resulted in more chance of their getting a disease.¹²
- They also found that those with poor numeracy skills were less likely to take a bowel cancer screening test.
- The view of one patient on how healthcare professionals can help:
- Link to video (Mr M Duffy) <https://youtu.be/9EtwZVC5hhs>

Health Literacy – The Story of Jimmy!

“Take one tablet on Monday, one tablet on Tuesday, and skip Wednesday”

Monday...



Tuesday...



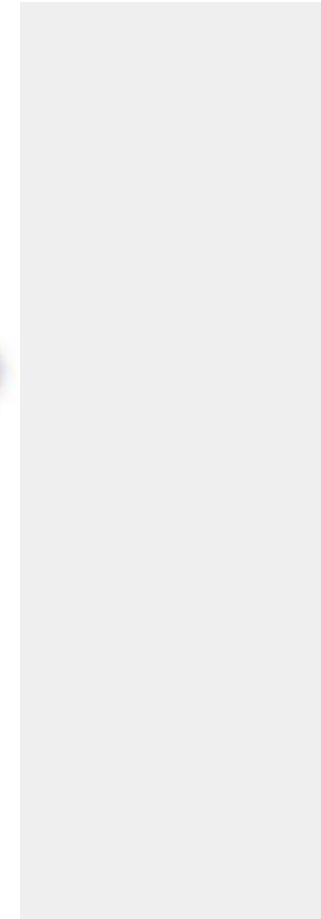
Wednesday..



1 in 5 Irish people **are not confident that they understand all the information** which their health professional gives to them

43% would **only sometimes ask for information to be explained** more clearly

1 in 10 people admitted to taking the **wrong dose of medication** because they didn't understand the instructions given.



Role of the pharmacist ¹³

Int J Clin Pharm (2011) 33:543–548
DOI 10.1007/s11096-011-9505-2

RESEARCH ARTICLE

Does satisfaction with information equate to better anticoagulant control?

Laura Sahm · Lisa Quinn · Michael Madden ·
Helen L. Richards

Impact of findings on practice

- Patients who are more satisfied with medicines information tend to have better outcomes in terms of anti-coagulation control.
- Pharmacists are ideally placed to positively affect patient outcome by providing ongoing medicines information.

Mental health and wellbeing ¹⁴



- Functional health literacy: The ability of an individual to read and understand health-related materials

Health literacy and the Clozapine patient

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LJ Sahn, as above

Abstract

Aims: To estimate the prevalence of limited health literacy in patients receiving clozapine for schizophrenia. To develop and produce a pharmacist-designed clozapine patient information leaflet (PIL) which has a higher readability score than the company-produced PIL.

Study design: This was a cross sectional prevalence study.

Methods: Ethical approval for the study was granted by the local ethics committee. Patients, over 18 years, attending the Clozapine Clinic of a Cork urban teaching hospital, were asked to participate in the study. Demographics such as gender, age, employment and smoking status, were gathered from all participants. The total daily clozapine dose, duration of clozapine treatment, and information regarding the clozapine DVD was also noted. The Rapid Estimate of

Conclusions: More than a quarter of the population were found to have marginal or low health literacy.

Role of the Pharmacist ¹⁵

Schizophrenia
Research and Treatment

[Schizophr Res Treatment](#). 2017; 2017: 6120970.

Published online 2017 Jun 13. doi: [10.1155/2017/6120970](https://doi.org/10.1155/2017/6120970)

PMCID: PMC5485348

PMID: [28695011](https://pubmed.ncbi.nlm.nih.gov/28695011/)

Impact of Pharmacist Counselling on Clozapine Knowledge

[Ciara Ní Dhubhlaing](#), ^{1, *} [Ailish Young](#), ¹ and [Laura J. Sahn](#) ^{2, 3}

▶ [Author information](#) ▶ [Article notes](#) ▶ [Copyright and License information](#) [Disclaimer](#)

Schizophr F

Conclusions:

Interventions involving pharmacist counselling can improve patient knowledge, whilst the specific knowledge gained relating to recognition of side effects may help patients towards more empowerment regarding their treatment

Pharmacists and other healthcare professionals

Intern / Foundation Year doctors:

- *" We got at lecture one day from the pharmacists. It was pretty decent, but it was just once and it would be worthwhile having more..."*
- *"...they kind of focused on it a bit more in final med but up till that, up till then we had pharmacology lectures but there was nothing- no kind of sessions about in practice prescribing..."*


Recent research:

- Lack of preparedness for the task of prescribing
- Lack of knowledge of appropriate sources of medication information
- Need for increased interaction with pharmacists

Where do medication errors occur?


Prescribing	39%
Transcribing	11%
Dispensing	12%
Administering	38%

Where do medication errors occur?



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Where do medication errors occur?

Prescribing 39%

Transcribing 11%



Dispensing 12%

Administering 38%

Medicines reconciliation

- *'creating the most accurate list possible of all medications a patient is taking – including drug name, dosage, frequency and route – and comparing that list against the physician's admission, transfer and/or discharge orders, with the goal of providing correct medication to the patient at all transitions points within the hospital'*

Reference:

Institution for healthcare improvement. protecting 5 million lives from harm campaign. Getting started kit: prevent adverse drug events (medication reconciliation how-to guide; 2008).

Four steps to safety

Verification: Current medication list is obtained,

Clarification: The medication and dosages are checked for accuracy,

Reconciliation: Newly prescribed and old medication are compared and documented,

Transmission: updated and verified medication list is communicated to the next healthcare provider

Reference:

Joint Commission on Accreditation of Healthcare Organizations, USA. Using medication reconciliation to prevent errors. Sentinel Event Alert 2006 Jan 23(35):1-4. [Medline: 16463453]

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Hard to decipher

"Handwriting is appalling [...] they need to be told print. They do not take their own slant on it. You print and you print in the alphabet. You don't print your own print, you print alphabet, the A, the B, that is the way it has to be done ..." [N2]

- *"One other big thing the girls [nurses] would notice [...] this illiterate writing. It is very unsafe..."* [N1]

Legibility

Image 2 (Reference: 17863)

Drug (Approved name)			
getarapirin (sup).			
Dose	Diluent	Vol.	Route
00mg			NG
Rate of Infusion	Frequency	First Dose Given By	
	8 ⁰		
Start Date	Dr.'s Sig		
25/05/15			
Stop Date	Dr.'s Signature		
Pharmacist:			
Review Date:			

Dose error

REGULAR PRESCRIPTIONS

Image 8 (Reference: 18337)

Drug (Approved name) Digoxin				Date Presc Time
Dose 62.5mg	Diluent	Vol.	Route po	06 08
Rate of Infusion	Frequency od	First Dose Given By		12 13
Start Date 28/10	[Redacted]			14
Stop Date				17
Pharmacist:				18
Review Date:				22
Drug (Approved name) Am...				24

Any issues here?

➤ Snapshot from patient drug kardex :

REGULAR PRESCRIPTIONS (C				Date
Drug (Approved name)			Date	→
Lantus			Prescribed Time	
Dose	Diluent	Vol.	Route	0600
36			SC	0800
Rate of Infusion	Frequency	First Dose Given By		1200
	OD			1300
Start Date	Dr.'s Sig			1400
15/06/15				1700
Stop Date	Dr.'s Signature			1800
Pharmacist:				1800
				2200
Review Date:				2400
Drug (Approved name)				

Insulin units

➤ Snapshot from patient drug kardex :

REGULAR PRESCRIPTIONS (C				Date
Drug (Approved name) Lantus			Prescribed Time	
Dose 36	Diluent	Vol.	Route SC	
Rate of Infusion	Frequency OD	First Dose Given By	0600	
Start Date 15/6/15	Dr.'s Sig		0800	
Stop Date	Dr.'s Signature		1200	
Pharmacist:			1300	
Review Date:			1400	
			1700	
			1800	
			2200	
			2400	

High risk medications

➤ Snapshot from patient drug kardex (2):

Drug (Approved name)				Date
MEPHOTREXATE				Presc Time
Dose	Diluent	Vol.	Route	06
6 TABLETS			PO	08
Rate of Infusion	Frequency	First Dose Given By		1
	Every Friday			1
Start Date	Dr.			1
24-07-15				1
Stop Date	Dr.			1
Pharmacist:				
Review Date:				

What strength?

➤ Snapshot from patient drug kardex:

Drug (Approved name)				Date
MEPHOTREXATE				Presc Time
Dose	Diluent	Vol.	Route	06
6 TABLETS			PO	08
Rate of Infusion	Frequency	First Dose Given By		1
	Every Friday			1
Start Date	Dr.	[Redacted]		1
24-07-15				1
Stop Date	Dr.			1
Pharmacist:				
Review Date:				

Challenges ..

"Their [doctors] workload is phenomenal and ferocious."

N2

• *"They [doctors] are under a lot of pressure. I know they are rushing and they are always short and have hundred and one things to do [...] I have notices in recent years [...] younger doctors they don't give themselves time, they are making mistakes in scripts"*

N1

Whose responsibility is it anyway?

- *"Pharmacists probably I feel should take a more leading role in it [medication reconciliation] [...]it is the pharmacist that has the great knowledge and in relation, if they are looking at something they tell straight away what's interacting with something.."*

Why is Health Literacy important to Hospital Pharmacists?

- Hospital Pharmacists are responsible for making sure patients obtain the maximum positive health outcomes from their medication(s).
- Hospital Pharmacists care for patients with low to high education levels, low to high incomes, and multiple races of people; all of whom may have limited health literacy.
- Errors are likely higher with patients with limited health literacy.
- Studies document an association between low literacy and poor health outcomes.

Be aware: of patients' behaviour and your own (unconscious) bias

- **Possible Indicators of Low HL:**

- Excuses: "I forgot my glasses"
- Lots of papers folded up in purse/pocket
- Lack of follow-through with tests/appointments
- Seldom ask questions
- Questions are basic in nature

Ask: Screening Questions

**Are you comfortable
with reading those
medical instructions?**

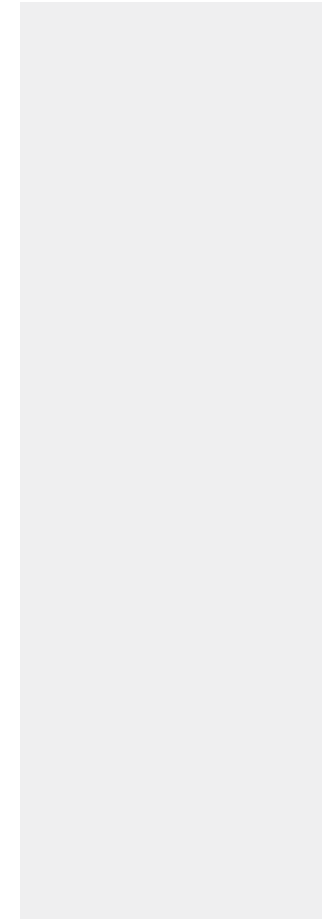
**Are you ok with
filling out this
medical form?**

Can I help
you with
that?

Avoid jargon: Use everyday words

Instead of	Consider
Administer	Give
Benign	Harmless
Dosage	How to take
Hypertension	High blood pressure
Malignant	Harmful

If you must use specialised language or jargon, **explain** what it means.



Check understanding: **Teach back / Talk back**

Can you just tell me, in your own words, what you think I've said, regarding your therapy/ medicines just so that I'm sure I've remembered to tell you everything?

Health professionals may not be able to change the literacy levels of their patient community but.....

- **“ they can however work to improve their own communication skills, the procedures followed for communicating with and interacting with people, and the forms and materials they write”**

Professor Rima Rudd 1999


Rima E. Rudd

Senior Lecturer on Health Literacy, Education and Policy

Social and Behavioral Sciences

Harvard University/ USA

Take home messages:

- People with limited health literacy commonly hide their difficulties:  **Communicate clearly with everyone**
Confirm understanding with everyone
- Pharmacists are uniquely qualified to help other healthcare professionals in the medication management process
- Pharmacists can increase knowledge and confidence of patients by use of their counselling skills

Acknowledgements

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- Dr Paul McCague (QUB, UK)
- Professor Colin Bradley (UCC)
- Dr Michelle O'Driscoll
- Mr Michael Duffy
- Staff, Mercy University Hospital

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