READING PASSAGE 3

*You should spend about 20 minutes on **Questions 27-40**, which are based on Reading Passage 3 below.*

Improving Patient Safety

How improved drug packaging could provide some answers to patient safety issues

Packaging

One of the most prominent design issues in pharmacy is that of drug packages and the patient information leaflets (PILs) included in them. Many pharmacists are concerned that current designs are 'accidents waiting to happen'. The UK government shares this concern and, in 2003, the National Patient Safety Agency created a new role, appointing Colum Lowe, who has 14 years' experience as a designer in the private sector, as head of design and human factors.

Packaging design in the pharmaceutical industry is handled by either in-house teams or external design agencies. For packaging design of over-the-counter medicines, which do not have to be dispensed by a pharmacist but can be bought directly from a sales assistant, characteristics such as attractiveness and distinguishability are important and so these are usually commissioned from an external design team. The marketing team prepares the initial brief and the designers come up with six or seven designs. Two or three of these are then tested on a consumer group. In contrast, most designs for prescription-only products are created in-house. In some cases, this may simply involve the company's design team applying the house design and then handing it over to design engineers rather than testing the design on a consumer group. Clearly this process cannot adequately address the needs of the wide variety of patients using medication.

Design considerations

In her book *Information Design for Patient Safety*, Thea Swayne highlighted a multitude of design problems. For example, drugs that look or sound alike can lead to confusion; small type sizes and even the glare on silver-foil packaging can lead to names or instructions being misread. One such example is a drug that was accidentally injected into a patient through the spine (intrathecally) rather than through the veins (intravenously). Investigations following this tragedy attributed some blame to the poor choice of typescript used on the drug container. Furthermore, according to Swayne, real situations in which medicines are used include a parent giving a cough medicine to a child in the middle of the night; packaging should be designed for moments such as these rather than for the ideal world of a hospital.

Safety and compliance
Child protection is another area that gives designers opportunities to improve safety. According to the Child Accident Prevention Trust, 70% of children admitted to hospital with suspected poisoning have swallowed medicines, and although child-resistant lids have helped, they are not yet fully effective. There is scope for improving what is currently available, according to Richard Mawle, a freelance product designer who feels it is not just children who are blocked by child-proof closures. ‘Many child-resistant packs are based on strength but older people may have the same level of strength as a child,’ he explained, and suggested that better designs could rely on cognitive skills (e.g. removing the lid using a three-step process).

Mawle also worked on a project which involved applying his skills to packaging and PILs. Commenting on the information presented, he said: ‘There can be an awful lot of junk at the beginning of PILs. For example, why are company details towards the beginning of a leaflet when what might be more vital for the patient is that the medicine should not be taken with alcohol?’

Design principles and guidelines
Most designers work according to basic principles; for example, certain print styles are known to be more difficult to read than others. Look-alike boxes present the potential for errors and an obvious solution would be to use colours to highlight a larger dosage of a drug. However, according to Thea Swayne, designating a colour to a particular dosage is not recommended because this could lead to the user not reading the text on a box.

Design features can provide the basis for lengthy debates. One argument is that if all packaging was white with black lettering, people would have no choice but to read every box carefully. The problem is that trials of drug packaging are few – common signage studies concern road-traffic signs and visual-display units. Although some designers take results from such studies into account, proving that a particular feature is beneficial can be difficult. For example, current UK legislation requires packaging to include the name of the medicine in Braille, but, according to Karel van der Waarde, a design consultant to the pharmaceutical industry, ‘it is not known how much visually impaired patients will benefit nor how much the reading of visually able patients will be impaired’. Van der Waarde is sceptical about current legislation and says that many regulatory authorities do not have the resources to handle packaging information properly. ‘They do not look at the use of packaging in a practical context – they only see one box at a time and not several together as pharmacists would do,’ he said.

Innovation
On a positive note, a recent innovation exhibition revealed several new designs. ‘The popper’ aims to help arthritis sufferers remove tablets from blister packs, and ‘Pluspoint’ is an adrenaline auto-injector (a device that allows diabetics to inject themselves) aimed at overcoming the fact that many patients do not carry their medication due to its prohibitive size. The aim of good design is to try to make things more user-friendly as well as safer. The guidelines in *Information Design for Patient Safety* are not intended to be legally binding. Rather, the book’s purpose is to create a basic design standard and to stimulate innovation. The challenge for the pharmaceutical industry is to adopt such a standard.

Questions 27–32

Look at the following statements (Questions 27–32) and the list of people or groups below.

Match each statement with the correct person or group, ***A****,* ***B****,* ***C*** *or* ***D****.*

Write the correct letter, ***A****,* ***B****,* ***C*** *or* ***D****, in boxes 27–32 on your answer sheet.*

NB *You may use any letter more than once.*

27 The elderly would benefit from drug containers that do not require force to open them.

28 Adapting packaging for the blind may disadvantage people who can see.

29 Specially designed containers have not been able to eliminate drugs being swallowed accidentally.

30 Designers have to consider how drugs are used in the home.

31 Governing bodies need to compare different drug containers rather than studying individual ones.

32 Information provided with medicine is not listed in the right order.

List of People or Groups

A Thea Swayne
B The Child Accident Prevention Trust
C Richard Mawle
D Karel van der Waarde

Questions 33–37

*Complete the summary using the list of words, **A–G**, below.*

*Write the correct letter, **A–G**, in boxes 33–37 on your answer sheet.*

Packaging design in the pharmaceutical industry

Over-the-counter drugs

First, a proposal is written by the **33** _____. Then several designs are produced by the **34** _____. Finally, selected designs are shown to **35** _____.

Prescription-only drugs

The **36** _____ create the design. The design is then passed to **37** _____.

A consumers	**B** design engineers	**C** external design team
D in-house design team	**E** marketing team	**F** pharmaceutical industry
G pharmacists		

Questions 38–40

Choose the correct letter, ***A, B, C*** *or* ***D****.*

Write the correct letter in boxes 38–40 on your answer sheet.

38 In the accident mentioned in the passage, what was the 'design consideration' that caused a drug to be given incorrectly?

A a printing error
B the style of print
C an incorrect label
D the shape of the bottle

39 What do some people say about the use of only black and white as a design feature?

A Consumers would dislike this option.
B Drug containers would all look too similar.
C People would pay more attention to label information.
D Partially sighted people would find these colours more helpful.

40 Why does the writer refer to 'the popper' and 'Pluspoint'?

A to show that progress is being made in pharmaceutical packaging design
B to give an example of pharmaceutical design problems that can cause accidents
C to prove that a lot of work still needs to be done to improve pharmaceutical packaging design
D to point out that patients need to be more informed about pharmaceutical products

Questions 27–32（配对题）

题号	答案	题干翻译	关键定位（英 / 中，注明段落）	详细解释（同义改写 & 排除）
27	**C**	老年人会受益于**不需要用力**打开的药品容器。	**第 4–5 段**：“*Many child-resistant packs are based on strength but older people may have the same level of strength as a child, … better designs could rely on cognitive skills (e.g. removing the lid using a three-step process).*” / “许多儿童防启瓶依赖**力量**，但老年人的力量可能与儿童相当；更好的设计应依赖**认知步骤**（如三步法开盖）。”	说话人是 **Richard Mawle**（选 C）。题干中的 *do not require force*（不需要用力）⇔ 原文反对“靠力量”，主张改为“认知步骤”。因此老人从“非力气式开启”中获益。
28	**D**	为盲人改造包装可能会**不利于**有视力的人。	**第 7 段**：“*it is not known how much visually impaired patients will benefit nor how much the reading of visually able patients will be impaired.*” / “尚不清楚**视障者**能获益多少，也不清楚**有视力者**的阅读会被**妨碍多少**。”	这一观点来自 **Karel van der Waarde**（选 D）。题干 *may disadvantage people who can see* ⇔ 原文 *reading … will be impaired*。
29	**B**	特制容器**并未消除**误吞药物的情况。	**第 4 段**：“*70% of children admitted… have swallowed medicines, and although child-resistant lids have helped, they are **not yet fully effective**.*” / “尽管**儿童防启盖**有帮助，但**尚未完全有效**。”	来自 **Child Accident Prevention Trust**（选 B）。题干“未能消除”⇔ 原文“not yet fully effective”。
30	**A**	设计师必须考虑家庭中药物的**使用场景**。	**第 3 段**：“*real situations in which medicines are used include a parent giving a cough medicine to a child in the middle of the night; packaging should be designed for moments such as these rather than for the ideal world of a hospital.*” / “真实情境包括**半夜**父母给孩子喂药；包装应为**此类情境**而非理想化的医院而设计。”	观点来自 **Thea Swayne**（选 A）。题干 *used in the home* 与原文 *real situations… middle of the night*（典型家庭场景）同义指向。
31	**D**	主管机构需要**比较不同**药品容器，而不是只研究单个容器。	**第 7 段**：“*They do not look at the use of packaging in a practical context – they only see **one box at a time and not several together** as pharmacists would do.*” / “监管方一次只看**一个盒子**，而不是像药剂师那样**把多个一起比较**。”	说话人 **Karel van der Waarde**（选 D）。题干“比较不同容器”⇔ 原文“not several together → 应该一起看”。“Governing bodies”=“regulatory authorities”。
32	**C**	药品附带信息（PIL）中**先后顺序**不合理。	**第 5 段**：“*There can be an awful lot of junk at the beginning of PILs… why are company details towards the beginning… when what might be more vital… is that the medicine should not be taken with alcohol?*” / “说明书**开头**常塞满无用信息；为何把**公司信息**放在前面，而不是把**与酒同服禁忌**这类要点置前？”	观点来自 **Richard Mawle**（选 C）。题干“not listed in the right order”⇔ 原文批评“把次要信息放前、重要警示靠后”。

Questions 33–37（概要填空—配词 A–G）

题号	答案	题干关键词 & 中文	关键定位（段落 & 原文要点）	解释
33	**E**	“First, a proposal is written by the ___.” → **marketing team 营销团队**	**第 2 段**：“*The marketing team prepares the initial brief…*”	“proposal/brief” 对应 “营销团队先写初始方案”。
34	**C**	“Then several designs are produced by the ___.” → **external design team 外部设计团队**	**第 2 段**：“*…so these are usually commissioned from an **external design team**. The … designers come up with six or seven designs.*”	OTC 外包给外部团队产出多版设计。
35	**A**	“Finally, selected designs are shown to ___.” → **consumers 消费者**	**第 2 段**：“*Two or three of these are then tested on a **consumer group**.*”	选定方案给消费者小组测试。
36	**D**	“The ___ create the design.” → **in-house design team 内部设计团队**	**第 2 段**：“*In contrast, most designs for prescription-only products are created **in-house**.*”	处方药多数由公司内部团队完成设计。
37	**B**	“The design is then passed to ___.” → **design engineers 设计工程师**	**第 2 段**：“*…then handing it over to **design engineers** rather than testing…*”	内部设计完成后转交工程师（而非做消费者测试）。

Questions 38–40（单选题）

题号	答案	题干翻译	关键定位（英 / 中，段落）	详细解释（同义改写 & 排除）
38	**B**	文中那起给错药的事故中，导致错误的“设计考量”是什么？	**第 3 段**：“*Investigations… attributed some blame to the **poor choice of typescript** used on the drug container.*” / “调查将部分责任归因于容器上**字体 / 字样的选择不当**。”	**B the style of print**（字样 / 字体）与 *choice of typescript* 完全同义。A “printing error” 无据；C “incorrect label” 文中未提标签错误；D “瓶形” 未出现。
39	**C**	关于只用黑白作为设计特征，有人怎么说?	**第 7 段**：“*if all packaging was white with black lettering, people would have **no choice but to read every box carefully**.*” / “若所有包装皆为**黑字白底**，人们**只能认真阅读**每个盒子的文字。”	这正对应 **C** “人们会更注意标签信息”。A/B/D 原文未支持（没有说消费者会不喜欢；也未说外观过于相似是问题；也不是为了帮助弱视者）。
40	**A**	作者为什么提到 “the popper” 和 “Pluspoint”?	**第 8 段**：“*On a positive note, a recent **innovation** exhibition revealed several new designs. ‘The popper’ aims to help… and ‘Pluspoint’… The aim of good design is to… safer.*” / “值得肯定的是，创新展上出现了**新设计**…… 目的在于更友好也更安全。”	作者用它们**举例说明进展**，故选 **A**。B 是 “问题样例”，不符；C “证明还有很多工作要做” 并非这两例的直接功能；D “强调患者需了解更多” 亦非文意。