

Unit 3 Disease

Contents

Part 1 Overview of the unit

Teaching objectives	1
A suggested teaching plan	2

Part 2 A detailed teaching guide

Discussion point	3
Academic exploration 1	4
Reading 1	4
Developing cultural awareness	15
Academic exploration 2	20
Reading 2	20
Critical thinking	31
Academic writing	33
Translation of the texts	39

Unit 3 Disease

Part 1 Overview of the unit

Teaching objectives

Upon completion of this unit, the T is expected to enable Ss to:

OBJECTIVES	
<ul style="list-style-type: none">understand some basic facts about cholera and reflect on how its real cause was discoveredunderstand the economic consequences of diseases and reflect on human efforts to fight against some catastrophic pandemicsunderstand the role TCM plays in the prevention and treatment of diseases	Knowledge & thinking
Reading skill <ul style="list-style-type: none">recognize paragraph structuresidentify sentence functions Critical thinking skill <ul style="list-style-type: none">evaluate evidence Academic writing skill <ul style="list-style-type: none">write definitions Language development <ul style="list-style-type: none">use vocabulary for showing cause and effectuse <i>unless</i> and <i>provided</i> to talk about conditions	Language & skills
make a presentation to introduce one of the TCM practices	Mini-project
write a cause-and-effect essay about the importance of funding research into disease	Writing task

A suggested teaching plan

Periods 1 & 2 Ss' online study	Ss are expected to complete the following activities on Ucampus: <ol style="list-style-type: none"> 1 Watch the mini-lecture of Unit orientation. 2 Think about the questions in Discussion point. 3 Read the text in Academic exploration 1 and finish the tasks in Reading & understanding. 4 Watch the mini-lecture of Getting the skill (AE1) (Recognizing paragraph structures). 5 Watch the video in Developing cultural awareness (AE1) (Understanding the role of TCM in modern society). 6 Read the text in Academic exploration 2 and finish the tasks in Reading & understanding. 7 Watch the mini-lecture of Getting the skill (AE2) (Identifying sentence functions). 8 Watch the mini-lecture of Critical thinking (Evaluating evidence). 	
Periods 3 & 4 Classroom teaching	Discussion point & Academic exploration 1	
	Introduce the topic of the unit (Disease) by dealing with Discussion point .	10 mins
	Check Ss' understanding of the text; deal with Interpreting the text and Thinking critically .	20 mins
	Check Ss' online study of Getting the skill (Recognizing paragraph structures) by asking Ss to do the tasks.	10 mins
	Deal with DCA (Understanding the role of TCM in modern society) and assign Ss to do the mini-project.	15 mins
	Academic exploration 2	
	Check Ss' understanding of the text; deal with Interpreting the text and Thinking critically .	20 mins
	Check Ss' online study of Getting the skill (Identifying sentence functions) by asking Ss to do the tasks.	10 mins
Periods 5 & 6 Classroom teaching	Critical thinking, DCA mini-project & Academic writing	
	Check Ss' online study of Critical thinking (Evaluating evidence) by asking Ss to do the tasks.	25 mins
	Invite Ss to present their projects to the class and make comments.	30 mins
	Deal with Academic writing and ask Ss to finish the tasks.	25 mins
	Wrap up the unit; assign Ss to finish the Writing task and do Review & check on Ucampus; assign Ss to do online study of Unit 4.	10 mins

Note to teachers: If you wish to extend this unit from six periods to eight periods, you could spend more in-class time on dealing with Reading 1 & 2, DCA mini-project and extension activities. If your class is not suitable for finishing both texts in the limited periods, you could also choose to focus on one text only.

Part 2 A detailed teaching guide

Discussion point

Teaching suggestions

- 1 Ask Ss to read the **Preventing disease** infographic on Page 53 of the Student Book. Ensure they understand the meaning of *immunization*, *antibiotic*, *vomit*, and *diarrhea*.
- 2 Relating the advice in the infographic to such diseases as the flu, hepatitis, and COVID-19, ask Ss if they agree with the advice. Then ask Ss whether they have seen any of the symbols and, if so, where.
- 3 Ask Ss to discuss the questions listed on Page 53 in pairs or small groups.
- 4 After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class.

Reference answers

- 1 It's incredibly important to our health. For example, a dirty hand can be a habitat for thousands of illness-causing germs. If we do not wash hands, we will easily get sick and those germs will be spread to other people.
- 2 The most important thing to do is implement immunization programs against different infectious diseases nationwide. Governments at all levels should take the initiative to educate the public about the preventive measures against diseases. It is also important for the governments to establish effective surveillance and reporting systems.
- 3 It depends. Many vaccines are developed to combat pandemics and have been proven effective. They should be and have already been provided free of charge to the people who need them. However, there are other factors to be taken into account. Many medicines should be strictly regulated and carefully controlled. Take the prescription drugs for example. They are normally paid by the patients who see the doctor, unless they are covered by the health insurance.

Extension activity

Ask Ss if they know other ways to prevent diseases.

Reference answers

- 1 Wear mask during an infectious disease outbreak.
- 2 Avoid crowds in flu season.
- 3 Keep healthy by doing exercise.
- 4 Have a healthy diet with more vegetables and fruits and less fatty food.

Academic exploration 1

Reading 1

Teaching suggestions

- 1 To warm up, ask Ss to brainstorm the diseases they know, and introduce the topic of the text – cholera. Ask Ss what they already know about cholera in terms of its cause, impact and treatment.
- 2 Check Ss' understanding of the text by discussing the questions listed in **Interpreting the text** on Page 57.
- 3 Encourage Ss to remember the word-forming components in medicine because this will increase their efficiency of learning medical terms. At the same time, check Ss' online study of **Reading & understanding**. Using medical terms is usually a main feature of medical literature. It will be easy to remember those terms if Ss know about the roots, prefixes, and suffixes. For example, the word "disease" is composed of *dis-* (not) + *ease* (comfort), literally meaning "not at ease" or "a condition of discomfort." Ask Ss if they know the components of the following terms (explained in **Language points**):
 - diarrhea = *dia-* (through) + *rrhea* (flow)
 - dehydration = *de-* (do the opposite) + *hydr(o)* (water) + *-ation* (noun suffix)
 - pandemic = *pan-* (all, whole) + *dem(o)* (people) + *-ic* (noun or adjective suffix)
- 4 Analyze the features of the text. (T may refer to **Text analysis**.)
- 5 Ask Ss if they can identify the structures in the text. Refer Ss to **Getting the skill**. Explain the main points of the skill "recognizing paragraph structures" to Ss. Check Ss' understanding by asking them to do the tasks.
- 6 Refer Ss to **Sharing your opinions**. Pair up Ss, and ask them to share their opinions with the partner.
- 7 Ask Ss to discuss the questions in **Making connections** in pairs or in small groups. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class. Close the discussion by mentioning the essence of scientific exploration is the scientists' perseverance. They may suffer from upsets and frustrations, and endure doubts and even stigmatization, but they never give up and eventually succeed in finding out the truth.
 - ✧ If time permits, deal with the **Extension activity** which draws Ss' attention to the credibility of online information.
- 8 Ask Ss to complete the table in **Showing inspirations**. Check the answer and end the task by emphasizing the importance of scientific and technological advances in the prevention and treatment of diseases as indicated in the comparison.

Extension activity

Not everything we read on the Internet is credible, so we need to develop strategies for deciding whether something is true or not. To illustrate this, ask Ss to search on Baidu for the treatment of one specific disease they are interested in. Ask them to make a list of the things that make the website believable and the things that indicate to them that the website is a hoax. In class, Ss can discuss their ideas.

Reference answers

The credibility of online information can be affected by a number of factors:

- 1 The website runner: governmental, institutional, or private.
- 2 The nature of the website: profitable or non-profitable.
- 3 The provider of the information: some authority (scientists, researchers, experts, etc.) or the general public.
- 4 The purpose of the information provider: to make a scientific report, to make an announcement, to educate the public, to advertise, to give personal opinions, etc.

Text analysis

Reading 1 is an expository text which introduces the status quo of cholera, its outbreaks in Britain during the First Industrial Revolution, and how its cause was identified. Cholera has been one of the most deadly infectious diseases in human history. Identification of its cause contributes much to its prevention.

As for the writing features of the text, here are some points worth mentioning:

1 Well-structured paragraphs

For example, Para. 2 has a cause-effect structure. The first two sentences state the effect – there have been many outbreaks of cholera that have killed millions of people. Then the rest of this paragraph explains why this has been the case (the cause).

Para. 3 has a structure of assertion and refutation. An assertion is made at the beginning: Most people thought that cholera was spread through polluted air (the miasma theory). Then the assertion is refuted: John Snow was not convinced that the miasma theory was how cholera spread, even though the “actual cause of the spread of infectious diseases – germ theory – was not yet known.”

Para. 4 makes use of proposition and support. In the second last sentence of this paragraph, the proposition is given: “Snow proposed that cholera was actually a disease transmitted through water rather than air.” Before that, Snow’s reasoning is explained to support his proposition – simply put, the disease affected people’s bowels instead of lungs.

2 Defining key terms

Defining new or unfamiliar specialized terms is common in academic texts. For example,

- 1) Cholera is a disease that is transmitted by drinking water contaminated with bacteria. (Para. 1, Line 1)
- 2) A pandemic is an outbreak of a disease that rapidly leads to large numbers of people being affected. (Para. 2, Line 6)

3 Apposition (同位结构)

Apposition is a grammatical construction in which two elements (especially noun phrases) having the same referent are placed beside each other in a sentence so that one describes or defines the other. In Reading 1, several sentences contain apposition. For example,

- 1) The actual cause of the spread of infectious diseases – **germ theory** – was not yet known. (Para. 3, Line 4)
- 2) However, **one local doctor, John Snow**, was not convinced that the miasma theory was how cholera spread. (Para. 3, Line 8)
- 3) This method led him to **a young child, Frances Lewis**. (Para. 5, Line 2)
- 4) **Henry Whitehead, a researcher who worked with John Snow**, used this evidence and the previous examples they had gathered to propose the theory again. (Para. 6, Line 9)

4 To start a sentence with an adverb

In an academic essay, moving an adverb to the beginning of a sentence serves to vary the rhythm of a paragraph and increase sentence variety. For example,

- 1) **Instead**, it attacked people's bowels and caused very bad diarrhea. (Para. 4, Line 3)
- 2) **Essentially**, people were drinking their own waste. (Para. 4, Line 6)
- 3) **Initially**, unless he could gather proof, his theory was unlikely to be accepted. (Para. 4, Line 8)
- 4) **Finally**, the theory was accepted. (Para. 6, Line 11)

Language points

New words and expressions

cholera

n. [U] 霍乱

*A public awareness campaign on the prevention of **cholera** has been started in the affected regions.* 一场预防霍乱的公众意识宣传运动已在受灾地区展开。

diarrhea

n. [U] (*BrE diarrhoea*) 腹泻

*Soluble fiber is found in some foods that absorbs fluid and can help relieve **diarrhea**.* 可溶性纤维存在于一些食物中，可以吸收液体，有助于缓解腹泻。

dehydration

n. [U] 脱水

*An individual suffering from 10% or more loss of body fluid is considered to be in a severe state of **dehydration**.* 如果一个人流失 10% 或更多的体液，则被认为处于严重的脱水状态。

sewer

n. [C] 下水道；阴沟；污水管

*Within the context of sustainable water management, investments have been planned for the improvement and repair of the **sewer** system.* 在可持续水资源管理的背景下，为改善和维修下水道系统的投资已被列入计划。

miasma

n. [sing.] dirty air or a thick unpleasant mist that smells bad 污浊难闻的空气，瘴气

*In the early 19th century, cholera was thought to have been transmitted by a **miasma** or “bad air,” but we now know that the disease is caused by a bacterium.* 在 19 世纪初，霍乱被认为是由瘴气或“坏空气”传播的，但现在我们知道该疾病是由一种细菌引起的。

pandemic

n. [C] a disease that affects people over a very large area or the whole world 流行病，大流行病，瘟疫

*The COVID-19 **pandemic** has caused mass trauma for the world, and the impact will last for many years to come.* 新冠肺炎大流行已经给世界造成了极大的创伤，而且这种影响将持续很多年。

sewage

n. [U] （下水道的）污水，污物

*Studies have been conducted to investigate how coronavirus may have spread through **sewage** pipes.* 人们已经展开了一些研究，调查冠状病毒可能是以何种方式通过污水管道传播的。

cesspool

n. [C] (*also cesspit*) 污水坑，化粪池

Cesspools were used to store waste in many parts of the world, before being replaced by municipal sewer systems. 在被城市下水道系统取代之前，化粪池曾被世界上许多地方用来储存废物。

propagate

vt. (*fml.*) to spread an idea, belief, etc. to many people 传播，散播，宣传（观点、信仰等）

*Building confidence in vaccines will require cooperation with social media platforms to ensure that they are not abused to **propagate** harmful rumors.* 要建立对疫苗的信心，就需要与社交媒体平台合作，确保它们不会被用来传播有害的谣言。

Proper names

World Health Organization 世界卫生组织

Louis Pasteur 路易斯·巴斯德（1822-1895，法国化学家、微生物学家）

John Snow 约翰·斯诺（1813-1858，英国医生，被视为现代流行病学的先驱）

Thames 泰晤士河（位于英国英格兰，为英国著名的“母亲”河）

Broad Street 宽街（英国牛津中心区的一条街道）

Houses of Parliament 英国议会大厦（位于泰晤士河西岸）

Henry Whitehead 亨利·怀特海德（1825-1896，英国牧师）

Difficult sentences

1 It leads to diarrhea, which can result in high levels of dehydration. (Para. 1)

此句中的两个医学词汇的构成方式值得注意。diarrhea 由前缀 *dia-*（穿过）和词根 *rrhea*（流）构成，其字面意思是“流过”，“腹泻”即从肠子中流过。另一个词 dehydration 是 hydration 一词的派生词，由词根 *hydr(o)*（水）+名词后缀 *-ation* 构成 hydration，指“水合或使含水”，而前缀 *de-*指“相反的动作”，所以 dehydration 指“脱水”。

2 These days the disease can successfully be treated provided that drinking water with added salt is consumed. (Para. 1)

此处 provided that ... 引导条件状语从句，相当于 if，意为“只要，如果……的话”。另外，provided 后面的 that 可以省略，比如 *Snow felt that provided cholera was a disease transmitted through the air, then it would affect people's lungs.* (Para. 4)

3 Transported between major towns and cities by people buying and selling goods, once the disease reached a new area, many people were quickly infected, and it caused many pandemics. (Para. 2)

transported 是过去分词，其所在的部分放在句首作状语，表示方式，即“借由买卖货物的人在主要城镇之间传播”。once 是连接词，引导时间状语从句，意思是“一旦”。pandemic 一词来自希腊语，由前缀 *pan-*（全部）+词根 *dem(o)*（人民）+后缀 *-ic* 构成，字面意思为“影响全民的（事物）”。

4 Known as the miasma theory, the visible effects of heavy industry understandably led people to suspect that bad air was the cause of the pandemic. (Para. 3)

miasma theory 是指瘴气理论，该理论认为疟疾、霍乱、鼠疫等流行病都是由污染或有毒的“坏空气”导致。known as 是过去分词短语作定语，可以理解为其逻辑主语是宾语从句 bad air was the cause of the pandemic，而不是紧跟其后的主句主语 the visible effects of heavy industry，从而形成了一种悬垂结构。副词 understandably 的作用相当于 it is understandable that ...，副词在英语中很常用，言简意赅，比如本文中还有 essentially, initially, arguably 等副词。

5 The actual cause of the spread of infectious diseases – germ theory – was not yet known. (Para. 5)

germ theory 是指细菌理论，该理论认为有些疾病是由微生物所致，是现代被广泛接受的病因学说。

6 John discovered that the mother had washed Frances' soiled clothes in a nearby cesspool, used to store human waste. (Para. 5)

soil 作动词，意思是“污染，玷污”。在本句中是 soil 的过去分词作形容词修饰 clothes，意思是“被弄脏的衣服”。used to store human waste 是过去分词短语作后置定语，修饰 cesspool，相当于非限制性定语从句 which was used to store human waste。

7 At the same time, a local workhouse with over 500 employees was not affected. (Para. 5)

workhouse 表示“济贫院，劳动救济所”，是英国旧时供无家可归的赤贫之人居住和工作之处。

8 ... it is the knowledge of the way in which the disease is propagated which will cause them to disappear. (Para. 6)

此句运用了强调句型，强调了主语 the knowledge of the way in which the disease is propagated。该主语中 in which 引导定语从句，修饰 the way，表示“疾病传播的方式”。另外需注意，虽然此处 John Snow 的原表述中强调句型用了 it is ... which ...，但其规范用法应该是 it is ... that ...。

Reference answers

THINKING & EXPLORING

Interpreting the text

- 1 Cholera is caused by bacteria and transmitted by contaminated drinking water. Its major symptom is diarrhea that can lead to severe dehydration. It can be successfully treated by drinking salty water.
- 2 Two factors contributed to it. The first was people's increasing mobility because of commercial activities. The second was that the infrastructure of cities did not develop at a rate necessitated by the people flooding into the cities, and that sewers became inadequate to take human waste away, resulting in pollution of other sources of water.
- 3 The miasma theory held that cholera was caused by the miasma or bad air, while the germ theory argued that cholera was caused by small organisms that grow and reproduce on people, plants and animals.
- 4 He thought that the lungs would be affected if cholera was transmitted through air, but they were not because breathing was not impacted. However, the disease attacked the bowels as it caused severe diarrhea. People in London drank water from the river Thames, which might have been contaminated by the sewage. Therefore, Snow proposed that cholera was actually transmitted through water rather than air.
- 5 The outbreak of cholera in the Broad Street area was caused by the water supply contaminated by leakage of waste from a polluted cesspool, while a local workhouse with over 500 employees was not affected because it had a different water supply.
- 6 If people know how cholera is transmitted, effective measures may be taken to prevent it from spreading from one person to another. Thus, an outbreak may not occur.

Thinking critically

Sharing your opinions

- 1 They didn't believe him because air pollution, as a result of industrialization, was visible. People took it for granted that bad air would cause health problems. Secondly, the real cause, germ theory, had not been

developed yet. Thirdly, people believed that water in the river Thames was fresh enough.

- 2 Lesson 1: Don't echo the views of others without a thorough investigation of the truth.

Lesson 2: Science should always be based on evidence.

Lesson 3: The development path of science may never be linear but is spiral instead, with many twists and turns as we move forward.

Lesson 4: Perseverance is a key contributing factor in one's scientific career.

Making connections

- 1 It depends. I sometimes believe the research findings if they are reported in scientific journals with adequate data and thorough analysis. However, I will take it with a grain of salt if the research has not been peer-reviewed.

2

- a) Nicholas Copernicus

Nicholas Copernicus held the theory that the Earth revolves around the Sun (i.e. solarism). However, the Church at that time disapproved of this theory because the Bible states that the Earth is at the center, not the Sun (i.e. geocentrism).

- b) Albert Einstein

For centuries, Newtonian physics dominated the worldview. However, Einstein challenged the old theories and shook up the scientific community with his groundbreaking work on the special and general theories of relativity and the origins of quantum theory.

- c) Galileo Galilei

Legend has it that to prove that two objects dropped at the same height hit the ground at the same time, Galileo dropped a cannonball (炮弹) and a musket ball (火枪子弹) simultaneously from a tower, and observed that they fell onto the ground at nearly the same time. This contradicted and challenged Aristotle's long-accepted idea that heavier objects fell faster.

- d) Yuan Longping

It was believed to be difficult to produce superior offspring via crossbreeding in a self-pollinating (自花授粉) plant like rice and to do crossbreeding experiments on rice on a large scale. However, Yuan succeeded in both seemingly impossible tasks by using the male-sterile (雄性不育的) rice. His contribution to the world is significant because his efforts have largely improved the rice production.

Showing inspirations

Aspects	Cholera	COVID-19
Methods used	John Snow depended on observation and deduction to establish the relationship between contaminated drinking water and the outbreaks of cholera.	Scientists used modern technologies like RT-PCR (逆转录-聚合酶链反应) and genomic sequencing (基因组测序) to identify and understand the COVID-19 virus.
Precision	John Snow only pointed out that contaminated drinking water resulted in infection but was unable to pinpoint the real pathogen (病原体).	Scientists not only identified the causing virus but also mapped out its genome sequencing.
Time taken	It took John Snow a lot of time to establish the relationship between cholera and contaminated drinking water.	It took modern scientists only weeks to identify the COVID-19 virus.
Credibility	People did not believe John Snow, and the miasma theory was widely recognized.	No one doubted when the COVID-19 virus was identified as the cause.

Getting the skill

1

Para. 2 (C)	A. assertion and refutation Reasons: <ul style="list-style-type: none"> Assertion: Bad air caused cholera. Refutation: John Snow was not convinced.
Para. 3 (A)	B. proposition and support Reasons: <ul style="list-style-type: none"> Proposition: Cholera was transmitted through water instead of air. Support: Bowels rather than lungs were affected.
Para. 4 (B)	C. cause and effect Reasons: <ul style="list-style-type: none"> Cause: inadequate infrastructure development to meet the demand of people flooding into the cities Effect: many outbreaks of cholera

2

1 Structure: cause and effect

2 Reasons:

Cause: regular physical activity

Effects: promote health and fitness

1) higher levels of cardiorespiratory fitness and stronger muscles

2) lower body fat and stronger bones

3) brain health benefits

Ucampus online course

READING & UNDERSTANDING

Before you read

Before you read

Making predictions about the text before you read it can help you improve comprehension. Read the following words and expressions taken from each paragraph of the text. What do you think the topic of each paragraph is? After filling in the blanks, you can read the text and check your predictions.

- 1 Para. 1 – cholera, diarrhea, dehydration, infected, treatment, die
Topic: [the symptoms of cholera and its treatment](#)
- 2 Para. 2 – outbreaks, started, transported, waste
Topic: [the outbreaks of cholera; the spread of cholera](#)
- 3 Para. 3 – thought, theory
Topic: [early theories about how cholera is spread](#)
- 4 Para. 4 – transmitted, fresh water, drinking, waste
Topic: [one theory about how cholera is spread](#)
- 5 Para. 5 – outbreaks, water, not affected, not infected, evidence, stop
Topic: [the research about the theory and the proposed solutions](#)
- 6 Para. 6 – sewer system ... built, propose ... theory, accepted
Topic: [the acceptance of the theory](#)

Understanding the text

Comprehension

Choose the best answer to each of the following questions or unfinished statements.

- 1 Which of the following statements is true about cholera?
A. It is caused by the virus instead of germs.
B. [Drinking salty water can treat the disease.](#)
C. It has been put under effective control worldwide.
D. Most cholera patients died because of difficult breathing.
- 2 The cholera pandemics during the First Industrial Revolution can be directly attributed to _____.
A. the insufficient healthcare services
B. the inadequate drinking water supply
C. [the increasing pollution of fresh water sources](#)
D. the expanding urbanization as a result of industrialization
- 3 The major difference between the miasma theory and the germ theory lies in the _____.
A. diagnosis of cholera
B. treatment of cholera
C. [cause of the cholera pandemics](#)
D. prevention of the cholera pandemics

- 4 John Snow doubted the miasma theory mainly because of the _____.
 A. digestive symptoms of cholera
 B. respiratory symptoms of cholera
 C. amount of water consumed by the cholera patients
 D. environment in the areas of the cholera pandemics
- 5 What was the value of Snow's finding about the workhouse in Para. 5?
 A. It proved that cholera had a low death rate.
 B. It showed that uncontaminated drinking water reduced the deaths.
 C. It evidenced that cholera was not as scaring as people had believed it to be.
 D. It suggested that most sewers in London had been contaminated with cholera.
- 6 What can be inferred from the last paragraph?
 A. People in London owed a lot to the politicians for the clean water supply.
 B. Henry Whitehead had been among those who doubted Snow's proposition.
 C. Doctors were more convinced of the germ theory than the general public.
 D. A connection was finally established between the contaminated water supply and the cholera pandemics.

Language focus

Words in use

Complete the sentences with the words below. Change the form if necessary.

contaminate	deposit	evidence	pandemic
procedure	propagate	survive	transmit

- 1 The following standard operating procedure / procedures must be followed by all laboratory workers where laboratory work involves the use of hazardous chemicals.
- 2 Current literature provides adequate evidence that intensive lifestyle modifications could lower the incidence of diabetes and cardiovascular (心血管的) diseases.
- 3 In the hospital, every patient is potentially at risk of acquiring and transmitting infectious diseases to other patients and healthcare workers.
- 4 Immunization provides the chief defense for children to survive the deadly diseases.
- 5 People may be infected by touching something contaminated by the COVID-19 virus and then touching their own mouth, nose, or eyes.
- 6 Experts across the globe predict that there will be another viral pandemic sooner rather than later.
- 7 The government has launched a series of programs to propagate knowledge about the recent pandemic outbreak and preventive measures against it.

- 8 Obesity occurs when too much fat is deposited in the body due to an imbalance of energy intake and consumption.

Translation

Translate the following sentences into Chinese. Pay attention to the words in bold.

- 1 Most people with healthy immunity (免疫力) are not easily **affected** by bacteria on the skin, but people with a weakened immune system are more at risk.
大多数免疫力良好的人不容易受到皮肤上的细菌的影响，但是免疫系统较弱的人面临感染的风险更大。
- 2 Globally healthcare professionals are **convinced** that technologies like personal health monitoring devices will play a vital role in creating a positive healthcare future.
全球医疗保健专业人士坚信，诸如个人健康监测设备之类的技术将发挥至关重要的作用，为医疗保健创造一个光明的未来。
- 3 Notably, early risk detection on the **outbreak** of the infectious disease will help to impose timely and effective public health measures to prevent its spread.
值得注意的是，及早发现疫情风险，有助于采取及时有效的公共卫生措施，防止疫情蔓延。
- 4 Medical researchers **proposed** a new disease category of skin disorders.
医学研究人员提出了一种新的皮肤病类别。
- 5 Further analysis revealed **significant** differences between the control group and the treatment group.
进一步的分析显示，对照组和治疗组之间存在显著差异。

Developing cultural awareness

Teaching suggestions

- 1 Start discussion by asking Ss if they have tried any TCM practice either for prevention or treatment of disease.
- 2 Check if Ss know the English equivalents of the following terms: “汤药” (decoction), “阴阳五行理论” (theories of Yin-Yang and Five Elements), “五脏” (five organs), “心” (heart), “肝” (liver), “脾” (spleen), “肺” (lung), “肾” (kidney), “太极拳” (Tai Chi), “针刺和艾灸” (acupuncture and moxibustion), “补充和替代疗法” (complementary and alternative therapy), “经络” (meridian), “气” (*qi* or the vital energy), “疟疾” (malaria), “青蒿素” (artemisinin), “整体整合医学” (Holistic Integrative Medicine), etc. By doing so, T may know if the Ss have watched the DCA video.
- 3 Ask Ss to work in groups to discuss the questions on Page 60 and choose 1-2 groups to report their discussion.
- 4 Ask Ss to share what they have learnt from the DCA video about the contribution that Zhang Zhongjing, Tu Youyou, and Zhang Boli have made in terms of TCM. Ask Ss what other figures they think are comparable to those mentioned in the video.
- 5 End discussion by asking Ss what they think about the future of TCM in terms of its international acceptance and popularization.
- 6 Explain the requirements of the mini-project. Assign the task to small groups (preferably 4-5 Ss in one group, depending on the class size), and ask each group to prepare a PowerPoint presentation, each group member focusing on one point of the prompts on Page 61. **小组互评作业**

(In Periods 5 & 6)

- 7 Ask each group to give their presentations.
- 8 Ask Ss to vote for the best group through Ucampus. Tell Ss the criteria of evaluation which should include “overall impression,” “content,” “cooperation,” and “audience reaction.” (教师可通过U校园教师端App首页上的【投票】功能发起班级投票，具体操作请参见《U校园使用手册（教师篇）》)
- 9 Comment on the performance of each group in terms of the content and delivery, and announce the best groups (2-3) from voting.
- 10 Wrap up the project by encouraging Ss to act as the promotion ambassadors of TCM, re-emphasizing the following points: Traditional Chinese Medicine has endured the test of time with proven efficacy for some diseases and effectiveness in maintaining health; it has saved lives for thousands of years. Ss may be encouraged to know more about TCM and try themselves for real experience with it, so that they can better introduce it to foreigners. This will contribute to its recognition and acceptance throughout the world.
- 11 If time permits, asks Ss to watch the supplementary video in **Extension activity** and discuss the questions in the directions.

Extension activity

- 1 Before playing the video, ask Ss if they know the English equivalent of “拔火罐” (cupping) and if they have tried it before.
- 2 Play the video, and ask Ss to take notes on the following two questions.
 - a) How is cupping performed and what is its mechanism?
 - b) What illnesses may cupping be used to treat?
- 3 Check Ss’ understanding by asking them to answer the above two questions.
- 4 Play the video again, and ask Ss to check their comprehension.

Reference answers

- a) A flame is lit and put into the glass which creates suction. The cup is left on for 5 to 10 minutes. This brings blood to the skin surface. The red marks are produced by the increase in blood flow and the toxins leaving the body.
- b) This technique is used for anyone who suffers from muscle tension, asthma, allergies, soreness, or inflammation.

Supplementary video 补充资源

Olympic athletes using cupping



Do you like eating jiaozi? Did you know the origin of Chinese dumplings has a connection with Traditional Chinese Medicine, or TCM for short?

Reportedly, jiaozi was first made by Zhang Zhongjing (张仲景), a Chinese doctor in the Eastern Han Dynasty (25-220) who was known as the “medicine saint.” The ancient story goes like this: On one cold winter day, when Zhang returned to his hometown, he noticed that many people’s ears were frostbitten. Zhang was more than willing to help them. He made ear-shaped dumplings with fillings of mutton, chilies and some medicinal herbs with warm nature. He boiled them and, together with the soup, handed them out to the poor. The dumplings helped people recover from the frostbite. Zhang’s recipe “Quhan Jiao’er Tang” (祛寒娇耳汤) literally means cold-dispelling, ear-healing decoction. The original name “jiao’er” evolved into what we now know as jiaozi.

TCM has been treating diseases and saving lives for thousands of years. It developed from ancient Chinese philosophies and was influenced by the theories of Yin-Yang and Five Elements (阴阳五行理论). It is believed

that yin and yang are two opposite forces in the body. Yin is negative and receptive while yang is positive and active. Yin and yang interact to keep a dynamic balance. Diseases occur when that balance is broken. TCM aims to treat illnesses by restoring the balance of yin and yang if it is disrupted. It has evolved to help people maintain health.

According to TCM, the body is believed to contain five *zang* (organs), namely heart, liver, spleen, lung and kidney. Each *zang* is paired with one of the Five Elements: heart with fire, liver with wood, spleen with earth, lung with metal, and kidney with water. Similar to the Five Elements, organs reinforce, yet counteract, each other and form a balanced cycle. Like yin and yang, a disruption in the balance of the five *zang* causes discomfort or illness. TCM practitioners, therefore, seek to restore the balance.

To maintain health and treat diseases, TCM resorts to a wide array of therapeutic modalities, including acupuncture, moxibustion (艾灸), herbal medicines, massage, and exercise therapies like Wu Qin Xi (五禽戏) and Tai Chi (太极拳). Among these therapies, the age-old practice of acupuncture has been widely accepted as a complementary and alternative therapy at home and abroad. Acupuncture involves inserting fine needles at acupuncture points connected by meridians (经络). Manipulation of the needles is believed to improve the flow of *qi* or the vital energy, and thus provides relief for many ailments. The World Health Organization recommends acupuncture for over 100 conditions. Among other effects, it has been proven effective for relieving pain, lowering blood pressure, and reducing the risk of stroke.

Herbal medicines made from plants are available in many forms including decoctions, tablets, capsules, powders, and fresh or dried plants. They are used for both preventive purposes and therapeutic effects, and their efficacy has been impressive. A good case in point is the use of Qingfei Paidu Tang (清肺排毒汤, Lung Cleansing and Detoxifying Decoction) in fighting COVID-19, as suggested by Zhang Boli (张伯礼), an academician of the Chinese Academy of Engineering.

The merits of TCM for human civilization are embodied in the contribution of Tu Youyou (屠呦呦), co-winner of the 2015 Nobel Prize in Physiology or Medicine. Tu searched countless ancient Chinese medical texts with a view to finding a traditional cure for malaria (疟疾), ultimately extracting a plant compound – artemisinin (青蒿素) – that has saved millions of lives. Tu's achievement has inspired more TCM researchers and specialists to develop medicinal products based on TCM theories and literature.

With the increasing recognition of Holistic Integrative Medicine (整体整合医学), TCM is gaining more attention worldwide and will make greater contributions to building a healthier society. TCM experts and researchers are taking advantage of modern technologies to study the mechanism of plant compounds, improve the efficacy of different TCM therapeutic practices, and try TCM on more diseases. Mounting evidence can be expected from such efforts so that effective products can be developed for the maintenance of health and treatment of disease.

Words and expressions

frostbitten *adj.* 冻伤的

frostbite *n.* 冻疮, 冻伤

dispel *v.* 驱散, 消除

decoction *n.* 煎剂; 汤药

spleen *n.* 脾脏

kidney *n.* 肾脏
 counteract *v.* 抵消; 对抗
 practitioner *n.* 执业医师
 modality *n.* 方式; 形式
 acupuncture *n.* 针刺 (疗法)
 moxibustion *n.* 艾灸
 meridian *n.* 经络
 ailment *n.* 小病, 不适
 capsule *n.* 胶囊
 efficacy *n.* 有效性; 功效
 embody *v.* 代表, 体现
 malaria *n.* 疟疾
 extract *v.* 提取; 提炼
 artemisinin *n.* 青蒿素
 a wide array of ... 各种各样的……; 大量的……
 complementary and alternative therapy 补充和替代疗法

Proper names

theories of Yin-Yang and Five Elements 阴阳五行理论
 Wu Qin Xi (Five Animals Exercises) 五禽戏
 Tai Chi 太极拳
 Chinese Academy of Engineering 中国工程院
 Nobel Prize in Physiology or Medicine 诺贝尔生理学或医学奖
 Holistic Integrative Medicine 整体整合医学, 简称整合医学, 指从人的整体出发, 将医学各领域先进的知识理论和临床各专科有效的实践经验分别加以有机整合, 并根据社会、环境、心理的现实进行修正、调整, 使之成为更加适合人体健康和疾病诊疗的新的医学体系。

Reference answers

Answers may vary.

- TCM developed from ancient Chinese philosophies and was influenced by the theories of Yin-Yang and Five Elements (阴阳五行理论). It is believed that yin and yang are two opposite forces in the body. Yin is negative and receptive while yang is positive and active. Yin and yang interact to keep a dynamic balance. Diseases occur when that balance is broken. TCM aims to treat illnesses by restoring the balance of yin and yang if it is disrupted.
According to TCM, the body is believed to contain five *zang* (organs), namely heart, liver, spleen, lung and kidney. Each *zang* is paired with one of the Five Elements: heart with fire, liver with wood, spleen with earth, lung with metal, and kidney with water. Similar to the Five Elements, organs reinforce, yet counteract, each other and form a balanced cycle. Like yin and yang, a disruption in the balance of the five *zang* causes discomfort or illness. TCM practitioners, therefore, seek to restore the balance.
- TCM resorts to a wide array of therapeutic modalities, including acupuncture, moxibustion (艾灸), herbal medicines, massage, and exercise therapies like Wu Qin Xi (五禽戏) and Tai Chi (太极拳). Among these

therapies, the age-old practice of acupuncture has been widely accepted as a complementary and alternative therapy at home and abroad. The World Health Organization recommends acupuncture for over 100 conditions. Among other effects, it has been proven effective for relieving pain, lowering blood pressure, and reducing the risk of stroke.

Herbal medicines made from plants are available in many forms including decoctions, tablets, capsules, powders, and fresh or dried plants. They are used for both preventive purposes and therapeutic effects, and their efficacy has been impressive. A good case in point is the use of Qingfei Paidu Tang (清肺排毒汤, Lung Cleansing and Detoxifying Decoction) in fighting COVID-19, as suggested by Zhang Boli (张伯礼), an academician of the Chinese Academy of Engineering.

- 3 The merits of TCM for human civilization are embodied in the contribution of Tu Youyou (屠呦呦), co-winner of the 2015 Nobel Prize in Physiology or Medicine. Tu searched countless ancient Chinese medical texts with a view to finding a traditional cure for malaria (疟疾), ultimately extracting a plant compound – artemisinin (青蒿素) – that has saved millions of lives. Tu's achievement has inspired more TCM researchers and specialists to develop medicinal products based on TCM theories and literature.

With the increasing recognition of Holistic Integrative Medicine (整体整合医学), TCM is gaining more attention worldwide and will make greater contributions to building a healthier society. TCM experts and researchers are taking advantage of modern technologies to study the mechanism of plant compounds, improve the efficacy of different TCM therapeutic practices, and try TCM on more diseases. Mounting evidence can be expected from such efforts so that effective products can be developed for the maintenance of health and treatment of disease.

Academic exploration 2

Reading 2

Teaching suggestions

- 1 To introduce the topic of Reading 2, ask Ss to share their views about the economic consequences that COVID-19 has caused for the world. Ask Ss which sector has suffered most because of COVID-19: health care services, labor productivity, tourism, demography, etc.
- 2 Check Comprehension 1 in **Understanding the text (Reading & understanding)** to see if Ss understand the main ideas of the paragraphs. Don't only check the answers. Ask Ss why they have made the match.
- 3 Check Comprehension 2 in **Understanding the text** to see if Ss understand the details of the text.
- 4 Check Ss' understanding of the text by discussing the questions in **Interpreting the text** on Page 65. Depending on the time and Ss' level, T may select several questions rather than discuss all the questions listed.
- 5 Advise Ss to notice that medical terms can fall into different types according to their origins. For example, Ebola is an eponym (名祖词) named for the river in Africa where the disease was first recognized in 1976. Parkinson's disease and Alzheimer's disease are also eponyms. SARS is an acronym (首字母缩略词) of Severe Acute Respiratory Syndrome (严重急性呼吸道综合征). Similarly, MERS is an acronym of Middle East Respiratory Syndrome (中东呼吸综合征). Flu is a clipped form (截短词) of influenza. Polio is a clipped form of poliomyelitis (小儿麻痹症). Advise Ss to notice such patterns when they learn medical terms.
- 6 Refer Ss to **Sharing your opinions**. Pair up Ss, and ask them to share their opinions with their partner.
- 7 Ask Ss to discuss the questions in **Making connections** in pairs or in small groups. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class. Sum up the discussion by emphasizing the importance of joint efforts from all levels in fighting disease: individual, institutional, governmental, national and international. With such joint efforts, we are sure that a community of common health for humanity (人类卫生健康共同体) will be established, as advocated by the Chinese government.
- 8 Ask each group to do the task in **Showing inspirations** after class, submit their report on Ucampus, and comment on the reports of other groups. T may offer feedback in the next class.
- 9 Refer Ss to **Getting the skill (Identifying sentence functions)**. Explain briefly the different functions that sentences can perform: defining, speculating, classifying, reporting, naming, etc. Check Ss' online study by asking them to do the tasks. The following are additional sentence functions not included in the Student Book.
 - **Stating and restating:** Stating means giving information, whereas restating means giving that information in a different way.
 - **Exemplifying:** Providing concrete instances will help make a viewpoint clear and credible.
- 10 Wrap up Reading 2 by drawing Ss' attention to **Text analysis**. (T may refer to **Text analysis**.)
- 11 If time permits, ask Ss to do the **Extension activity**.

Extension activity

- 1 Play the video, and ask Ss to take notes on the economic impact on the following aspects.
 - a) high-income families
 - b) low-income families
- 2 Ask Ss to pair up and share their notes with their partner.
- 3 If necessary, ask Ss to read the video script to check their answers.

Reference answers

- a) high-income families
 - Consumer spending was most extreme with high-income individuals.
 - High-income families really stopped spending.
 - High-income communities are somewhat buffered from the economic shocks because they can self-isolate and can work remotely.
- b) low-income families
 - The low-income workers working in high-income communities are facing the biggest brunt of this crisis.
 - A low-income worker working in a restaurant or bar in Manhattan, a very high-income community, are more likely to lose his / her job.
 - Once the school is shut down, low-income families and low-income communities are hit harder with the highest levels of drop in terms of student engagement and student progress.

Supplementary video 补充资源

COVID-19 and the economy

Text analysis

Reading 2 explains the economic impact of diseases. The topic is particularly relevant in the context of the COVID-19 pandemic. The author focuses on the economic consequences of diseases in different aspects, including the influence on a country's economic output, labor productivity, health services, local tourism, and the demography. Meanwhile, the author takes account of the two categories of diseases – infectious and non-infectious.

The explanation is thorough and convincing, based on such solid evidence as examples (Ebola, SARS, “Stoptober” in the UK, the flu of 1918) and statistics.

Variety is an important feature in academic writing. Variety can be achieved by using different expressions or structures. The author uses the words *impact*, *effect*, and *consequence* for what results from a disease. Similarly, different expressions are used to show the cause-effect relationship, such as *there are many widespread economic consequences of*, *due to*, *is a direct economic cost to*, *lead to*, *result in*, *as a consequence of*, *have detrimental consequences on*, *cause*, *had a detrimental effect on*, *has immediate and long-term economic consequences*. Ask Ss to find those expressions in the text, and to learn how they can be used for the same purpose.

Language points

New words and expressions

catastrophic

adj. causing a lot of destruction, suffering, or death 灾难性的，毁灭性的

*In some poor countries, hunger and poor nutrition can contribute to the spread of **catastrophic** infectious diseases.* 在一些贫穷国家，饥饿和营养不良可能助长灾难性传染病的传播。

simplistic

adj. treating difficult subjects in a way that is too simple 过分简单化的

*Some people tend to have **simplistic** views about how to promote public health.* 有些人对如何促进公众健康抱有过于简单化的看法。

diminish

v. to become or make sth. become smaller or less （使）减少，（使）减小

*Studies showed that the incidence of AIDS **diminished** substantially with the cocktail treatment.* 研究表明，艾滋病的发病率因为鸡尾酒疗法而大大降低了。

pharmaceutical

adj. (only before noun) relating to the production of drugs and medicines 制药的

*These transparency bills require **pharmaceutical** companies to provide specific information about their pricing practices.* 这些透明度法案要求制药公司提供有关其定价方法的具体信息。

predominantly

adv. mostly or mainly 在很大程度上，主要地

Some studies show that eating a predominantly plant-based diet is one key way to reduce the risk of chronic disease, as the foods tend to be higher in fiber, vitamins, etc. 一些研究表明，以植物为主的饮食是降低慢性疾病风险的一个关键方法，因为这些食物往往富含纤维、维生素等。

vaccine

n. [C, U] a substance which contains a weak form of the bacteria or virus that causes a disease and is used to protect people from that disease 疫苗

Historically, vaccines have proved to be the most effective weapon in the fight against infectious diseases, such as smallpox, polio, measles, and yellow fever. 从历史上看，疫苗已被证明是对抗天花、小儿麻痹症、麻疹和黄热病等传染病的最有效武器。

closure

n. [C, U] the act of closing or the state of being closed 关闭；封闭

Localized closure of the affected areas was recommended to prevent the spread of the infectious disease. 建议对疫区进行局部封闭，以防止传染病的传播。

detrimental

adj. (fml.) causing harm or damage 有害的，不利的

Our modern, largely-indoor lifestyle results in Vitamin D deprivation which is highly detrimental to our immunity. 我们以户内为主的现代生活方式会导致维生素 D 的缺乏，这会严重损害我们的免疫力。

malaria

n. [U] 疟疾

Most of the drugs used to treat malaria are either derived from plants or are products of natural sources. 大多数用于治疗疟疾的药物要么是从植物中提取的，要么是天然来源的产品。

minuscule

adj. extremely small 极（微）小的

Prevention is a cornerstone for the health care system in the undeveloped countries where health care budget is minuscule as compared with that of the developed countries. 预防是欠发达国家医疗保健系统的基石；与发达国家相比，这些国家的医疗保健预算微不足道。

demography

n. [U]

1 the makeup of a particular human population 人口结构，人口组成

Smallpox, which killed hundreds of millions of people on this planet, reshaped the demography of the globe. 天花夺去了地球上数亿人的生命，重塑了全球的人口结构。

2 the study of human populations and the ways in which they change, for example the study of how many births, marriages and deaths happen in a particular place at a particular time 人口学, 人口统计学

Demography is an important component of epidemiologic research and essential to give an overall picture of the health status of a community. 人口统计学是流行病学研究的重要组成部分, 对于全面了解一个社区的健康状况至关重要。

Proper names

Ebola 埃博拉病毒病 (又称埃博拉出血热, 由埃博拉病毒引起, 是一种十分罕见但往往致命的疾病)

SARS (Severe Acute Respiratory Syndrome) 传染性非典型肺炎, 简称“非典”, 又称严重急性呼吸道综合征

Stoptober 十月戒烟 (由英国公共卫生部倡议的一项年度活动, 旨在鼓励英国人在 10 月份戒烟 28 天)

the Spanish flu 西班牙流感 (发生于 1918 年的流感大流行, 是人类历史上最致命的传染病之一)

Difficult sentences

1 No one would question how catastrophic the impact of diseases can be on society. (Para. 1)

从句 how catastrophic the impact of diseases can be on society 作 question 的宾语, catastrophic 修饰 impact。这句话的意思是: No one would question that the impact of diseases can be astonishingly catastrophic on society. 或 No one would question that diseases can have many catastrophic effects on society.

2 From the simple loss of productivity, due to days off sick, through to the long-term impact on regional tourism, there are many widespread economic consequences of disease. (Para. 1)

from ... through to ... 表示范围, 其中 through 表示“直至, 一直到”, 起强调作用。days off sick 的意思是“(几天) 病假”。

3 Hence, any increase in the usage of doctors, accident and emergency or pharmaceutical purchases, is a direct economic cost to the wider society. (Para. 3)

accident and emergency 是英式英语, 意思是“(医院的) 急诊室”。这是一个不可数名词短语, 缩写为 A & E, 其对应的美式表达为 emergency room。

4 It is important though to distinguish between economic losses as a consequence of illnesses or injuries and those related to diseases. (Para. 4)

句中 it 是形式主语, 指代整个动词不定式短语 to distinguish between economic losses as a consequence of illnesses or injuries and those related to diseases。though 是副词, 作插入语, 意思是“可是, 不过, 然而”。those 代替前面出现的复数名词 economic losses。该句强调了需要将“由疾病导致的经济损失”和“与疾病相关的经济损失”区分开来。

5 It is estimated that to develop a new vaccine costs in the region of \$200 million to \$500 million. (Para. 4)

(somewhere) in the region of 是一个固定表达，可以用在数字前，表示“大约……，在……左右”。比如：

This medical insurance plan only covers some of the cost of treatment, in the region of 70% to 80%, depending on what the treatment is for and who is being treated. 这一医疗保险计划只涵盖部分治疗费用，大约 70%到 80%，具体取决于治疗的目的和治疗对象。

6 At its peak, some countries' tourism sectors collapsed by 50% on the previous year. (Para. 5)

句中 on 表示“和（另一人或物）相比”。on the previous year 的意思是“和前一年相比”。比如：

Pork prices rose by 97 percent year on year in December, 2019, according to the National Bureau of Statistics. 根据国家统计局的数据，2019 年 12 月猪肉价格同比上涨了 97%。

7 Even areas not affected by the disease saw a drop in tourism as people became concerned about the spread of SARS and fearful of flying in general. (Para. 5)

句中 affected 是过去分词作定语，用 not 否定，相当于定语从句 that had not been affected。主句谓语动词为 saw, see 可以表示“遭受，历经；目睹”，其主语可以是时间或地点。比如：

The first two decades of the new millennium saw rapid progress in our knowledge of the genetic background of obesity. 在新千年的头二十年里，我们对肥胖的基因背景的了解取得了快速进展。

8 Commonly known diseases are another factor to take into account when considering the effect and cost of fighting diseases. (Para. 6)

句中 when considering the effect and cost of fighting diseases 是“连接词+分词”结构，相当于从句 when we consider the effect and cost of fighting diseases。类似的结构还有“连接词+形容词”，比如 when necessary 相当于 when it is necessary。

Reference answers

THINKING & EXPLORING

Interpreting the text

- 1 Factors causing economic losses in case of an infectious disease include the development of vaccines, the consequent panic and closure of public services, as well as cancelled or delayed events.
- 2 When SARS broke out in Southeast Asia, millions of jobs were lost, and some countries' tourism sectors collapsed by as high as 50% on the previous year. Even the tourism in areas not affected by the disease saw a drop because of people's concern about the spread of SARS and fear of flying in general.
- 3 Smoking, a well-known risk factor for a large number of commonly known diseases, especially non-infectious ones, is used as a typical example to illustrate the effect and cost of fighting such diseases. As is shown in Para. 6, governments launched various campaigns to help people stop smoking, such as the "Stoptober" event in the UK. Reduction in smoking rates brings about huge economic benefits for both smokers and society as a whole.

- 4 The immediate consequences include that the average life expectancy dropped by about 12 years and as many as 100 million people died. The long-term consequence lies in that it killed a vast proportion of the working population in the world, on whom the elderly and the young are dependent for economic support. Besides, households may have had less income, and government tax revenue would have been reduced.
- 5 Illnesses and diseases not only affect the sufferers and their families but also impact all areas of society, including health care, education, demography, productivity, consumption, morale of the society, etc. Considering such an enormous and severe impact, among all the causes that could weaken an economy, illnesses and diseases are perhaps much larger than any other factors.
- 6 Besides loss of productivity and long-term impact on regional tourism, economic consequences of disease include the financial burden of health care, the cost of developing a new vaccine, the closure of public services, canceled or postponed events, etc.

Thinking critically

Sharing your opinions

- 1 Absolutely! First of all, illnesses cause disabilities and deaths, reducing the labor force and consequently decreasing productivity particularly in deadly pandemics of infectious diseases. In such cases, the impact will not be regional or national but global instead. Secondly, pandemics like SARS and COVID-19 caused devastating economic losses to sectors like tourism worldwide. It is true that borders become meaningless in the face of infectious diseases. The world economy as a whole will definitely be affected.
- 2 The impact on tourism is perhaps the worst because it first involves a good many of sectors, such as transportation, hotels, restaurants, and entertainment. Secondly, a lack of travelling and leisure may put people in low spirits. If prolonged, it will be detrimental to people's overall well-being, resulting in further financial burdens.

Making connections

- 1 The Chinese government has launched health campaigns for the overall well-being of the people and for fighting some particular diseases.

Eye Exercises

To protect vision and prevent myopia or short-sightedness, eye exercises have been implemented in China since 1963. The eye exercises are a kind of massage on the acupoints around the eyes. They have been practiced by the students in primary and middle schools in China for about half a century.

China Prophylactic Vaccination Day

Campaign activities are held on April 25 each year to raise people's awareness of the importance of vaccination for children across China.

National Hypertension Day

In 1998, the Chinese government designated October 8 of each year as the National Hypertension Day. It aims to raise public awareness of hypertension, focusing on its prevention and control with efforts from different sectors of society.

- 2 Infectious diseases travel fast with the great mobility of the population throughout the world, and thus borders are meaningless. Because of the quick spread of such diseases, joint efforts involving all countries are needed to ensure that coordinated measures are taken to prevent their transmission. In this sense, the world is closely connected and indivisible.

Showing inspirations

Take SARS as an example:

SARS (Severe Acute Respiratory Syndrome), an infectious disease that can spread between humans, emerged in late 2002. With great rapidity, the disease became a pandemic, affecting China, Australia, Brazil, Canada, South Africa, Spain, the US, etc. The SARS outbreak reached its peak during the summer of 2003 and ended by July 2003. In total, about 8,000 individuals had been infected, and almost 10% of them died (Keogh-Brown & Smith, 2008).

1) Economic losses incurred by SARS

The economic impact of SARS was not as catastrophic as anticipated at the time of its outbreak. The largest economic impact of SARS was related to GDP and investment, affecting sectors like tourism. It was estimated that China lost 3% of its GDP in the second quarter of 2003 (Keogh-Brown & Smith, 2008) or 1.05% in the whole year (Lee & McKibbin, W. 2012). China's domestic tourism lost approximately 79,291.63 million yuan or USD 3.5 billion (Keogh-Brown & Smith, 2008).

2) Efforts to find cures

The identification of the etiological agent, SARS CoV, within weeks of global spread was followed by a series of research achievements. These included the development of diagnostic assays; the characterization of the clinical, epidemiological and biological features of infection; the identification and initial evaluation of antiviral drugs; the development of animal models of SARS CoV infection; the development and evaluation of candidate vaccines; the identification of receptors for SARS CoV; the development of a reverse genetics system and more (Anderson & Tong, 2010). The exact amount of monetary expenditure on research is not available in literature.

3) Efficacy of therapeutic treatments

A variety of treatment options have been introduced, including antiviral agents, immunosuppressive agents, convalescent plasma, immunoglobulin, noninvasive positive pressure ventilation (NIPPV), and traditional Chinese medicine (TCM). Ribavirin and corticosteroids were predominately used during the SARS outbreak. The former has not been proved effective in a number of studies and the latter showed usefulness in some uncontrolled trials but requires further investigations. The antiretroviral drugs like lopinavir / ritonavir, when combined with ribavirin, were found to have clinical benefits. TCM has not been studied and can be complementary to the conventional treatment strategy (Lai, 2005).

References:

Anderson, L. J., & Tong, S. (2010). Update on SARS research and other possibly zoonotic coronaviruses. *International Journal of Antimicrobial Agents*, 36 Suppl 1, S21–S25.

Keogh-Brown, M. R., & Smith, R. D. (2008). The economic impact of SARS: How does the reality match the predictions? *Health Policy (Amsterdam, Netherlands)*, 88(1), 110–120.

Lai S. T. (2005). Treatment of severe acute respiratory syndrome. *European Journal of Clinical Microbiology & Infectious Diseases*, 24(9), 583–591.

Lee, J., & McKibbin, W. (2012). The impact of SARS. In Garnaut R. & Song L. (Eds.), *China: New Engine of World Growth* (pp. 19-33). ANU Press. Retrieved April 13, 2021, from <http://www.jstor.org/stable/j.ctt24h9qh.10>

World Health Organization. Treatment. Severe Acute Respiratory Syndrome (SARS). Retrieved April 13, 2021, from https://www.who.int/health-topics/severe-acute-respiratory-syndrome#tab=tab_3

Getting the skill

1

- 1 classifying (two categories)
- 2 defining (the explanation of “an infectious disease”)
- 3 exemplifying (SARS as an example of infectious diseases with detrimental consequences)
- 4 exemplifying (one such campaign)
- 5 speculating (the use of the word “perhaps”)

2

Sentence 1: reporting (reporting on the results of the studies)

Sentence 2: exemplifying (giving an example of the results)

Sentence 3: exemplifying (“an angry manager” as a specific example)

Sentence 4: stating (making an assertion)

Sentences 5-7: exemplifying (giving examples to support the previous assertion)

Sentence 8: speculating (the use of “will”)

Ucampus online course

READING & UNDERSTANDING

Understanding the text

Comprehension 1

Match the main ideas (A-F) to the paragraphs (2-7).

- | | |
|-------------|--|
| Para. 2 (C) | A. the effect on medical services |
| Para. 3 (A) | B. the impact of non-infectious diseases |
| Para. 4 (F) | C. the effect of time off work |
| Para. 5 (D) | D. how the travel industry can be affected |
| Para. 6 (B) | E. the loss of many lives |
| Para. 7 (E) | F. the impact of infectious diseases |

Comprehension 2

Decide whether the following statements are true, false or not given.

- Regional tourism is usually hit hardest by diseases.
A. True B. False C. Not given
- Infectious diseases cause more severe economic losses than non-infectious diseases.
A. True B. False C. Not given
- Illnesses and diseases may play a bigger role in weakening the economy than other factors.
A. True B. False C. Not given
- Malaria had a worse impact on tourism than SARS.
A. True B. False C. Not given
- The “Stoptober” event was aimed at reducing people’s expenditure on smoking.
A. True B. False C. Not given
- The Spanish flu reduced the world’s population by as high as 20%.
A. True B. False C. Not given

Language focus

Words in use

Complete the sentences with the words below. Change the form if necessary.

catastrophic	closure	demography	detrimental
diminish	pharmaceutical	predominantly	vaccine

- In past decades, the field of cardio-oncology (肿瘤心脏病学) has predominantly focused on prevention and treatment of cardiovascular disease in cancer survivors.

- 2 Among the many types of catastrophic medical mistakes that occur, surgical errors can be the most dreadful.
- 3 Several models have been proposed to explain the changing demography of chronic diseases of affluence, such as cardiovascular disease.
- 4 The gel (凝胶) quickly coats the point of bleeding, resulting in the physical closure of the broken blood vessel.
- 5 It normally takes years to design a manufacturing process and develop a new vaccine or drug.
- 6 Chronic, prolonged (持久的) stress can be detrimental to our overall health if left untreated.
- 7 Governments should make laws to guarantee the manufacturing and delivery of urgently needed pharmaceutical products used to treat emerging threats.
- 8 Most consumers prefer eating cooked nuts as opposed to raw although cooking diminishes their health benefits.

Translation

Translate the following sentences into Chinese. Pay attention to the words in bold.

- 1 Carrying excess weight has an adverse **consequence** for one's health and increases the risk of health problems.
超重会给一个人的健康造成不良后果，并增加健康问题的风险。
- 2 The main objectives of this reform were to reduce health **expenditure** for patients, and improve the quality of hospital services.
这次改革的主要目标是减少病人的医疗开支，提高医院的服务质量。
- 3 It is **estimated** that by 2050, there will be nearly 13.8 million Americans age 65 and older that will suffer from Alzheimer's (阿尔茨海默病).
据估计，到 2050 年，将有近 1380 万 65 岁及以上美国人患阿尔茨海默病。
- 4 The government funded a new media **campaign** to raise people's awareness and concern about autism (自闭症).
政府资助了一项新的媒体宣传活动，以提高人们对自闭症的认识和关注。

Critical thinking

Teaching suggestions

- 1 Check if Ss have watched the mini-lecture of **Critical thinking (Evaluating evidence)** by asking them such questions as what the evidence-based medicine means, what the three most common types of evidence include, and what the three criteria for evaluating evidence are. Emphasize the importance of evaluating evidence in academic texts.
- 2 Ask Ss to do the tasks on Page 69.
- 3 If time permits, ask Ss to do the **Extension activity**.

Extension activity

Ask Ss to make a list of evidence for the following proposition in pairs or in small groups. In five minutes or so, invite one pair / group to share their evidence list, and ask the class to distinguish the relevant evidence from the irrelevant.

“Telemedicine is preferable to visits to the doctor’s office.”

Reference answers

Relevant evidence may include:

- The findings of several studies show that telemedicine saves the trouble of transportation.
- Telemedicine reduces cross infection.
- Telemedicine provides more possibilities for the patients that cannot be moved from one place to another.
- Telemedicine offers convenience for interdisciplinary consultation.

Irrelevant evidence may include:

- Telemedicine is attracting more and more attention.
- More and more hospitals offer telemedicine services.
- IT technology contributes to the development of telemedicine.
- Telemedicine is the future of clinical practice.

Reference answers

Getting the skill

1

- 1 The support is loose. Arguably, the lost working days could affect profitability, but we do not know how relevant it is in comparison to other factors. Also, it is likely that most companies would factor in this amount of sick leave when determining someone's rate of pay.
- 2 It is limited because it is only European and only a small sample of major companies. Smaller European companies and other companies from the rest of the world have been excluded.

2

The third one is the correct answer.

- 1 This is not significant enough. There are many other factors involved here. For example, these could in general be richer countries with longer life expectancy.
- 2 Not relevant. The question focuses on countries, not companies.
- 3 Relevant. Although it is only about one country, it would be a good example to support the essay question.

Academic writing

Teaching suggestions

- 1 Assign Ss to preview **Language for writing** online at the end of Periods 3-4.
- 2 Ask Ss to read through the information in the **orientation** to find out what they will be learning in this section in order to finish their writing task.
- 3 Analyze the student model essay (Educating children about disease prevention) in terms of developing ideas, using different words and expressions for showing cause and effect, using *unless* and *provided* to talk about conditions, and defining terms.
- 4 Ask Ss to do the tasks in **Model analysis**, **Language for writing** and **Writing skill**, and ask Ss to share their answers in class.
- 5 Assign Ss to finish the **Writing task** on Ucampus and conduct online self-evaluation. Give feedback on this writing assignment in the next class or on Ucampus. 写作互评作业

Reference answers

WRITING MODEL

Essay prompt

“How important is it to teach children about how diseases are transmitted?”

Model analysis

1

- 1 B
- 2 A
- 3 D
- 4 C

2

- 1 Yes, educating children about things such as handwashing is effective. In fighting against the pandemic of COVID-19, Chinese children are educated to wash hands and it has been proved that handwashing is a very effective way.
- 2 Yes, I think so. For example, the Chinese government has spent a lot of money educating people about how to protect themselves from COVID-19. And it is very successful and worthwhile.
- 3 Governments, private companies or individuals.

WRITING SKILL

Getting the skill

1

- 1 Flu [word being defined] is a contagious illness [category] transmitted between individuals [characteristics].
- 2 Quarantine [word being defined] is a period of time [category] when a person or animal is kept apart from others in case they are carrying a disease [characteristics].
- 3 A campaign [word being defined] is a series of organized events [category] for raising awareness of and protesting against an issue [characteristics].

2

- 1 Typhoid is an infectious disease transmitted by consuming contaminated food and water.
- 2 Bacteria are small living organisms that are made up of one tiny cell.
- 3 The immune system is a complex system within the body that protects you from contracting diseases.

3

- 1 Medicine is a substance that you take to treat an illness.
- 2 Non-infectious disease is a disease that cannot spread from one person to another.
- 3 Evidence is facts or physical signs that help to prove something.
- 4 A researcher is someone who does research collecting facts and ideas, investigating issues to solve problems or discover more knowledge.

Ucampus online course

LANGUAGE FOR WRITING

Vocabulary development

Vocabulary for showing cause and effect

Vocabulary for showing cause and effect

We use a number of different words and expressions to show cause and effect. Some words and expressions place the cause first and the effect second, and others place the effect first and the cause second. For example,

cause

effect

Unclean water can **result in** an increase in diseases.

effect

cause

Diseases such as typhoid can be **caused by** drinking unclean water.

In the student model essay, the writer uses “lead to” to show the effect, and “as a result of” to show the cause.

Here are more words and expressions for showing cause and effect:

- cause: *because (of), the reason, the cause, due to, result from*
- effect: *therefore, consequently, thus*

1 Identify the cause and the effect in each of these sentences.

- 1 Many days can be taken off sick. As a result, companies may suffer losses.
Cause: Many days can be taken off sick.
Effect: Companies may suffer losses.
- 2 In the worst cases, a lower birth rate can result from a sharp rise in an infectious disease.
Cause: a sharp rise in an infectious disease
Effect: a lower birth rate
- 3 Lifestyle choices can result in an increase in many diseases.
Cause: lifestyle choices
Effect: an increase in many diseases
- 4 The world's population fell by 5% because of the 1918 flu.
Cause: the 1918 flu
Effect: The world's population fell by 5%.
- 5 People often fear an outbreak of a new disease. Therefore, governments need to keep the public informed.
Cause: People often fear an outbreak of a new disease.
Effect: Governments need to keep the public informed.

- 6 A sharp increase in the levels of any disease can place pressure on the medical profession. Consequently, many governments have emergency plans to help deal with this.

Cause: A sharp increase in the levels of any disease can place pressure on the medical profession.

Effect: Many governments have emergency plans to help deal with this.

2 Complete the sentences with the words or phrases below.

as a result	because of	consequently
resulted from	resulted in	therefore

- 1 The disease outbreak resulted in a fall in tourism.
- 2 Diseases can have significant economic impacts. Consequently / Therefore / As a result, countries need to fund research into diseases.
- 3 More days being taken off work resulted from increased levels of depression and stress.
- 4 Governments have a responsibility for the welfare of their residents. Therefore / As a result / Consequently, they should develop vaccines that fight dangerous diseases.
- 5 Because of lost working days, the government's income from taxes fell.
- 6 The government reduced funding for disease research. As a result / Consequently / Therefore, fewer cures are being discovered.

Grammar

Unless and provided

Unless and provided

Sometimes we need to impose specific conditions or set limits on a situation. In these cases, we can use **unless** and **provided** to lead conditional clauses.

Unless means "except if" or "only if."

Provided means "if" or "on condition that."

In the student model essay, the writer uses **unless** and **provided** to talk about conditions.

Unless children do this before eating, they have a significantly increased chance of being infected.

Many diseases, **unless** prevented by a vaccine, can potentially lead to a loss of life.

Provided these techniques are taught at a young age, the spread of these diseases could be significantly reduced.

Provided good hygiene is established at a young age, it can be effective in reducing the outbreak of a disease.

1 Choose the correct word to complete each sentence.

- 1 _____ the media react in a calm way, people tend not to panic.
A. Provided B. Unless
- 2 _____ people are educated about the importance of vaccination, they may not accept it.
A. Provided B. Unless
- 3 _____ people wash their hands, the spread of diseases can be reduced.
A. Provided B. Unless
- 4 _____ more funding is made available, a cure is unlikely to be found.
A. Provided B. Unless
- 5 _____ all children have the vaccine, the risk of an outbreak is very low.
A. Provided B. Unless
- 6 _____ infected people follow the advice to stay at home, the outbreak should be controlled.
A. Provided B. Unless

2 Rewrite the sentences with the same meaning. Use *unless* or *provided* in your sentences.

- 1 If there are enough doctors and medicines, everyone can receive good treatment.
Provided (that) there are enough doctors and medicines, everyone can receive good treatment.
- 2 Governments must act soon or there might be a pandemic.
Unless governments act soon, there might be a pandemic.
- 3 It is a holiday today. Doctors will only see people for an emergency.
It is a holiday today. Unless it's an emergency, doctors won't see people.
- 4 You may keep the book a further week if no one else requires it.
You may keep the book a further week provided (that) no one else requires it.

WRITING TASK

Sample essay

Disease is one of the major reasons for deaths and economic losses worldwide. All national governments have to try to tackle this issue. One of the main ways most governments can do this is by funding research.

Funding research can help both prevent and treat disease. Through research, people can find out the reasons for the transmission of disease and therefore help prevent it. When researchers found proof that polluted water supplies resulted in cholera, for instance, effective water treatment systems were introduced, and the number of infected people fell dramatically. Similarly, researchers have developed vaccines against diseases such as polio, which used to be widespread but has been virtually eradicated in some countries. Unless such research continues, diseases such as HIV and cancer may never be prevented. Equally, research can help develop treatments for those who have already contracted these diseases, preventing suffering and even death.

There are many risks of not funding research. Lives may be lost because of disease, and the economy may also suffer as a result of the sick leave people take, and the cost to the health care system. Ultimately, it is a moral duty of governments to protect citizens, and to prevent the costs that disease brings. Provided they can afford it, it is essential that all governments fund research into disease. However, such research is expensive, and not all the countries are able to afford to fund it themselves. Consequently, the wealthier nations have the responsibility to fund research and share the benefits with countries which cannot afford it.

Reading 1

抗击霍乱

1 霍乱是一种通过饮用被细菌污染的水而传播的疾病。它引起腹泻，从而导致严重脱水。根据世界卫生组织的数据，目前大约有 300 万到 500 万人感染了霍乱。如今，只要饮用含盐的水，就可以成功治疗该疾病。受益于这种廉价而有效的治疗方法，大多数人得以存活。但是，每年死于霍乱的人数仍超过 10 万。

2 世界各地暴发过许多次霍乱，夺走了数百万人的生命。在第一次工业革命期间，这种疾病的杀伤力更大。该疾病借由买卖货物的人在主要城镇之间传播，一旦传播至一个新的地区，就会有許多人很快被感染，这造成了许多次疾病大流行。疾病大流行是指一种疾病的大暴发，它会迅速导致大批人受到影响。随着越来越多的人涌入城市，许多地方的基础设施开发速度滞后。下水道的建造速度不够快，无法将人的排泄物及时带走，因此，许多主要河流和其他水源都遭到了污染。

3 在早期，大多数人认为霍乱是通过被污染的空气传播的。这种解释被称为瘴气理论，重工业带来的肉眼可见的后果自然使人们怀疑糟糕的空气是造成大流行病的原因。传染病传播的真正原因——细菌理论——在那时尚不为人所知。细菌学说是路易斯·巴斯德提出的，这一理论认为，太小而无法用肉眼看到的微小有机体会在人体、植物和动物身上生长和繁殖。但是，有一位当地医生约翰·斯诺并不相信瘴气理论是霍乱传播的原因。

4 斯诺认为，如果霍乱是一种通过空气传播的疾病，那么它将影响人的肺部。但是，它对人的呼吸没有影响。相反，它攻击人的肠胃，导致严重腹泻。在当时的伦敦，居民家中没有供水系统。他们从泰晤士河取水饮用，而泰晤士河也是污水排入的地方。从本质上来说，人们是在饮用自己排出的污水。斯诺提出霍乱实际上是一种通过水而不是空气传播的疾病。起初，他的理论不太可能被人接受，除非他能收集到证据。

5 斯诺挨家挨户摸排了主要疫情的暴发地，并在地图上将其标出。在这一过程中，他接触到了一个叫弗朗西斯·路易斯的小孩。约翰发现小孩的母亲在附近的污水池中洗了弗朗西斯的脏衣服，而这是一个用来储存人的排泄物的池子。这个污水池已经泄漏到当地主要的淡水供应系统，造成了污染，这一情况当时不为人所知，然而这一泄漏是伦敦宽街地区暴发霍乱的原因。与此同时，当地一家拥有 500 名员工的济贫院没有受到影响。那里的工人中只有五人死亡。斯诺认为这是因为该济贫院有自己的淡水泵，而它没有被污染。有了这个发现，再加上一些其他的证据，斯诺成功说服了当地政府关闭宽街的水泵，可以说这阻止了疫情的蔓延。

6 尽管斯诺有了重要的证据来支持自己的理论，但它仍未被广泛接受。包括医生在内的许多人仍然相信泰晤士河中的水足够干净，可以饮用。1858 年，约翰·斯诺去世。那年夏末，炎热的天气使泰晤士河臭气熏天，以至于政客们差点被迫离开议会大厦。结果，为了使人们能够获得干净的水，伦敦地下建造了一个庞大的下水道系统。但是，将近十年后，在最后一个接入下水道系统的区域又暴发了一次霍乱。研究人员亨利·怀特海德与约翰·斯诺共事过，他借助这次的证据以及他们之前所收集的例子，再次提出了他们的理论。

最终，该理论被接受了。约翰·斯诺对亨利·怀特海德说的话应验了：“你和我可能活不到那一天，我的名

字可能会被遗忘，但霍乱的大规模暴发将成为过去，这一天将会到来。正是因为人们了解了霍乱的传播方式，才不会再有霍乱暴发。”

Reading 2

疾病对经济的影响

1 没有人会质疑疾病对社会的灾难性影响。生命的损失显然是最大的影响，但是，人们较少谈及疾病可能对社会造成的经济影响。事实上，疾病不仅会对一国国内经济产生重大影响，甚至可能影响世界经济。从单纯由于病假导致的生产力损失，一直到对区域旅游业的长期影响，疾病会产生诸多广泛的经济后果。

2 简单来讲，疾病会减少生产天数，从而导致一个国家的经济产出减少。要确切地说出哪些疾病对经济的影响最大几乎是不可能的。但是，由于健康相关的问题，每年有数百万个工作日被损失掉。从精神压力到肌肉损伤和严重的长期疾病，一个国家可能因此损失数十亿美元的收入。

3 当然，工作日的损失只是经济影响的一个方面。此外，还有对卫生服务方面的经济影响。除非所有医疗保健都是私人的，否则这些开销最终都将由人们向政府缴纳的税款来承担。因此，看病就医、急诊室抢救或药品购买方面的任何增量对整个社会来说都是直接的经济成本。尽管并不确定这是否会导致税收增加，但它可能导致在其他领域（如教育、交通或社会支持）的支出减少。

4 但重要的是要把由疾病或伤痛造成的经济损失和与疾病相关的损失区别开来。疾病主要可以分为两类：传染性疾病和非传染性疾病。传染病是可以从一个人传染给另一个人的疾病。我们可以想到，当诸如埃博拉病毒病、非典和各种类型的流感等传染性疾病出现时，它们最初并不为人所知，在社会上可能会引起极大恐慌。此外，为新疾病开发新疫苗需要相当大的成本。据估计，开发一种新疫苗的成本在 2 亿到 5 亿美元。还有，除非管理得当，否则还可能造成恐慌，并导致学校等公共服务部门的关闭。其他需要警察或医务人员在场的活动，如体育赛事或公共庆祝活动，可能不得不取消或推迟，而所有这些都有经济成本。

5 此外，当某个地区暴发传染病时，可能会对当地的旅游业造成不利影响。非典（一种与呼吸有关的疾病）在东南亚暴发时，估计造成了数百万工作岗位的消失。在疫情最严重时，一些国家的旅游业比前一年暴跌了 50%。甚至在未受疫情影响的地区，旅游业也受到影响，因为人们普遍担心非典的传播，害怕乘飞机出行。然而，只有 8000 人左右感染了非典，死亡人数不超过 800。当你考虑到每年有超过 40 万人死于疟疾时，感染非典的人数就是小巫见大巫了。但是，由于人们的恐惧造成的经济影响估计达到了数百万美元。

6 在考虑防治疾病的效果和成本时，要考虑的另一个因素是常见病，尤其是非传染性疾病。在世界范围内，各国政府已经采取了各种措施来降低吸烟率。从公共禁令到媒体宣传，各国政府试图消除吸烟带来的经济负担。英国的“十月戒烟”事件就是这样的一个宣传活动。这项媒体宣传活动鼓励吸烟者在 10 月努力戒烟。据估计，该月试图戒烟的人数增加了 35 万。这会带给一个国家巨大的经济利益。早亡、医疗和工作日损失

则会造成数十亿美元的经济损失。

7 最糟糕的情况是，疾病会对整个人口结构产生重大影响。有些疾病使个别国家的人口减少了 20% 之多。1918 年的流感，有时也称为西班牙流感，导致全世界人口下降了 5%，平均预期寿命缩短了约 12 年，多达 1 亿人死亡。流感对老年人和年轻人的影响通常要比对健康成年人大得多，但这次流感对健康人群的伤害也很大。结果，世界失去了很大一部分劳动人口。老年人和年轻人在很大程度上依赖于这一群体的经济支持。家庭收入可能会减少，政府税收也会减少。像这样的疾病会对整个社会的方方面面产生直接和长期的经济影响。

8 当我们讨论疾病时，其对健康的影响和造成的惨痛的生命损失很显然是最重要的因素，但其经济后果也不容忽视。从医疗保健到教育，再到整个社会人口结构，疾病对社会各个领域都构成了压力。疾病也许是造成全球经济疲软的最大原因之一。