

問題 I . 米国の慢性疾患事情に関する次の英文を読み、後の設問に本文に即して日本語で答えなさい。なお、「\*」のついた単語については本文の後に語注がついているので参考にしなさい。

Chronic disease is the nation's greatest health care problem. In 2004 it was estimated that there were 133 million individuals living with at least one chronic disease, and it is projected that 50% of the population, roughly 157 million, will have at least one chronic condition by 2020. Perhaps more sobering, however, is data from the 2001 Medical Expenditure Panel Survey which indicates that currently 83 % of the nation's medical care costs are associated with treating individuals with chronic conditions.

As we examine the range of chronic conditions, one is struck by the wide diversity of services needed to care for such individuals. For example, consider clients with \*Alzheimer's disease, \*cerebral palsy, heart disease, \*AIDS, \*spinal cord injury, or \*multiple sclerosis; each of these clients has unique physical needs, and each would need different types of services from a health care system that is currently attuned to delivering acute care.

① The first Baby Boomer will turn 65 in 2011, and this anticipated event has brought increased attention to the capabilities of the health care system. This generation, in particular, has been vocal about the inability of the health care system to meet current societal needs, let alone future needs. Additionally, this new group of seniors will be the most ethnically and racially diverse of any previous generation. How will the current system or a future system cope with these diverse seniors and their accompanying chronic conditions?

Multiple factors have produced the increasing number of individuals with chronic disease. Developments in the fields of public health, \*bacteriology, \*immunology, and \*pharmacology have led to a significant drop in \*mortality from acute disease. Medical success has contributed, in part, to the unprecedented growth of chronic illness by extending life expectancy and by earlier detection of disease in general. Living longer, however, leads to greater \*vulnerability of people having accidents and disease events that can become chronic in nature. The client who may have died from a \*myocardial infarction in earlier years now needs continuing health care for \*heart failure. The \*cancer survivor has health care needs for the \*iatrogenic result of life-saving treatment. The adolescent who is a \*quadriplegic due to an accident may live a relatively long life with our current rehabilitation efforts but needs continuous preventive and maintenance care from the health care system. The child with \*cystic fibrosis has benefited from a lung transplant, but needs continuous care for the rest of their life. Thus, many previously fatal injuries, diseases, and conditions have become chronic in nature.

The current health care system was largely designed and shaped in the two decades following World War II. It was a system designed to provide acute, episodic and \*curative care, and was

never intended to address the needs of individuals with chronic conditions. Generally, the system does provide acute care effectively and efficiently. However, it is based on a component style of care in which each component of the style is \*reimbursed separately, i.e., hospital visit, home care, physician visit. Each component of the health care system views the client from its narrow window of care. No one entity, practice, or agency is managing the entire disease, and certainly not managing the illness experience of the client and family. No one is responsible for the overall care of the individual, just their own independent component, and with that approach higher costs may occur. As Zitter states "optimizing any component of care separately from other components often generates higher systemwide costs".

## ②Disease Versus Illness

It is important to distinguish between a *disease* and an *illness*, although the terms are often used interchangeably by health care professionals. *Disease* refers to a condition that the \*practitioner views from a \*pathophysiological model, such as an alteration in structure and function. *Illness*, on the other hand, is the human experience of \*symptoms and suffering, and refers to how the disease is perceived, lived with, and responded to by individuals and their families. Although it is important to recognize the pathology of a chronic disease, understanding the illness experience is essential when caring for individuals long term.

## Acute Versus Chronic Disorders

When an individual develops an acute disease, there is typically a sudden onset, with signs and symptoms related to the disease process itself. Acute diseases end in a relatively short time, either with recovery and \*resumption of prior activities, or with death.

Chronic illness, on the other hand, continues indefinitely. Although a welcome alternative to death, the illness may be seen as a mixed blessing to the individual and to society at large. In addition, the illness often becomes the person's identity. For example, an individual having any kind of cancer, even in \*remission, acquires the label of "that person with cancer"

出典：Chronic illness、Lubkin IM, Larsen PD 著、2006 年第 6 版の序文（一部省略）

注)

Alzheimer's disease アルツハイマー病

cerebral palsy 脳性麻痺

AIDS 後天性免疫不全症候群

spinal cord 脊髄

multiple sclerosis 多発性硬化症

bacteriology 細菌学  
immunology 免疫学  
pharmacology 薬理学  
mortality 死亡  
vulnerability 損傷を受けやすい性質  
myocardial infarction 心筋梗塞  
heart failure 心不全  
cancer 癌  
iatrogenic 医療によって起こる  
quadriplegic 四肢麻痺  
cystic fibrosis 嚢胞性線維症  
curative 病気を治す  
reimburse 返済する  
practitioner 開業医  
pathophysiological 病理生理学な  
symptom 自覚症状  
resumption 復帰  
remission 寛解

[設問 1] 下線①を全訳しなさい。

[設問 2] 近年慢性疾患が健康管理上最も重要な課題になっている主要な理由を3つ、各々20字以内で述べなさい。

[設問 3] 近年、慢性病が増加している主要な理由を3つ、各々15字以内で述べなさい。

[設問 4] 慢性疾患に対する現在の健康管理システムの問題点を、句読点を含んで60字以内で述べなさい。

[設問 5] 下線②の Disease と Illness の意味を両者の違いが判るように、句読点を含んで60字以内で述べなさい。なお、解答には Disease, Illness は和訳せずに、Disease は D, Illness は I と記述しなさい。



問題Ⅱ. 次の英文を読み、後の設問に日本語で答えなさい。なお、「\*」印のついた単語については本文の後に語注がついているので参考にしなさい。

Scientists have once again found that people with higher levels of bisphenol A (BPA) in their \*urine are more likely to have heart disease than those with lower urinary BPA levels.

(1) Used to make some plastic drinks bottles and the inner coatings of food cans, BPA can mimic the effects of \*oestrogen and has been associated with a number of conditions in animal studies. (①) low \*sperm count, \*prostate cancer and \*fetal developmental problems. In 2008, researchers first linked BPA to \*diabetes and heart disease in humans, but industry lobby groups such as the American Chemistry Council in Arlington, Virginia, have vigorously disputed those findings.

Now, the same researchers are back with a second report in *\*PLoS ONE*, which uses an independent data set to come up (②) broadly similar, if weaker, results. "It's only the second data set from a big population to be released," says lead author David Melzer of the Peninsula Medical School at the University of Exeter, UK. (A)"It shows that our first paper wasn't a statistical \*blip."

Melzer and his co-authors analysed data from the 2005–06 US National Health and Nutrition Examination Survey of 1,493 adults, who provided urine samples and completed questionnaires about their health. Higher concentrations of BPA in the subjects' urine were associated with \*cardiovascular disease, but not with diabetes or high levels of liver \*enzymes, which indicate liver damage. However, BPA concentrations were 30% lower in this survey than in the 2003–04 survey used in the team's previous study, although when the two samples were pooled, diabetes and liver-enzyme associations remained statistically significant. Based (③) the data, a 60-year-old man with the lowest levels of BPA in the survey had about a 7.2% chance of developing cardiovascular disease whereas a similar subject with levels three times higher faced about a 10.2% risk.

The results add to a limited number of human studies on the effects of BPA, but are unlikely to bring together the two sides of the highly charged debate on the chemical's safety. \*Toxicologist Frederick vom Saal of the University of Missouri in Columbia, a long-time critic of the regulations governing the use of BPA, says that identifying such an association from \*epidemiological data is alarming. "The important issue is there have got to be 100 plus factors involved in any one of these diseases, and you are looking at one chemical, one time in a spot urine collection, and it's popping up as a significant variable," he says, "That's impressive because that's something you can do something about."

But Steven Hentges of the American Chemical Council says that the fact that some of the team's original results were not independently supported (④) more questions than it answers. "The weight of scientific evidence continues to support the view that BPA is not a health concern," he says. "If you think that this study raises a hypothesis – fair enough – but (2) the fact that they have not been able to replicate most of what they reported before is very telling."

Indeed, other scientists agree that what is still missing from the research is a demonstration of the mechanism of action. "Association studies show something really is going on, but getting to a definite mechanism of cause and effect is what we can add with animal studies," says Scott Belcher of the University of Cincinnati in Ohio, who has begun a series of studies on mice and rats funded by the National Institute of Environmental Health Sciences in Research Triangle Park, North Carolina.

Scientists have long known that oestrogen has the potential to affect heart function through the oestrogen beta \*receptor, and Belcher is looking at how BPA affects calcium levels, which control heart \*contractions. His early results show that BPA, like oestrogen, causes an irregular heartbeat in female rats, which could increase the risk of a heart attack. Belcher is planning further studies in \*rodents to look directly at the risks of heart attack, obesity and changes in the cardiovascular system.

(B) The policy on BPA in the United States seems to be caught in a loop. The \*Food and Drug Administration has delayed a promised 'update' on its position that the chemical is safe. "We'll be making an announcement soon," says agency spokeswoman Meghan Scott, (⑤) she was unable to be more specific about the timing of the announcement.

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注)

urine 尿

oestrogen エストロゲン (ホルモンの一種)

sperm 精子

prostate 前立腺

fetal 胎児の

diabetes 糖尿病

*PLoS ONE* 科学雑誌の1つ

blip ささいなこと

cardiovascular 心血管系の

enzyme 酵素

Toxicologist 毒物学者  
epidemiological 疫学的な  
receptor 受容体  
contraction 収縮  
rodent 齧歯動物  
Food and Drug Administration 《米》食品医薬品局 (FDA)

[設問 1]

下線(1) (2)を日本語に訳しなさい。

[設問 2]

①、②、③、④、⑤に入る最も適切な語を イ～ホのうちから1つ選びなさい。

①

イ. including      ロ. included      ハ. being included  
ニ. having been included      ホ. include

②

イ. for      ロ. to      ハ. in      ニ. with      ホ. within

③

イ. to      ロ. as      ハ. on      ニ. by      ホ. in

④

イ. makes      ロ. takes      ハ. provides  
ニ. raises      ホ. turns

⑤

イ. so that      ロ. although      ハ. because  
ニ. even if      ホ. as long as

[設問 3]

下線部 (A) は具体的にどういう意味か、句読点を含んで80字以内で説明しなさい。

[設問 4]

下線部 (B) は具体的にどういうことか、本文に即して句読点を含んで80字以内で説明しなさい。