

Less Unnecessary Medical Care For Better Health

Key Facts

- ※ More medical tests and treatment do not necessarily contribute to better health. In some cases, it has been proven that harms outweigh benefits.
- ※ ‘False-positive’ or inconclusive results from routine medical checkups may trigger anxiety and lead to more follow-up medical tests, invasive investigations or treatment.
- ※ Inappropriate use of screening tests can give rise to over-diagnosis and over-treatment.
- ※ Inappropriate use of antibiotics is a contributing factor to the development of antibiotic resistance.

Avoid Unnecessary Medical Tests and Treatment by Being Aware and Informed

- ※ Healthy people should appraise the need with their family doctor prior to having general medical checkups.
- ※ For cancer screening test, assess the need and obtain full information from family doctor on potential risks and benefits of receiving the test.
- ※ Periodically ask family doctor or pharmacist to review all prescribed and over-the-counter medications to discontinue unnecessary medications.
- ※ Take all antibiotics as prescribed, in the right dose, right interval and right duration.
- ※ Effective communication with family doctor is the key to optimise medical care. Do not be afraid to ask questions (e.g. reasons for the medical test ordered), express any concerns (e.g. possible side-effects of the medication prescribed), and explore alternative remedies (e.g. lifestyle modifications).

Less Unnecessary Medical Care For Better Health

Quaternary prevention is defined as action taken to identify patient at risk of over-medicalisation, to protect him/her from new medical invasion, and to suggest him/her interventions, which are ethically acceptable.¹ Nowadays, the number of available medical tests and treatment is large and growing. However, it does not mean that people need them. Over-medicalisation does not necessarily contribute to better health. On the contrary, almost all tests, imaging procedures, medications, surgeries and preventive interventions have risk of adverse effects. In some cases, it has been proven that harms outweigh benefits.²

More Screening is NOT Necessarily Better

Screening is a means of detecting disease early before symptoms onset. For people who are known to be at higher risk of certain cancers (such as those with a strong family or personal history of cervical cancer and colorectal cancer), screening could be beneficial because it can help doctors detect and treat those types of cancer early. In other situations, screening tests may be unnecessary for people who have no or low risk of developing certain cancers. Besides, all screening tests have their own limitations and they are not 100% accurate. There are false positive results causing unnecessary anxiety and potentially risky investigations, and false negative results giving false reassurance to patients and leading to delay in seeking treatment. Inappropriate use of screening tests can give rise to over-diagnosis and over-treatment of suspected cancers.³ For example, a woman with abnormal mammography result may not have breast cancer (false positive result). She will be subjected to unnecessary anxiety, further investigations and treatment which may be harmful. Overseas studies found that for women who have mammography screening every year regularly for 10 years, 200 out of 2000 women will be falsely alarmed, and 10 out of 2000 women will be treated unnecessarily.⁴

Another example is scheduled yearly medical checkups which often routinely include blood and urine tests, electrocardiograms (ECG) and imaging tests (such as chest X-ray examination) by healthy individuals. It is noteworthy that many of these commonly ordered “just to be sure” or “just to know” tests probably would not help people avoid hospital stays, stay well or live longer.⁵ More importantly, unnecessary medical checkups can expose people to unwarranted risks (such as unnecessary radiation exposure). Any false positive or inconclusive results from a simple blood or urine test may trigger anxiety and lead to more follow-up medical tests, invasive investigations or treatment which can eventually cause more harms than benefits.^{2,3}

More Treatment is NOT Necessarily Better

Similarly, more treatment does not mean better health. For example, most upper respiratory tract infections are viral in origin and do not require the use of antibiotics. Yet in some countries such as Southern and Eastern Europe, and some parts of China, many people still mistakenly believe that antibiotics can cure or shorten the duration of upper respiratory tract infection, and incorrectly self-medicate themselves or their children with antibiotics.^{6,7} Apart from the potential adverse outcomes related to the use of antibiotics, such as nausea, vomiting, constipation or diarrhoea and allergic reactions including skin rash, itchiness or breathlessness, inappropriate use of antibiotics is widely recognised as a contributing factor to antibiotic resistance, including the creation of multidrug-resistant bacteria (the ‘super-bugs’). As the World Health Organization warns, we are heading towards a ‘post-antibiotics era’ in which common illnesses like pneumonia that have been treatable for decades will once again become fearful killers.⁸

Polypharmacy (i.e. the use of multiple medications and/or administration of more medications than clinically indicated) is common among the elderly who commonly have multiple chronic illnesses.⁹ Observational studies of polypharmacy in elderly found that substantial proportion of hospitalised elderly patients (44%) and community-dwelling elders (58.6%) took one or more unnecessary medications, including vitamins, therapeutic nutrients or minerals, drug classes for gastro-intestinal and central nervous systems.^{10,11} Negative consequences associated with poly-pharmacy include an increased risk of adverse drug reactions, drug-interactions, medication non-adherence and geriatric syndromes (including cognitive impairments, functional decline, falls and urinary incontinence).^{9,12,13} Of note, doctor shopping behaviour and over-the-counter medications could lead to polypharmacy and adverse drug-interactions.

Notably, non-pharmacological treatments may be helpful for some illnesses and common symptoms. For example, sleeping pills are usually not required at the first stage for treating insomnia. There are other effective ways to improve sleep, including exercise, no smoking, avoiding alcohol and food or beverages containing caffeine, and shaping a sleep conducive environment.¹⁴

How Serious is the Problem

United States

In the United States (U.S.), a study in 2009 estimated that \$6.8 billion U.S. dollars were spent on 12 unnecessary tests and treatments in primary care each year. They included routine complete blood cell count, routine blood chemical tests, routine urinalysis, annual electrocardiography, imaging (including computed tomography, magnetic resonance imaging or radiography) for back pain, bone density scan for younger men, bone density scan for younger women, head injury imaging in children, Pap tests for females younger than 21 years old, using expensive brand-name (instead of generic) statins on initiating lipid-lowering therapy,

antibiotics prescribed for children with pharyngitis, and cough/cold medications prescribed for children who presented with upper respiratory tract infections.¹⁵ Likewise, another study estimated between \$158 billion and \$226 billion U.S. dollars might be wasted on overtreatment in 2011. Examples of overtreatment included excessive use of antibiotics and use of surgery when watchful waiting is better.¹⁶

Hong Kong

In Hong Kong, a survey conducted by the Census and Statistics Department during February to May 2008 found that some 957 600 persons aged 15 and over had medical checkups regularly (constituting 16.7% of the total population aged 15 and over other than foreign domestic helpers). Among them, 68.2% had medical checkups taken once every 7 to 12 months. Of over 1.2 million medical checkups taken (based on the last and up to the last three medical checkups) by persons aged 15 and over during the twelve months before enumeration, more than four-fifths (80.1%) of medical checkups included blood tests, about half included urine tests (50.5%) or electrocardiograms (47.1%), and about one-third (34.6%) included X-rays. More importantly, 63.5% of medical checkups were taken because of “no particular health concern, just want to know if there was any abnormality” while only 9.3% of medical checkups were prescribed by doctors (Table 1).¹⁷

Avoiding Unnecessary Medical Tests and Treatments

Evidence-based medicine has long been advocated in modern medicine. It is the use of current best evidence in making decisions about the management of individual patients. The practice of evidence-based medicine means integrating individual clinical experience with the best available clinical evidence from scientific research.¹⁸ Such practice can help to identify and apply the most efficacious treatment on individual patients.

Table 1: Medical checkups taken* by persons aged 15 and over during the twelve months before enumeration by main reason for having medical checkups

Main reason for having medical checkups	No. of medical checkups ('000)	Proportion (%)
No particular health concern, just want to know if there was any abnormality	763.4	63.5
Prescribed by doctors	111.5	9.3
Persistent symptoms (no diagnosed illness in related to the symptoms)	93.2	7.8
Being requested (e.g. employment, insurance, emigration)	80.5	6.7
Free offer (e.g. by insurance, bank)	59.6	5.0
Advice from family member(s) or friend(s)	29.7	2.5
Discounted offer or cost not being fully charged (e.g. by insurance, bank)	19.4	1.6
Others	45.7	3.8
Total	1 202.9	100.0

Note: * Medical checkup referred to an encounter with the health care system for the purpose of screening disease(s) when there was no doctor's diagnosis of illness in relation to the screening test. The number of medical checkup taken was based on the last and up to the last three medical checkups taken by persons aged 15 and over having medical checkups during the twelve months before enumeration.

Source: Thematic Household Survey Report No. 41, Census and Statistics Department.

Based on evidence of overuse, waste and potential harm, specialists in the U.S. and Canada created lists of what doctors and patients should avoid, such as cough and cold medicines for viral respiratory illnesses in children below four years of age, and annual electrocardiograms for low-risk patients without symptoms. More could be found at the designated websites: <http://www.choosingwisely.org> or <http://www.choosingwiselycanada.org/>.

In Hong Kong, the Task Force on Conceptual Model and Preventive Protocols under the Working Group on Primary Care also developed a number of evidence-based reference frameworks for the care of major chronic diseases (diabetes and hypertension) and for preventive care for certain population subgroups (children and older adults) in primary care settings. For more information about the reference frameworks, please visit the website of Primary Care Office of the Department of Health at <http://www.pco.gov.hk/english/initiatives/frameworks.html>.

Being Aware and Informed

Generally, people need a medical checkup when they are sick or have any symptoms that could mean illness, are at risk of developing certain diseases, have to manage chronic conditions, have to check on the effects of a new medication, have to deal with issues at different life stages like family planning, prenatal or postnatal care, or have other reasons that are based on individual needs.⁵ Knowing that 'more' is not always 'better', healthy people should appraise the need with their family doctor prior to having general medical checkups. For individuals considering a cancer screening test, they are urged to seek advice from their family doctors for assessing the need and obtain full information on potential benefits and risks of having the screening test.

Based on the existing evidence, the Hong Kong Government's Cancer Expert Working Group on Cancer Prevention and Screening (CEWG) has made specific recommendations on screening for some cancers, such as cervical cancer, breast cancer, colorectal cancer and prostatic cancer. For more information about the CEWG's recommendations, please visit the website of the Centre for Health Protection (CHP): <http://www.chp.gov.hk/en/content/9/25/31932.html>.

Colds, flu and most coughs are caused by viruses and usually will get better on their own. If antibiotics use is indicated, people should take them as prescribed, in the right dose, right interval and right duration. Apart from taking medications according to prescription for disease management, lifestyle modification could be beneficial for certain diseases such as hypertension and diabetes. Periodically ask family doctor or pharmacist to review all medications – both prescribed and over-the-counter medications – to discontinue unnecessary medications, avoid drug duplications and identify potential drug interactions.

Remember, effective communication with your family doctor is the key to optimise your medical care. Do not be afraid to ask questions (e.g. reasons for the medical test ordered), express any concerns (e.g. possible side-effects of the medication prescribed) and explore alternative remedies (e.g. lifestyle modifications).¹⁹ By being aware and informed, we can make smarter choices for better health.

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World Heart Day 2014

29 September 2014

World Heart Day is an annual event initiated by the World Heart Federation to inform people that heart disease and stroke are the world's leading causes of death. Each year, the Federation would select a different theme for the event to raise public awareness about heart health.



For 2014, the World Heart Federation and its members are putting a spotlight on creating heart-healthy environments. Ensuring people have the best opportunities to make heart-healthy choices where they live, work and play helps reduce their own cardiovascular risk.

To know more about the World Heart Day 2014, please visit:

<http://www.world-heart-federation.org/what-we-do/awareness/world-heart-day-2014/>.

Non-Communicable Diseases (NCD) WATCH is dedicated to promote public's awareness of and disseminate health information about non-communicable diseases and related issues, and the importance of their prevention and control. It is also an indication of our commitments in responsive risk communication and to address the growing non-communicable disease threats to the health of our community. The Editorial Board welcomes your views and comments. Please send all comments and/or questions to so_dp3@dh.gov.hk.

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