When a test isn’t best

How do doctors decide on tests and treatments for their patients? Most people would like to believe that such decisions are made on the basis of available evidence, and that only appropriate investigations and interventions are done. But often this is not the case, with many widely used tests and procedures unsupported by evidence, duplicative of others already used, unnecessary and wasteful, or even potentially harmful.

The problem can be particularly acute in the US, where the structure of the private health-care system creates a perverse incentive in favour of medically unnecessary tests and procedures, which in turn adds to escalating costs. In this context, the Choosing Wisely campaign from the American Board of Internal Medicine Foundation has been a welcome development. Working together with a coalition of medical specialty societies and health-based consumer organisations, on Feb 21 the foundation published a revised list of more than 130 tests, procedures, and drug treatments that “physicians and patients should question”.

Each of the 17 specialty societies has produced a list of five or more recommendations, along with supporting evidence. Recommendations include not to use electroencephalography for headaches (since it has no advantage over clinical assessment); not to do MRI of the peripheral joints to monitor inflammatory arthritis routinely; not to do cardiac imaging for patients who are at low risk; and not to schedule elective, non-medically-indicated inductions of labour or caesarean deliveries before 39 weeks.

The organisation Consumer Reports has been working as part of the campaign to produce easy-to-understand materials for patients, to allow them to question specific tests and procedures. Although worthwhile, the onus should instead be on doctors to ensure that they—and their trainees—request only relevant tests, and deliver only scientifically proven treatments. As such, Choosing Wisely is a valuable resource for clinicians and for policy makers charged with tackling runaway health-care costs, in the US and elsewhere. It should not be ignored. ■ The Lancet

Endocrine-disrupting chemicals: how much of a health threat?

Several headlines that appeared in the mainstream media last week might have left some people cowering behind their kitchen tables in fear of their Teflon-coated saucepans. “Everyday objects trying to kill you”, said one newspaper, “Poisoned by everyday life”, said another.

The media were reporting the findings of a new report by WHO and the UN Environment Programme—State of the Science of Endocrine Disrupting Chemicals. The report warns that synthetic chemicals could have substantial health implications and it calls for more research to understand fully the associations between endocrine-disrupting chemicals (EDCs) and many household and industrial products.

Around 800 chemicals are thought to be capable of interfering with hormone receptors, hormone synthesis, or hormone conversion. Some EDCs occur naturally, whereas synthetic varieties can be found in pesticides, electronics, and cosmetics. They can enter the environment through industrial, urban, or agricultural processes, and human exposure can occur via ingestion of food, dust, and water, inhalation of gases, or direct skin contact.

The report makes several fair points—eg, many endocrine-related diseases and disorders are on the rise, the disease risk due to EDCs might be underestimated because human beings are exposed to a combination of EDCs, and the health risk of such mixtures is poorly studied. However, it goes too far in singling out associations with particular disorders when the evidence is largely or completely speculative. For example, the report discusses potential links between thyroid disruptors and increased thyroid cancer risk, but as it notes there is very limited evidence at present for associations between EDCs and thyroid cancer (the major evidence being a single fairly poor-quality study looking at pesticide exposure). A link with thyroid disruptors and autism is also mentioned but such a link is purely speculative.

Perhaps the most important point the report makes is that there is currently no widely agreed system for assessing the strength of evidence of associations between exposures to chemicals (including EDCs) and adverse health outcomes. Clearly, such a system is badly needed. ■ The Lancet