The benefits of modern medical care have advanced the health of populations around the world, but with better health has come rising health-care spending. Not surprisingly, there is global interest in optimising the delivery of health services, exemplified by the universal health coverage (UHC) and waste in research campaigns. Comparatively neglected is a central paradox that afflicts high-income countries (HICs) and low-income and middle-income countries (LMICs) alike: the failure to deliver needed services alongside the continuing delivery of unnecessary services. The Lancet Series on right care aims to bring these two issues—overuse and underuse—to the centre of global health strategies (panel).

Inappropriate care is a widespread phenomenon. Doctors in HICs and LMICs continue to underuse simple and inexpensive interventions, and to overuse ineffective but familiar, lucrative, or otherwise convenient services, despite potential patient harms. Underuse and overuse occur whether providers are paid fee-for-service or salaried in market-driven and highly regulated systems, or in systems that are funded publicly and privately. Moreover, these two issues can affect the same country, the same health organisation, the same hospital, and even the same patient.

Getting better value from health care—is, more health per dollar spent—is a challenge common to all nations. Underuse leaves populations and patients in any setting vulnerable to avoidable disease and suffering. Overuse causes avoidable physical harms from the irreducible rate of adverse events, and financial harms from wasted resources which could be better spent on services that promote health.

In most HICs, rising health-care costs with little or no marginal improvement in population-based outcomes have become a concern across the political spectrum, and the scope of the waste is staggering. In 2010, the US Institute of Medicine estimated the annual excess cost from health-care waste in the USA at US$765 billion—with at least $210 billion in unnecessary services and $55 billion in missed disease prevention. In LMICs, the development of insurance schemes coupled with the transfer of seemingly advanced, but often merely wasteful, norms of medical care through globalised markets means that scarce resources are triple-taxed by the continuing burden of poverty, malnutrition, and infectious disease, rapidly rising rates of chronic diseases, and the adoption of expensive yet unproven medical technologies.

Defining the right care and understanding the forces that work against it constitute a crucial pathway to real affordability. Failing to do so will leave universal access to high-quality, cost-effective, and compassionate care an ever-receding mirage. The Right Care Series creates a framework for understanding overuse, and underuse around the world, the common drivers of poor care, and the potentially scalable remedies to each.

What is the right care? Answering this question remains a challenge, largely because most medical services fall into a grey zone where the probability of benefit or harm is uncertain for any individual. This zone of uncertainty has at least four dimensions: (1) services for which high-quality evidence of clinical effectiveness is lacking; (2) patients for whom there is irreducible uncertainty about the potential for benefit and harm; (3) patient preferences, whether for quantity or quality of life, avoidance of harm, or ability/willingness to incur financial costs; and (4) varying cost utilities of national political economies. Globally, definitions of overuse and underuse are necessarily context dependent; the same clinical service may have different utility when refracted through the lens of the national delivery system or wealth of a country.

This last dimension includes both a nation’s capacity to pay for health care and its political willingness to do so. Underuse is generally driven in LMICs by insufficient medical resources and patients’ inability to pay. In HICs, underuse often reflects a maldistribution of resources driven by inequalities of economic or cultural power, and profit seeking for high-margin technologies at the expense of less expensive treatments. Just as inadequate capacity drives underuse, excess capacity drives overuse—so-called supply-sensitive demand. With inadequate or insufficiently independent regulatory mechanisms, particularly in the absence of adequate methods for determining population needs, many HICs have overinvested in hospital-based infrastructure and workforce while underinvesting in community-based services such as primary care or home care. A few countries, such as Denmark and China, are attempting...
to shift resources towards community-based care, a model pioneered effectively in Cuba. 14

With UHC adopted as a target under the United Nations Sustainable Development Goals in 2015, focusing the world’s attention on achieving the right care is an urgent task and an enormous opportunity: we could improve the value of the care we deliver and redeploy the vast waste to reduce underuse, improve overall access to care, and, in many nations, address socioeconomic determinants of health.

Winning this result will not be easy. First, we do not have detailed data on underuse and overuse. We then will need the necessary political consensus for redirecting investments now devoted to sustaining current delivery models towards newer, more balanced models as well as to health outside of health care. This will require addressing the increasingly commercial and transactional nature of medical practice that has emerged globally in the neoliberal era, 15 and developing a deeper understanding of care delivery as a science. Overuse and underuse can be seen as the twin tails of a new epidemiology and a proper domain of robust inquiry for global public health. 16

Although many steps will involve technical innovations and expertise, the broader goal of getting to the right care will not be possible without strong democratic participation by the people of all nations. The deepest drivers of poor care arise out of fundamental inequalities of information, wealth, and power. In addition to more and better knowledge, the path to the right care for health systems will therefore require an activated, informed, and mobilised citizenry. Clinicians have a unique opportunity to provide leadership in this effort and to fulfil their social responsibility to their patients and to the public.

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What is the impact of treatment for hepatitis C virus infection?

The introduction of direct-acting antiviral (DAA) medicines in 2013 revolutionised the treatment of chronic hepatitis C virus (HCV) infection. The efficacy of DAA therapy is impressive—in many clinical trials HCV cannot be detected by sensitive laboratory assays in more than 90% of people who complete DAA therapy, and observational studies have documented similar results. High efficacy combined with low rates of adverse events have led WHO to include DAAs in the WHO Model List of Essential Medicines. Several countries, including Australia, Georgia, Iceland, and Morocco, have started national DAA-based treatment programmes to eliminate HCV infection, and WHO has called for the expansion of HCV therapy with DAAs as part of its global hepatitis elimination strategy.

HCV is an important contributor to global mortality, causing an estimated 399 000 deaths each year worldwide, and as HCV treatment expands, it is anticipated that mortality from HCV infection will decline. However, because the annual risk of death from HCV infection is low and the DAAs were introduced only recently, there are limited data on how these drugs affect mortality. Clinical trials that evaluate the efficacy of DAAs do not assess mortality as an outcome but rather a surrogate outcome called the sustained virological response (SVR). An SVR is defined as the absence of detectable HCV by nucleic acid testing of blood samples obtained 12–24 weeks after completion of HCV therapy. An SVR is deemed equivalent to a cure because once an SVR is achieved, it is maintained in more than 99% of patients, even after years of follow-up. Also, an SVR is associated with resolution of cirrhosis in about half of patients with cirrhosis followed-up clinical trials.

However, documenting in a clinical trial that DAAs result in an SVR is not the same thing as showing that they reduce mortality or morbidity. A recent systematic review by Jakobsen and colleagues from the Cochrane Hepatobiliary Group sought evidence from clinical trials of HCV therapies to assess this issue. The authors reviewed randomised clinical trials that used SVR as the primary outcome in people receiving DAA therapy compared with those either not treated or treated with other regimens (primarily interferon-based therapy). Jakobsen and colleagues concluded that DAAs were effective in producing an SVR (relative risk 0·44, 95% CI 0·37–0·52); however, the analysis did not find a reduction in morbidity or mortality after DAA therapy. At first sight, this conclusion seems to contradict systematic reviews of observational data that show that people who have an SVR after treatment with interferon and ribavirin had a 50% (95% CI 37–67) reduction in overall mortality and 76% (95% CI 69–82) reduction in the incidence of hepatocellular carcinoma as compared with people who were treated but did not achieve an SVR. The reduction in overall mortality was even greater (81% [95% CI 72–87]) when persons with an SVR were compared with those not treated. Other studies have shown improvements in extrahepatic manifestations of HCV infection and quality of life among people with an SVR after DAA treatment.

Data on the effect of DAA therapy are also beginning to be reported from national programmes that are scaling up HCV therapy. In England where HCV therapy increased by 48% in 2015, compared with 2014, there were reductions in the incidence of HCV-related cirrhosis (42%), liver transplantations (32%), and deaths (8%).

Observational studies are biased towards showing an effect of treatment since treatment decisions are based on the likelihood of a successful outcome, and people achieving an SVR may be predisposed to a better outcome for reasons unrelated to the treatment. However, the magnitude and consistency of health benefits across studies and outcomes support the conclusion that HCV therapy resulting in an SVR substantially reduces mortality and morbidity.

How to explain these apparently contradictory results? An important difference between the studies reviewed by Jakobsen and colleagues is the duration...