

Health structures explain nearly 20 percent of non-adherence to heart failure guidelines

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Health structures explain nearly 20% of the non-adherence to heart failure guidelines, according to the results of a joint ESC-OECD study presented today at ESC Congress by Professor Aldo Maggioni. Clinical variables explained more than 80% of non-adherence.

Professor Maggioni said: "This is a unique evaluation which combines clinical data and health structure characteristics of different countries. It provides a fuller picture of the reasons some patients with [heart failure](#) do not receive treatment according to ESC guidelines."

Heart failure affects 2-3% of the population and accounts for around 14% of cardiovascular disease related hospital admissions in Organisation for Economic Co-operation and Development (OECD) countries. Medical treatment can improve survival of patients with chronic heart failure but guidelines are often incompletely followed.

The current study analysed the impact of clinical factors and health system characteristics on [adherence](#) to guidelines in OECD countries. Three data sets were combined: the ESC EORP Heart Failure Long-Term Registry, the OECD Health System Characteristics Survey (2012) and the OECD Health Statistics 2013 database.

Out of the 17 901 patients in the ESC Registry, 5 304 were included in this analysis. These were patients in OECD countries who had chronic heart failure with a reduced ejection fraction, for whom there are ESC guidelines on drug therapy(1) (2). Non-adherence to the guidelines was

defined as: patients not treated with at least two recommended drugs, treatment at suboptimal dosage, no documented contraindication or intolerance to recommended drugs.

The researchers found non-adherence to drug treatment in nearly 25% of patients, with a large variation within and across countries. Within countries, adherence ranged from 0-100% while across countries it ranged from 11-73%.

Professor Maggioni said: "We found that within country variation was higher than the variation across countries. Countries with a large variability in adherence to guidelines between centres need targeted approaches to improve access and quality of care. Those with low adherence overall need country-wide solutions."

When the researchers evaluated each health structure characteristic individually, they found that resource; payment and quality variables were strongly linked to adherence. For example, higher numbers of GPs per 1 000 population was associated with higher adherence to guidelines. Countries where GPs primarily worked in private practice or were paid for the services provided also had higher levels of adherence. Conversely, [countries](#) with no incentives to comply with guidelines had higher levels of non-adherence.

The researchers then conducted a multivariate analysis. They found that 18% of the variability in adherence to guidelines was explained by country health structures and the remaining 82% was accounted for by patient clinical variables. Provider incentives to comply with guidelines remained an influential factor in this analysis, although the strength of the association weakened. Patients with more advanced heart failure and comorbidities such as mitral regurgitation and COPD were more likely to receive recommended treatments.

Professor Maggioni said: "Our analysis shows that it is not only clinical factors that influence whether or not guidelines are implemented. Countries that have a specific programme to implement [guidelines](#) and that pay for them to be followed have a statistically significantly better adherence to recommended treatments."

He concluded: "The next step in the ESC's collaboration with the OECD is to see if these [health](#) structure characteristics and clinical variables are also associated with outcomes in [patients](#) with heart failure."

More information: 1) ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2008. *Eur J Heart Fail.* 2008;10:933-989. [DOI: 10.1016/j.ejheart.2008.08.005](https://doi.org/10.1016/j.ejheart.2008.08.005)
2) ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2012. *Eur Heart J.* 2012;33:1787-1847. [DOI: 10.1093/eurheartj/ehs104](https://doi.org/10.1093/eurheartj/ehs104)

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