

## How to improve delivery of care in patients with heart failure

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Heart failure is a major health problem in the developed countries with millions of affected patients and an increasing number of hospitalizations and deaths attributed to this disease [1]. Significant progress in our understanding of pathophysiology of heart failure and development of new, effective therapies helped lower morbidity and mortality of this population. However, with the development of each new therapy, the complexity of management of heart failure is increasing, and a significant proportion of patients with heart failure (HF) are not receiving treatment with guideline-recommended, evidence-based therapies. In this context the paper by Fedyk-Łukasik in this issue of *Cardiology Journal* is very timely [2]. Although “score cards” are usually not our favorite reading material, this careful review of practice patterns in management of heart failure in Poland documents trends in physicians’ performance and gives guidance for improvement. It definitely should be noted with satisfaction, that high percentage of both inpatients (88%) and outpatients (81%) with heart failure were treated with angiotensin converting enzyme inhibitors (ACE-I) and that high percentage of outpatients were treated with beta-blockers (84.7%). These efforts provide patients with tremendous survival advantage as demonstrated by Cohn in the analysis of placebo arm of Val-HeFT (the Valsartan Heart Failure Trial). Overall mortality over 23 months of

follow up in this trial was 31.6% in patients who did not receive ACE-I and beta blockers and 11.9% in patients receiving both ACE-I and beta-blockers. This means that there was a 62% reduction of mortality with combined neurohormonal blockade therapy. If ACE-I were used alone, relative reduction of mortality was 29% and beta-blockers alone demonstrated 39% relative reduction in mortality [3]. There is no doubt that 100% of eligible patients should be on these therapies. These and other data are so convincing that in the US, both government agencies and major insurance agencies, under pressure from customers, are demanding hospital discharge data providing performance measures of physicians treating patients with heart failure. The days of a high degree of autonomy with which physicians may practice are gone. These data are also used to provide financial incentives to those institutions that meet the 85% compliance with ACE-I/ARB (angiotensin receptor blocker) therapy at discharge (among other parameters). These data are readily available for public on internet. Public demand for quality care and public access to these data has been a major driver in quality improvement initiatives in hospitals in many areas of care including heart failure. This trend demonstrated that hospital-based systems can improve medical care and education of hospitalized heart failure patients and can accelerate use of evidence-based, guideline-recommended therapies by administering them before hospital discharge.

Observation by Fedyk-Łukasik et al. [2] that general practitioners are less comfortable with treating patients with both ACE-I and beta-blockers is consistent with experience of others. Use of ACE-I in patients before referral to heart failure centers varies from 35% to 75%, depending on the geographic region and the background of the referring physician in the US [4]. All guidelines have delayed penetration into the market, despite the frequently overwhelming evidence. In the same

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time this is greatly important issue since heart failure is traditionally treated by general practitioners and with increasing numbers of patients, cardiologists alone will not be able to provide care to this population. Also in the US primary care physicians deliver the majority of care to patients with heart failure and only 17% of these patients ever see a cardiologist [5]. Fedyk-Lukasik's data indicate significant gap especially in use of beta-blockers in patients with heart failure treated by general practitioners [2]. It is thus important to stress the need for initiation of these drugs prior to hospital discharge. This practice is known to increase their utilization and it has also been demonstrated to be safe [6].

As if this was not challenging enough, device therapy for HF, including implantable cardioverter defibrillators and cardiac resynchronization therapy, has recently been demonstrated to also result in substantial mortality reduction. Careful evaluation of patients with heart failure with echocardiography is becoming even more important to help with patient selection. It is of note that only small percentage (37%) of patients in Poland is evaluated by echocardiography as described by Fedyk-Lukasik et al. [2]. Since accurate evaluation of patients with heart failure is critical for the appropriate selection and monitoring of therapy as well as for the prevention of recurrent hospitalizations the availability of this diagnostic modality should be increased in Poland. Easy access to echocardiography in the US was achieved in part by emergence of support personnel such as echocardiography technicians who are trained in performing echocardiographic examination, which later is interpreted by a cardiologist. In the age of digital echocardiography this approach allows for electronic transfer of data from even remote sites and increases access to expert echocardiographic interpretation for patients and their physicians, who otherwise would have no available access to this diagnostic tool.

Further improvement in heart failure care represents significant challenge for the cardiology community in Poland. Development of HF disease management programs have been shown to improve HF treatment, resulting in substantial reduction in hospitalizations and mortality. These programs will need to be developed in collaboration between cardiologists with interest in management of heart failure and general practitioners. It was necessary in the US to modify cardiology training programs to accommodate the emergence of the new subspecialty of heart failure physicians. At this time, no established guidelines exist regarding the curricu-

lum of these programs or requirements that need to be fulfilled by trainees and by training programs. One year of training for internal medicine physicians represents a practical approach, which should be considered in view of the enormous needs of the heart failure population. This training may result in the relatively quick emergence of internal medicine sub-specialists who will play a leadership role in the primary care environment by providing quality, evidence-based care to heart failure patients and who will bridge the gap between primary and cardiologic subspecialty care for patients with more complex disease. The presence of primary care physicians with special interest in heart failure may increase interactions between primary care physicians and cardiologists, with potentially significant benefits to the patients. Even more important, this group of primary care physicians will be exceptionally positioned to champion heart failure prevention issues — an important aspect of heart failure. In conclusion, I congratulate Dr. Fedyk-Lukasik, her co-authors and coworkers for undertaking this difficult task of providing us with information regarding heart failure management in Poland [2].

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