pulmonary disease (COPD) patients requiring long-term oxygen therapy. These efforts are very relevant, especially for patients affected by chronic illnesses that are consequently exposed to frequent rehospitalizations.

Chronic patients represent a high portion of the population requiring frequent hospital admissions, high number of drugs, and high levels of care. Moreover, elderly subjects, when admitted to hospitals, are exposed to relevant consequences that frequently differ by the main cause of admission, such as functional impairment, infections, or delirium. In this sense, HC can be a safe and efficacious alternative to hospital care. COPD has been the focus of several hospital-at-home studies, although most models studied have been early-discharge schemes that employed nursing care, without physician led in the home. An HC program dedicated to COPD patients is surely helpful in reducing frequent exacerbations.

However, COPD patients are destined to hospital’s readmissions during their life, for frequent acute exacerbations that affect their health and their quality of life. For this reason, we would like to report the experience of an HC service dedicated to acutely ill patients providing substitutional hospital-at-home care in a “clinical unit” model. The care is located in San Giovanni Battista Hospital of Torino, Italy and it is delivered by a multidisciplinary team consisting of 3 geriatricians, 13 nurses, 1 physiotherapist, 1 social worker, and 1 counselor. The team operates 7 days a week and looks after 25 patients a day on average. Every year, a mean of 450 patients is treated at home. About 60% of our patients are referred from the emergency department, 25% from hospital wards, and 15% from specialists or general practitioners. Several examinations and treatments can be carried out at home: blood tests, electrocardiogram, spirometry, pulse oximetry, echocardiograms and vascular Doppler ultrasonographies, placement of peripherally inserted central catheters, oxygen and other respiratory therapies, intravenous fluids and drugs, blood transfusions, surgical treatment of pressure ulcers, radiograms, telemonitoring, physiotherapy, occupational therapy, and counseling. This team recently published a randomized controlled trial on elderly COPD patients with acute exacerbation reporting that an HC service could represent an alternative to traditional hospital care: no differences in terms of mortality were found between patients treated at home and those treated in the hospital, and the incidence of hospital readmission after discharge was lower for home treated patients. Depression and quality of life improved significantly in subjects treated at their own home as compared to the traditional treatment.

Although these 2 studies present many differences, results confirm that, for selected patients and particular conditions, home could be a place of treatment and care.

In conclusion, an integrated management for the chronic, the acute, and the rehabilitative phases, involving the patient’s caregivers too, would be one of the street that the good clinical practice should cover.

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**Physical Activity Following Stroke**

The recent report published in Archives of Physical Medicine and Rehabilitation by Lang et al adds further support for the notion that the amount of physical activity and movements practiced by stroke patients remains low, despite efforts to increase practice and intensity of rehabilitation. This is not a recent finding; a 2004 study revealed that in the acute setting patients were mobilizing on average 13% of the therapeutic day and in 2006 Egerton et al reported that during rehabilitation stroke patients spent an average of 8% of the therapeutic day upright. This suggests that recommendations to increase the amount of practice in stroke units have not been effectively implemented. Both the Australian and American clinical practice guidelines published in 2005 have called for increasing the intensity of practice during rehabilitation and providing the patient with as much therapy as needed for their recovery of function. The Australian guidelines suggest that group therapy involving task-specific training is one way to increase the amount of practice in rehabilitation. Although Lang did not comment on the structure of the units observed, the data were collected recently, between May 2007 and June 2008, and the findings are believed to be representative of other centers across North America.

The low levels of physical activity are not restricted to the rehabilitation environment. A recent study of stroke survivors in the community confirmed that they are also incredibly inactive. Using accelerometers to measure activity levels revealed that 58% of stroke survivors with mild motor impairment do not meet the minimum recommended physical activity level for adults. That is, over half of the stroke patients in their study were not expending sufficient energy (as determined by hip counts obtained by the accelerometers) to accumulate 30 minutes or more of moderate-intensity physical activity on most days of the week, as recommended by the American College of Sports Medicine and the American Heart Association. It is well established that reduced physical activity levels after stroke can lead to disuse atrophy, cardiovascular deconditioning and combined...
with social isolation and associated psychologic factors stroke survivors are at a greater risk for secondary cardiac complications and recurrent stroke. Physical activity can increase independence in activities of daily living, increase walking speed and efficiency, improve exercise tolerance and reduce risk of cardiovascular disease, among other benefits, which led to the “Physical Activity and Exercise Recommendations for Stroke Survivors” published in Stroke in 2004. This comprehensive Scientific Statement outlines many of the benefits of and guidelines for implementing physical activity programs for stroke survivors, and also highlights the barriers to increasing physical activity.

So What has Changed in the Last 5 Years?

According to recent literature, stroke patients are still inactive, un-fit, and a significant proportion are depressed and fatigued. Depression and fatigue are strongly associated with poor functional ability and mobility and are likely to lead to deterioration in mobility status 1 to 3 years following stroke. Other factors strongly associated with deterioration of mobility are poor levels of activity and cognitive problems. There is limited evidence in stroke survivors to show that exercise improves cognition although there is considerable evidence to suggest that exercise is beneficial for brain function and cognition throughout life.

Current clinical practice guidelines recommend that cardiovascular fitness should be addressed during rehabilitation and people living in the community with stroke should have access to interventions to improve their fitness. The available data would suggest that either this service is not available in many communities, or that it is not taken up by stroke survivors, perhaps due to barriers such as communication, impaired cognition, caregiver stress, depression, fatigue, and social isolation. It is worth noting, however, that physician recommendations to exercise may double the likelihood that stroke survivors would exercise.

There are still many more questions that remain un-answered regarding the delivery of the optimal type, amount and intensity of exercise to stroke survivors, and the effect this may have on reducing recurrent stroke and improving participation and quality of life. The recommendations from the literature thus far certainly suggest that these should be the focus of research trials in the future. But the evidence currently available suggests that we should be acting in some way to encourage physical activity in all stroke survivors.

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