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Greener Hospitals For Economic Success And Sustainability

The world's population continues to rapidly increase as well as grow older. The growth in the world's population parallels a rapid increase in healthcare needs. And, more than anything, an ageing society places greater demands on medical services. Thus, around the world, the cost of healthcare is skyrocketing while the threat posed by various diseases continues to loom large. Increasing public spending is not a sufficient response to the rising costs of delivering healthcare services. To establish effective healthcare systems over the long term and to make healthcare affordable for everyone, we also need technological and financial innovations that both improve the quality of medical care and help save money.

The world's population is not only expanding, it is also getting older. The situation is particularly acute in developed countries where medical advances have lowered mortality and extended life expectancy. In these countries, one-fifth of the population is already 60 years old or older, and that proportion is expected to grow to almost a third of the total population by 2050.

The surge in older populations has resulted in a corresponding spike in such chronic diseases as cancer, diabetes, heart disease and respiratory conditions. Consider this startling fact: In 2010, it is estimated that more than one-third of Europeans will have developed at least one chronic disease. When poorly managed, these chronic diseases can account for up to 70% of healthcare expenditures.

Furthermore, rapid urbanisation, a fastfood culture, high calorie diets and unhealthy, passive lifestyles have made obesity and its resultant health risks very apparent. According to the latest statistics from the World Health Organization (WHO), more than 1.4 billion adults around the world are overweight. Of these, 500 million are obese.

Other factors are driving up healthcare expenses as well. Among these factors are the rising costs of bringing new medicines and treatments to market and the growing demands of an increasingly Internet- savvy consumer base with online access to the latest information on modern medicine.

It's hardly surprising then that healthcare spending continues to rise faster than economic growth in most European countries. In fact, according to World Bank figures, public expenditure on healthcare in the EU could jump from 8% of GDP in 2000 to 14% of GDP in 2030 and continue to grow beyond that date.

With the financial and debt crisis still holding much of Europe firmly in its grip, healthcare faces significant future challenges, especially since healthcare costs are expected to rise even further. Today's challenge is for hospitals to balance budgets more carefully and to do more to wring better value out of healthcare spending.

Technological and Financial Innovations

An effective way of establishing efficient healthcare systems over the long term and ensuring that healthcare is universally affordable is through technological and financial innovations that both improve the quality of medical care and help save money. Here is where an integrated offering comprising technology and financing best addresses the challenges hospitals currently face. A financing partner that has industry expertise is better able to understand the needs of hospital management, enabling the speedy and efficient execution of projects that enhance performance and economic success. What's more, the financial backing provided by the manufacturer also underscores its confidence in its own products and solutions.

An increasingly popular area for increased efficiency and sustainability in hospitals is in their use of energy. Hospital requirements for 24/7 lighting, heating, air conditioning and ventilation systems, not to mention sterilisation and high-tech equipment, add up to enormous electricity bills. It's no wonder that European hospitals measure annual energy costs in the billions of euros.

Energy prices and levels of consumption also seem to be on an upward trajectory, straining hospital budgets and taking a severe toll on the environment. Indeed, the carbon footprint of the European healthcare sector amounts to at least 5% of total EU emissions, a level comparable to that of international aviation and shipping activities. In light of growing environmental concerns, hospitals need to "go green" and invest in modern and energy-efficient equipment, technology and buildings that can facilitate huge savings in primary energy consumption. It is estimated that if hospitals could reduce their electricity consumption by a fifth, annual national energy bills could be cut by €300 million to €400 million, even by conservative estimates. More importantly, going beyond the cost efficiencies, hospitals will be building an environmentally responsible, efficient and sustainable healthcare system.

The transition to energy-efficiency is a challenging issue, however, as it demands vast investment sums. In an economy that is still reeling from economic crisis, the access to capital for modernisation projects is bound to be harder to come by.

In such a scenario, customised performance-based solutions that allow facility and technology upgrades to be made within existing budgets are essential. These improvements not only help to reduce operating costs while providing the additional value of new, energy-efficient equipment. They also utilise the very same energy and operational-cost savings to pay for the investment.

Such an Energy-Saving Contracting project typically begins with a preliminary analysis to determine a hospital's current energy usage and identify areas to maximise energy savings. Most hospitals will be surprised to find plenty of opportunities to correct the mismatch between energy supply and actual utilisation.

Working Examples: Energy-Saving Contracting

Take the example of a hospital in Bavaria, Germany, that replaced its oil-fired steam generators used for kitchens and sterilisation areas with electric boilers that only operate on demand. The oil-fired steam generators that were left on throughout the year accounted for a significant share of the hospital's energy bills, not to mention the huge sum of money spent on maintenance. With the change, the hospital now emits 1,600 fewer tons of CO₂ annually and, since 2008, has saved around €250,000 a year in energy costs.

An essential part of such projects is to conduct regular measurements and verification, so the solutions guarantee energy savings throughout the contract period. Thus, the savings can be used to fund the project itself, making it in effect a zero investment, zero risk model. In the case of the Bavarian hospital, the modernisation costs accrued to around €3 million. Rather than compel the hospital to make a large investment all at once, the Energy-Saving Contracting scheme enabled the energy-efficient investment costs to be offset against the energy savings made throughout the financing term. In a win-win solution, the hospital was able to reduce energy consumption via green technology implementation while rerouting the efficiency gains towards financing investments in the new equipment.

In a similar deployment, the University Hospital in Heidelberg, Germany, overhauled its conventional lighting and ventilation system in a bid to minimise its electricity consumption and operating costs. The result was a reduction of 1,385 megawatt hours of consumption, translating to savings of around €155,000 per year. What's more, the contractually guaranteed energy- and operating-cost savings during the term of the agreement ensured that the medical centre's investment financed itself. Today, around 30 hospitals are being modernised under the Energy-Saving Contracting scheme in Germany alone.

Conclusion

As ageing societies across Europe place greater demands on medical services and the threat posed by various diseases continues to loom large, healthcare spending will undoubtedly continue on its upward spiral. Faced with this grim reality, intervention in the form of energy efficient projects will help to deliver on the promise of efficient and sustainable healthcare and infrastructure for a better quality of life.

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