Love as a Starting Point, Journey Towards a Green Hospital
MacKay Memorial Hospital

GGHH Agenda Goals
- Energy
- Water
- Waste

Hospital Goal
- Reduce energy costs by 5% in three year in Taipei branch
- Achieve a 1% water consumption saving in Tamshui branch
- Gain 1% electric energy saving at Tamshui branch in 2015
- Reduce Medical waste at 3% per year in Taipei and Tamsui branch

Progress Achieved
- Energy consumption decreased by 4.36% in Taipei
- Used water is decreased by 24,202 cu.m with utilization rate reduction of 4.82%
- Due to advanced waste processing techniques and the MMH’s programs to encourage recycling, the 2013 waste diversion rate has increased by more than 17.47%.

The Issue
The Energy Usage Intensity (EUI) in MacKay Memorial Hospital is higher than Taiwan’s national utilization average (241~169Kwh/(m².yr)). We hope to set a benchmark in Taiwan by decreasing our own EUI.

Sustainability Strategy Implemented
The strategies implemented are presented below:
- To announce the importance of Green policy to hospital employees and patients
- To practice self-management of resources within each department
- To evaluate the efficiency and eliminate high energy consuming equipment
- To reuse and recycle resources
- To set annual target and evaluate the achievement rate
- To participate in external accreditation to improve the energy saving ability

Implementation Process
To reduce carbon emissions generated, heighten energy savings and reduction, the 5S principle. The hospital also deems that incentivization is of great importance and benefitting the institution. Due to this, we added an “R” to the 5R being implemented which include “Replace, Reduce, Recycle, Reuse, Application of Green Resource and Employees Rewards.

Employees are also encouraged to submit energy saving and reducing ideas. The employees who had suggested appealing and plausible ideas and invention may be rewarded up to 60% of the income (saving resulted from the implementation of the idea/ invention).

**Tracking Progress**
Mackay Memorial Hospital is ISO50001 accredited. In accordance to ISO50001 Energy Management Team is mandated to develop and update internal audit plans annually. Members of the Audit Chamber evaluate the Energy Management Team once a year to assess efficiency of their energy reduction activities.

In order to ensure full implementation of ISO50001, Mackay Memorial Hospital contracts an external third party auditor to supplement any internal evaluation it conducts.

**Challenges and lessons learned**
Mackay Memorial Hospital was built more than 135 years ago. We recognize that our facilities are timeworn which affects effective and efficient energy utilization. However, we are committed to innovate our system towards an energy efficient operation through purchasing new equipments and implementation of green policies.

To carry out Green policy, each department in the hospital has to provide allocation for the management responsibility, to implement energy management program, and to fulfill energy management requests. They are also expected to reasonably utilize resources and to purchase low energy consumption products.

Furthermore, they are mandated to set up “Energy Management Committee” in order to implement and achieve goals specified under “Energy Saving and Carbon Reduction” objectives of Mackay Memorial Hospital

**Next Steps**
1. To apply for and secure ISO50001 accreditation for Taitung Branch by 2016.
2. To develop a “Green Procurement Policy Manual” where guidelines for
purchasing energy – efficient products and equipments will be specified.
3. To replace all old equipments with new energy – efficient apparatus.
4. To reduce dependence and demand for paper, there is a plan to establish a Medical Mobile Networks
5. To use new fiber materials for easy cleaning
6. To purchase local product
7. To improve medical wastes segregation to increase volume of wastes recycled and reused.

Demographic Information

<table>
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<tr>
<th>Name of Hospital</th>
<th>Number of Employees (As of December 2013)</th>
<th>Number of Beds (As of January 2014)</th>
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</table>
| MacKay Memorial Hospital Taipei Branch   | Physicians: 556
Nurses: 1,379
Medical Personnel: 868
Administrators: 480
Total: 3,283                                        | 1,120                              |
| MacKay Memorial Hospital Tamsui Branch   | Physicians: 266
Nurses: 1,074
Medical Personnel: 517
Administrators: 254
Total: 2,111                                        | 1,095                              |
| MacKay Memorial Hospital Taitung Branch  | Physicians: 66
Nurses: 551
Medical Personnel: 166
Administrators: 137
Total: 920                                          | 492                                |
| MacKay Memorial Hospital Hsinchu Branch  | Physicians: 140
Nurses: 563
Medical Personnel: 371
Administrators: 217
Total: 1,291                                        | 579                                |

Links
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