EXECUTIVE SUMMARY

The management research field project was undertaken to address the problem of the gap in clinical waste generation at Teaching Hospital-Anuradhapura and related issues in line with the clinical waste management process. Teaching hospital in Anuradhapura started in 1892 and was administrated by a governed board. It gradually improved and finally became the third largest hospital in the country. It operates as a free healthcare provider for the community around Anuradhapura.

THA is the third-largest hospital in the country and has been providing free healthcare to the community since 1850. The hospital provides more than LKR 7 billion worth of healthcare facilities to the community around the hospital. A SWOT analysis was carried out to study the project requirement area. SWOT analysis shows the critical strengths, weaknesses, opportunities, and threats of the teaching hospital in Anuradhapura. Insufficient clinical waste management was noticed as one of the key weaknesses in the organization. As a result, THA faced a significant impact in generating clinical waste during their service delivery, which was noticed to be above the country average of 401g per bed per day, whereas THA generates 648g per bed per day. A detailed root-causes analysis was performed with the help of officers who are interested in clinical waste management in the hospital to identify the leading causes of the over generation of clinical waste. A detailed root-causes analysis was done to suggest a sustainable solution to clinical waste management.

An extensive review of literature was carried out in the areas of clinical waste, procedures, people, and machinery in order to develop a comprehensive theoretical background for the generation of clinical waste at teaching hospital in Anuradhapura. In addition to that, a comprehensive literature review was carried out for solution development. Need assessment, SWOT analysis, gap analysis, cause-and-effect diagram, work breakdown structure, on the job training, variance analysis, KPI evaluation, maintenance schedule, waste audit, and flow chart are the techniques that have been utilized to develop the solution.

Based on each project component, the objectives were established, which helped to achieve its primary project objective of reducing clinical waste generation from 648g per bed per day to 401g per bed per day. Other objectives were developed to align with the components

identified through detailed root-cause analysis to develop a solution for each component. Apart from that, the current situation of each project component was explained in detail. Machinery, people, and procedures were discussed to cater for the existing situation, along with techniques that are used to develop the solutions. The author's suggestion is to provide comprehensive on-the-job training to staff who engages with the process. Since clinical waste management is a human-oriented task and purely depends on the knowledge of stakeholders, Procedure components help reduce clinical waste disposal costs by LKR 131.6 million in the first year; people components help reduce waste disposal costs by LKR 45.12 million in the first year; and finally, machinery components help reduce clinical waste costs by LKR 93.3 million in the first year. Altogether, the project is expected to save the hospital's waste budget LKR 270.35 million in its first year and increase recyclable sales value by LKR 956,712.00. Resource allocation was identified along with the cost estimate for the project.

Outputs and outcomes were identified for the project, along with quantitative and qualitative measurements. A benefit cost analysis was done to identify the tangible and intangible benefits. Quality free healthcare delivery in a work-related accident free environment was identified as having tangible benefits. It is expected to generate overall project net benefits of LKR 228.6 million during the project period, which represents a benefit-cost ratio of 6.36:1. In addition to that, the long-term benefits of the project will be LKR 215.24 million (NPV). The overall benefits demonstrate the feasibility of implementing a clinical waste management project at teaching hospital in Anuradhapura.

Finally, the findings of the project explained the proposed solutions, linking them with the literature review for each of the problems. The proposed solutions, tangible benefits, and intangible benefits help improve hospital services. The project is expected to be implemented and completed within a twelve-month period. The suggested solutions were reconciled with the theoretical background and were strongly available to reach the set objectives during the project period. By implementing the recommendations presented herein, teaching hospital in Anuradhapura will be able to reduce its high volume of clinical waste generation to the country average and enhance other cost savings through disposal recommendations.