Vinyl and Linoleum Floorings in Health Infrastructures: Design and Execution Recommendations Based on Fieldwork Data

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1 Introduction

Vinyl and linoleum floorings (VLF) have ideal properties for health infrastructures, such as static control, slip resistance and antibacterial characteristics, which can lose their effectiveness without adequate maintenance. Several studies emphasise the importance of adequate maintenance, in order to prevent hospital-acquired infections (Harris et al., 2010; Harris and Detke, 2013). However, apart from maintenance manuals, there is hardly any literature regarding the maintenance of VLF. An inspection, diagnosis and rehabilitation system for VLF in healthcare facilities (Carvalho et al., 2018) was developed and validated through the visual inspection of 101 compartments in six health infrastructures in Lisbon, Portugal, and the collected data was analysed with descriptive statistics (Carvalho et al., 2019).

The purpose of this paper is to gather the maximum of information available on “Maintenance Recommendations Guides” from several manufacturers, supporting the presented information with the statistical data acquired during the inspection and validation campaign of Carvalho et al. (2019).

2 Installation

Regarding the installation of VLF, the instructions given by the manufacturer must be strictly followed. However, there are some general preliminary actions that are necessary, regarding the preparation of the substrate, the application of the screed, coves and the VLF, the type of glue, the joints, amongst others.

3 Maintenance

Floorings are selected for specific characteristics, such as colour, design and some special properties, like static control or slip resistance. Without regular maintenance, dust and soiling builds up quickly, changing aesthetic properties and making special features practically useless. Moreover,
dirt and soiling usually harbour bacteria, making the flooring a health hazard. By defining a maintenance programme, real savings can be made without compromising appearance, hygiene and cleanliness requirements. Before establishing the programme, some variables, such as floor location, type and volume of traffic and existence of dirt barriers, should be considered, as they affect the method, frequency and hence the cost of maintenance.

Several types of maintenance are needed, the two big groups being: (i) routine/regular maintenance; and (ii) periodic maintenance. Also, to prevent damage, some preventive measures should be taken. For example, spills should be cleaned immediately, and heavy furniture should be equipped with flat, non-staining floor protectors (Seeley, 1985). Some of the anomalies that are most affected by an inadequate maintenance or use are scratches, wear and brightness changes.

4 Conclusions and Future Developments

This paper contributes to the dissemination of knowledge on the maintenance of VLF, specifically in health infrastructures, as the presented information may be used to improve and increase the effectiveness of maintenance plans. Moreover, it may also be useful at the application stage, as some defects with substrate origin, for instance, may be prevented with adequate cleaning of the substrate. At the design stage, a maintenance manual of the flooring should be developed and delivered to the client. At last, to avoid defects at the application stage, the use of specialised labour is mandatory. In terms of maintenance, regular cleaning is more beneficial and cost-effective to the flooring than occasional heavy cleaning.

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