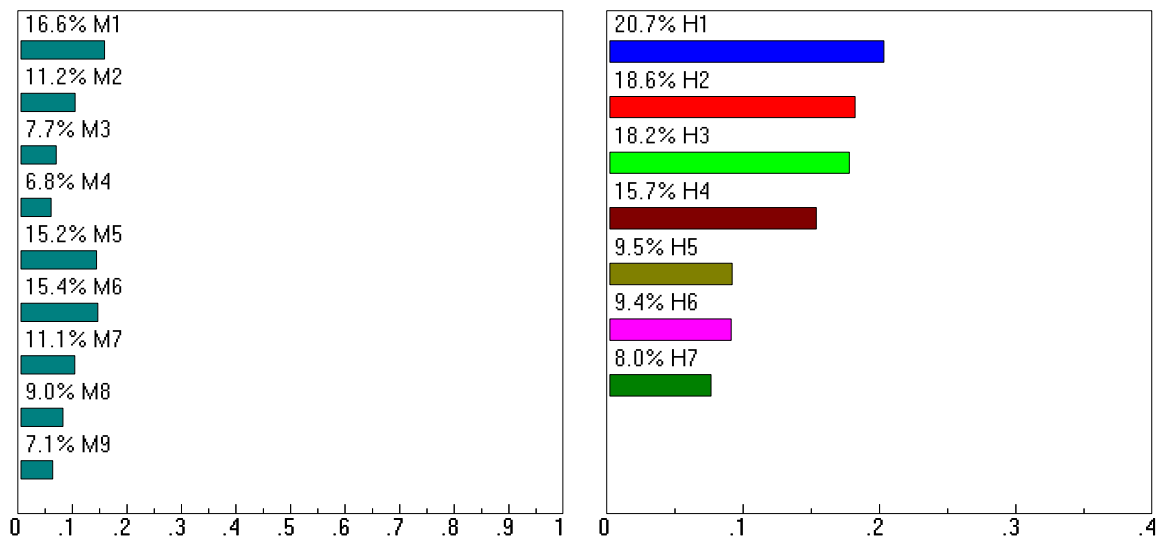


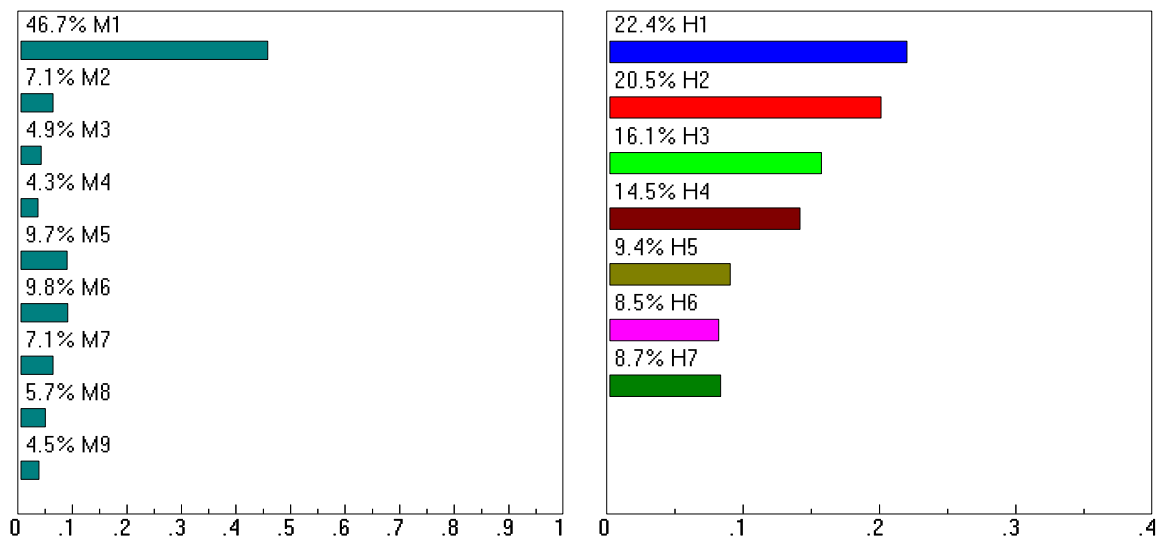
Sensitivity analysis

To examine the robustness of the priority ranking, sensitivity analysis is performed. The weights assigned to the main criteria have a large significant impact on the final priorities of the alternatives. As a result, minor changes in relative weights can result in substantial changes in the final ranking. Because these weights are frequently built on highly subjective assessments, the ranking's stability must be evaluated when different criteria weights are used. Sensitivity analysis can be used for this purpose, and it can be based on occurrences that indicate different perspectives or alternative future developments on the relative importance of the criteria. The resulting changes in priorities and alternative ranking can be observed by raising or lowering the weight of specific criteria. Hence, sensitivity analysis offers information on the stability of the ranking. A thorough evaluation of the weights is advised if the ranking is particularly sensitive to slight changes in the criteria weights. Hence, weights of important criteria are altered separately between 0% and 100%, to reflect the weights change of other criteria accordingly. Dynamic sensitivity of alternatives has been analyzed when waste segregation (M1) is increased by 30%, waste treatment (M3) increased by 20%, waste transportation (M4) is increased by 30%, awareness/capacity building (M7) is decreased by 10%, waste disposal (M5) is increased by 25% and environmental public health/occupational safety practices (M6) is increased by 35% from its initial level (Figure).

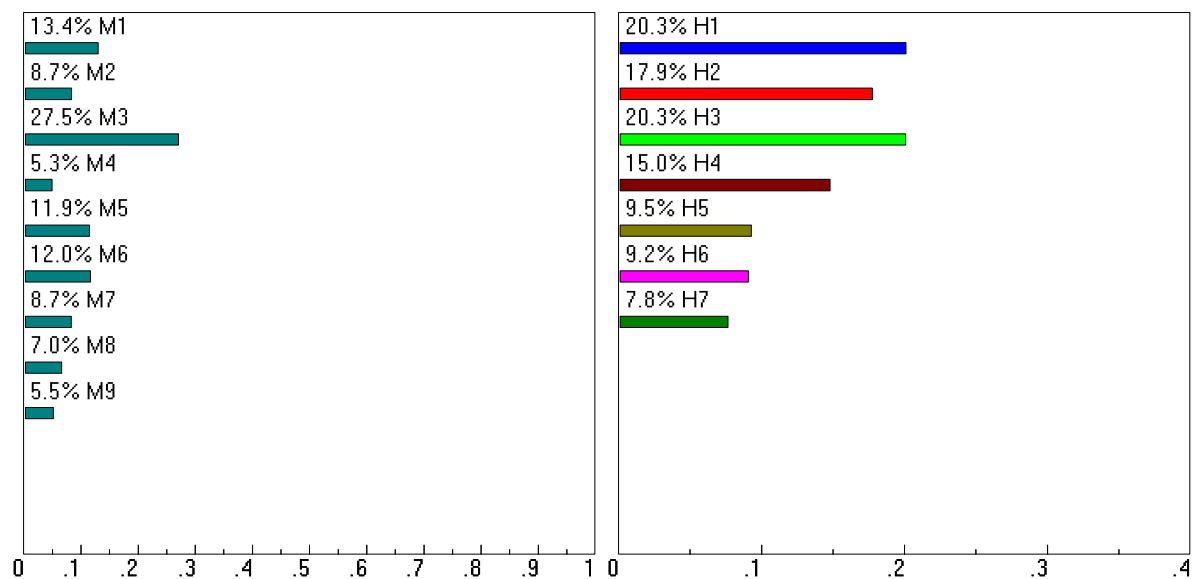
Increasing waste segregation (M1) at 25% increases the global weight of “H1” from 0.207 to 0.224 (Figure). Increasing environmental public health/occupational safety practices (M6) at 35% takes the global weight of “H1” from 0.207 to 0.198 (Figure). Increasing waste disposal (M5) at 25% decreases the global weight of “H1” from 0.207 to 0.202 (Figure). When waste segregation is increased, the weight of “H1” shows an upward tendency, signifying the robust standpoint of M1 practises in medical waste management for alternative H1. Since occupational safety practices and environmental public health is generally low in selected hospitals, an increase in M6 resulted in a decrease in the weight of “H1”. Therefore, if health workers and waste handlers lack basic knowledge about medical waste management practices, the effectiveness of waste management systems this negatively impacted.



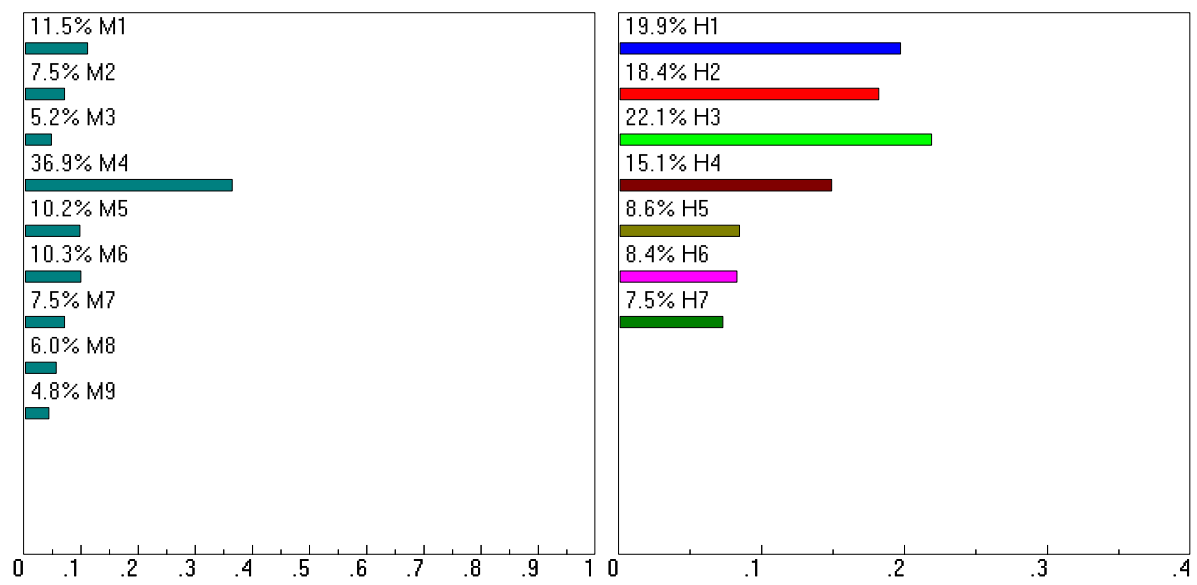
Dynamic sensitivity of alternatives



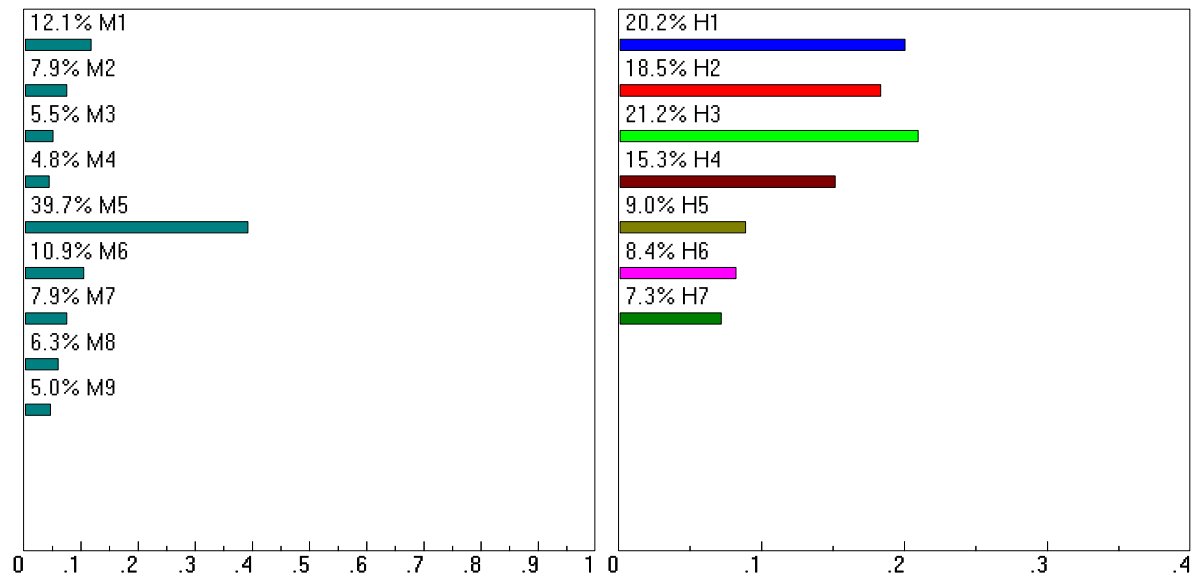
Dynamic sensitivity of alternatives when M1 is increased by 30%



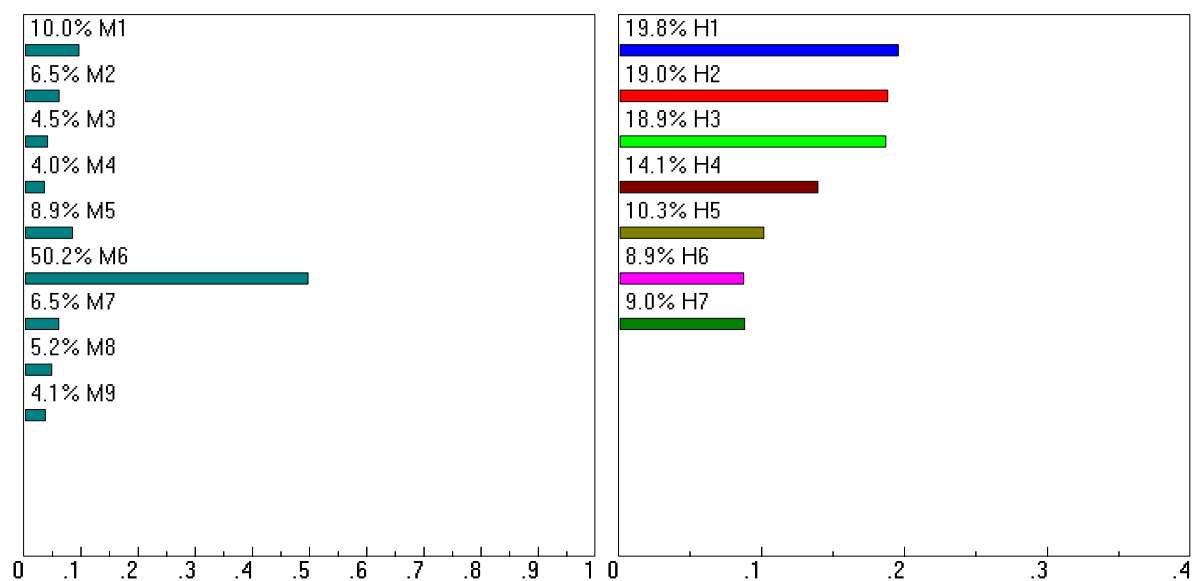
Dynamic sensitivity of alternatives when M3 is increased by 20%



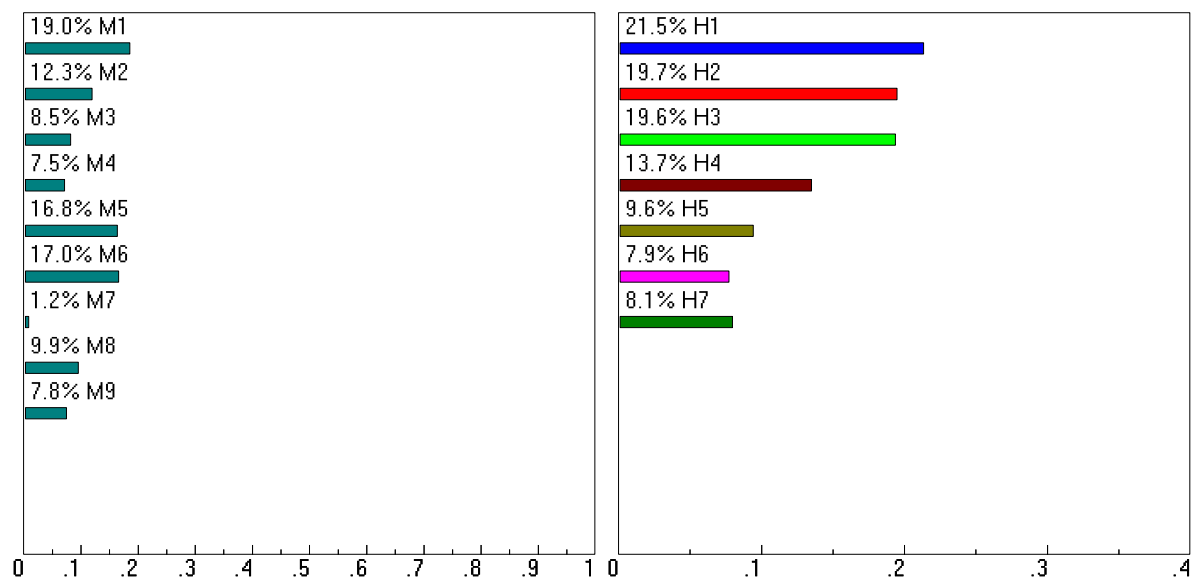
Dynamic sensitivity of alternatives when M4 is increased by 30%



Dynamic sensitivity of alternatives when M5 is increased by 25%



Dynamic sensitivity of alternatives when M6 is increased by 35%



Dynamic sensitivity of alternatives when M7 is decreased by 10%