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Air, surfaces and copper halos, interstitial microbial zones. Has it been measured; can it be predicted?

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SUMMARY

Health care associated infection (HAI) bears a great cost burden on countries and contributes to the TB and HIV AIDS epidemic in South Africa. A Meta data analysis of published literature was conducted using keywords and phrases. A total of 60 articles where reviewed to assess the efficacy of copper (Cu) and the occurrence of the 'Halo' effect. The antimicrobial properties of Cu present novel healthcare opportunities. Related to the Cu 'halo' phenomenon published literature has not investigated microbial modelling, inhibition of microbial contamination and microbial 'fall out'. However the literature implicitly addresses mechanism of inhibition by ionisation and contact, methods for model development and for airborne and surface microbial 'fall out' relationship related to various pathogenic bacteria antimicrobial responses. The literature did reveal nano copper particle research development and presents potential healthcare architectural and environmental applications.