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Letter to the Editor

Exploring the Application of Colour Coding For Quality Health Care

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Dear Sir,

Colour coding is defined as the systematic, standard application of color to aid in classification and identification.[1] Colour coding in health care is mainly used for better enhancement, differentiation, systematic classification. Colour coding is used in various fields of medicine for different purpose. Techniques used commonly are colour differentiation and colour matching.[2]

Colour coded growth chart is an important tool for the classification of malnutrition and used as a diagnostic aid for Health care workers and educational tool for mother in child care.[3] Rapid categorization of victims during mass casualties follows colour coding and decides medical action required. Red tag indicates critical patients demanding immediate action, yellow tag indicates non-ambulatory patients between critical and minor categories requiring urgent action, green tag for ambulatory patients who need minor care and black tag implies expired patients.[4]

To the absence of specialist in primary health care centers and to minimize unnecessary referrals, National AIDS Control Organization has recommended seven colour-coded kits for syndrome based management of STI/RTI symptoms- grey colour (urethral, vaginal, anorectal discharge and painful scrotal swelling), green kit (vaginal discharge), white and blue kit (non-herpetic genital ulcerative disease), red kit (genital herpetic ulcer), yellow kit (lower abdominal pain) and black kit (inguinal bubo).[5] Similarly, IMNCI (Integrated Management of Childhood Illness) employs color coded management of common childhood illness. Pink implies urgent referral to higher center for admission, yellow indicates initiation of treatment with medicine, green calls for home management.[6]

Under Biomedical waste management, hospital wastes are categorized and segregated in different coloured coded bin for safe disposal. Wastes which are disposed by incineration like human anatomical waste, animal anatomical waste, non sharp & non plastic solid wastes, and microbiological wastes should be segregated in yellow bin. Non sharp plastic wastes like intravenous sets, catheter, tubings should be collected in red bin. Blue colour coded bin is for sharp waste and black bin is for discarded and cytotoxic medicines, incineration ash as well as solid chemicals.[7]

Colour coded stratification for ordering radiological tests are practiced in Australia aimed at the reduction in the number of test and its associated cost. Those radiological tests

categorized under 'red' should be authorized by a consultant, 'amber' colour coded radiological test must be signed by a registrar or a consultant and 'green' test can be ordered by interns or residents.[8] Patient-wise colour coded box for tuberculosis treatment is being provided under Tuberculosis program in India. Red colour box for category I patients, blue colour box for category II patients.[9]

For ensuring uniform hospital colour codes and for conveying different emergency situations to hospital staffs without panicking the patients, a policy statement was issued by Ministry of Health services, British Columbia regarding colour codes as follows: code red (fire), blue cardiac arrest, orange for disaster or mass casualties, green for evacuation, yellow for missing patient, amber for missing or abducted infant or child, black for bomb threat, white for aggression, brown for hazardous spill, grey for system failure and pink for pediatric emergency and/or obstetrical emergency.[10]

Colour coding for topical ocular medications, colour coded anesthetic drugs for preventing accidental syringe swapping, intravenous colour coded cannula, colour coded wrist bands for identification of specific alerts like allergies, do not resuscitate, fall risk etc., are other major applications of colour coding.

Use of colour technique in health care also has its limitations such as presence of limited number of identifiable colours, yet more categories of pharmaceutical products; certain colours are associated with specific meaning universally like red for warning, black or white for death, hence there will be a potential risk of confusion over these colours and therefore it should be used cautiously; moreover, it needs intense training of staffs for proper identification and utilization during emergencies.[11]

Even though colour coding has been extensively used in medical field for the prevention of medication errors, it needs international standardization and proper validation for uniform utilization around the globe.

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