



Developing an injury prevention photosphere

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INTRODUCTION

Approximately 35,000 children under 3 years old attend emergency departments (EDs) annually with an injury. In this age group, injuries are likely to occur in the home and these children are also more likely to re-attend with further injury.

Health visitors (HVs) have no guideline or tool for contacts with families post-injury. We have developed a prototype intervention to support and standardise HV practice with consequent improvements in family-centred care.

AIM

To create a framework and fully functioning pilot product:

- examine the technical means for online mark-up of markers
- revise the current prototype and create a pilot platform
- run through the process with a small group of HVs and families
- establish scale-up requirements, identify delivery partners
- identify suitable routes for follow-up funding/investment for wider scale user trials

MATERIALS & METHODS

Qualitative feedback, examples

- Focus groups with parents from three young mum's groups and children's centres in Bristol:
 - pop-ups with facts are good
 - prevalence data are useful
 - too much text/too difficult to understand
 - information panel red to indicate danger
 - use 'standard' hazard warning triangle
- Meeting with health visitors
 - realistic, makes one think
 - send text, 'so sorry to hear about...' and provide link
 - CAPT have good videos, gain permission to use these
 - for some parents need to introduce this/go through it
 - link to electronic records

RESULTS

- We have developed a demonstration injury prevention photosphere for an 'unsafe' kitchen, bathroom and sitting room
- Hazards can be identified by hovering the cursor over the hazard or clicking on it
- This 'identifies' the hazard and leads to a description of the danger, epidemiological data, positive prevention message and link for further information
- This provides a hi-resolution, three-dimensional view of each room from a scene scan using a mobile phone
- This photosphere has the potential to have a variety of applications and audiences.

What's new?

- A user-centred interactive environment based on a photorealistic visualisation of the user's own environment
- Realistic images independent of language
- Applied to any environment/age group
- Once designed, low cost and simple maintenance
- Opportunities for peer-peer support and shared learning
- Remote assessments & reviews could be undertaken

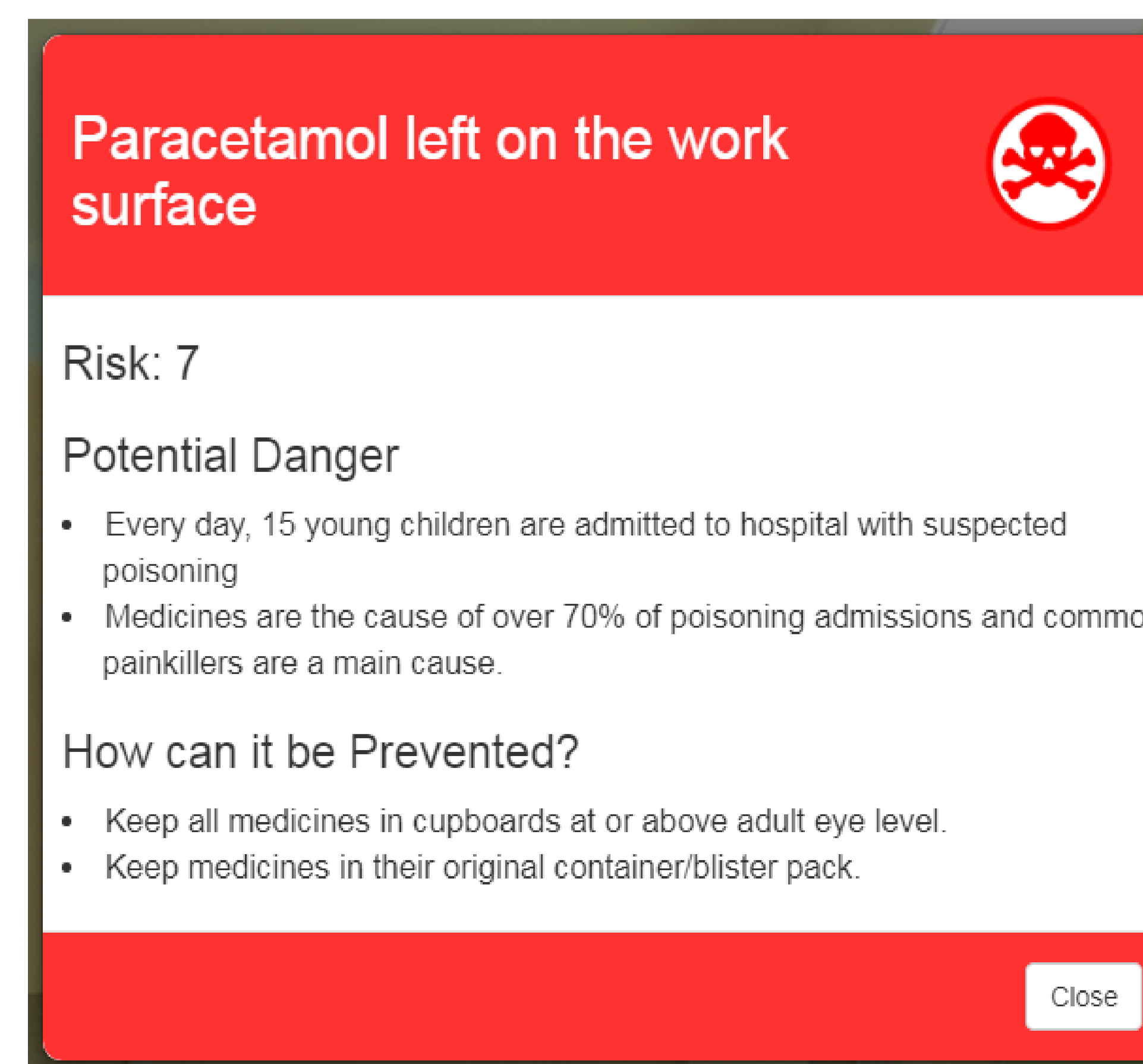
Video example of 'Spot the Hazard' game



Figure 1: Messy kitchen



Figure 2 : Hazard information pop-up



SUMMARY / CONCLUSION

The modified photosphere environment enables a hi-resolution three-dimensional photorealistic view of rooms to be constructed from a scene scan using a standard mobile phone camera. We have received highly positive feedback from HVs and potential users.

The photosphere can be used in groups or one-one and families can use it themselves, independently.

This interactive photosphere is underpinned by an evidence-base and will help to prevent injuries that have lifelong physical and psychological problems and is expensive for both the NHS and families.

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