



CPR Feedback

You Better Know Your Coach

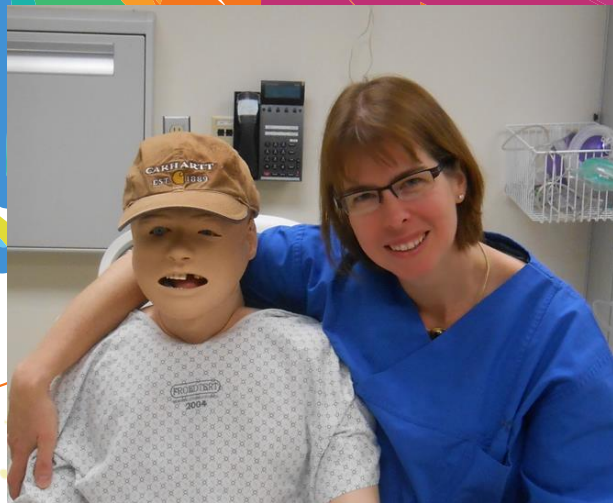
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External accelerometer measurement
Real CPR Help, ZOLL® R series® defibrillator



Internal depth of compression
QCPR, SimMan 3G, Laerdal, Stavanger, Norway



Internal depth of compression
voice activated manikin (VAM)
Laerdal, Stavanger, Norway



Automatic CPR device
LUCAS®2 Physio Control, Redmont, WA

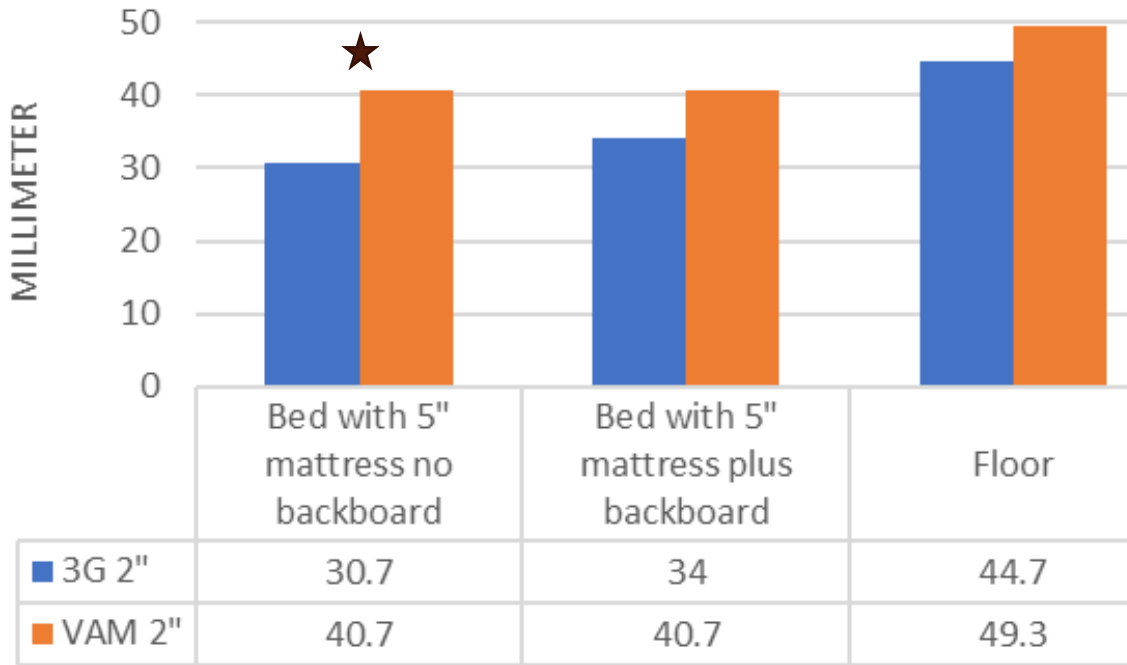
Methods



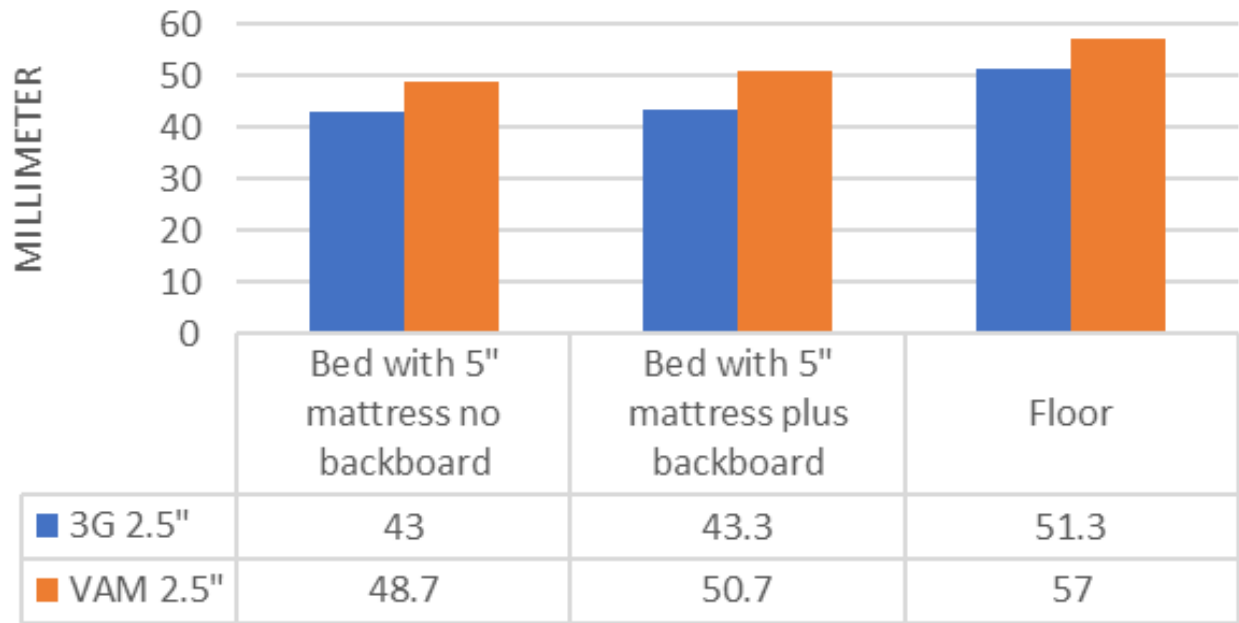


Comparison of measured depth of compression on 5inch mattress +/- backboard and floor with human compressor

2 inch (50.8mm)



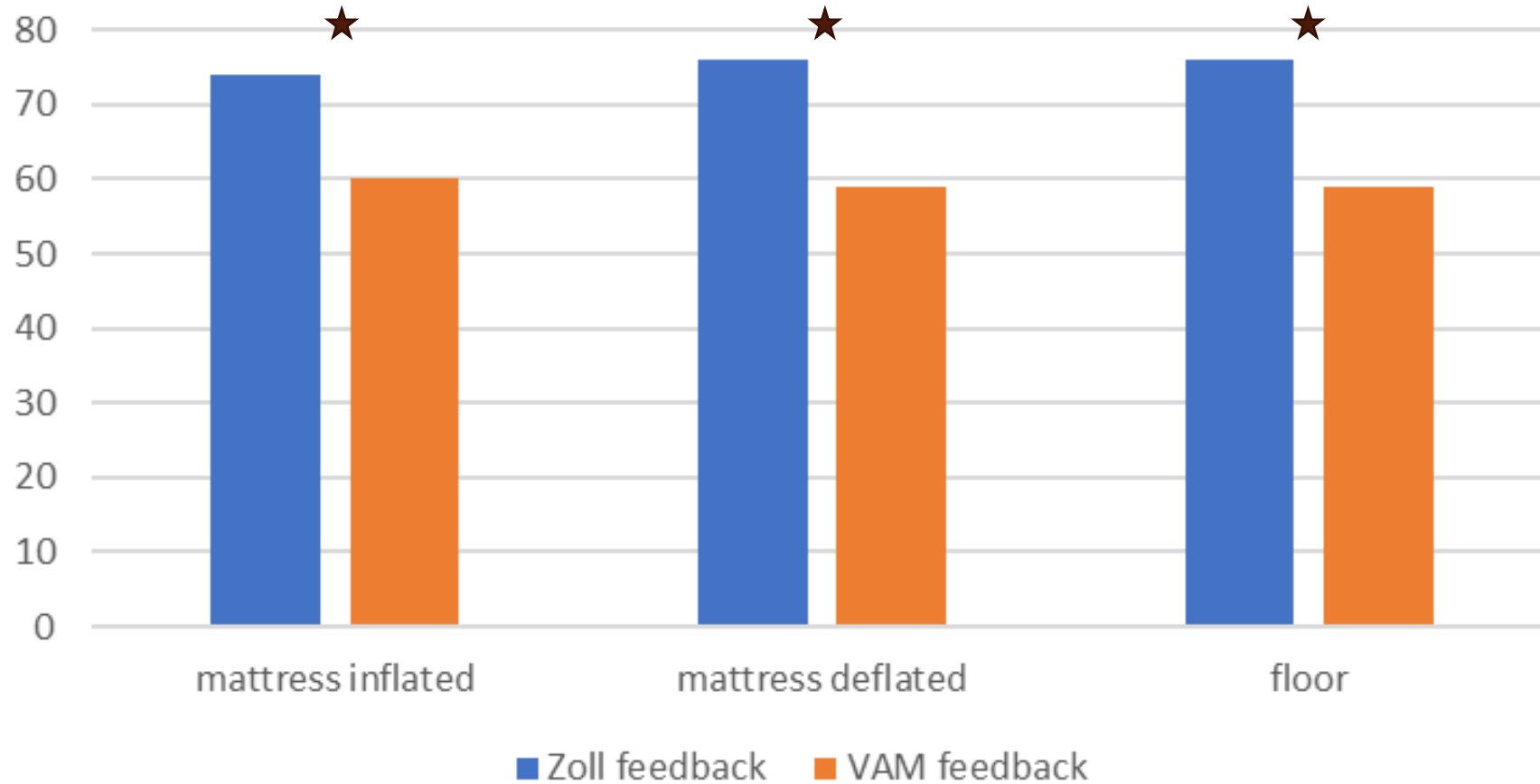
2.5 inch (63.5mm)





External and internal feedback with automatic CPR device

Comparison of measured depth of compression on 5inch mattress +/- inflation and floor with automated compressor.





Conclusions

- Methods used to measure the quality of compressions can give significantly variable feedback
- Limitations of the various methods to quantify need to be understood
- This might lead to overestimating the quality of compressions in certain clinical environments. In the worst case, this can give a false sense of accuracy and lead to reduced quality of care
- **When giving feedback to learners about quality of CPR, it is important to be mindful of the data source and mechanism to quantify information**

References

1. Meaney PA, Bobrow BJ, Mancini ME, et al Improving CPR Quality. Circulation 2013, 23:417-434
2. Smereka J, Szarpak L et al The TrueCPR device in the process of teaching cardiopulmonary resuscitation 2019, 98(27): e15995
3. Beesems SG, Koster RW Accurate feedback of chest compression depth on a manikin on a soft surface with correction for to total body displacement Resuscitation 2014, 85(11):1439–1443

#IMSH2021

SIMULATION:
BRINGING LEARNING TO LIFE

