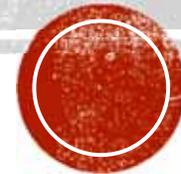


# SOUND LEVEL ASSESSMENT IN THE POSITRON EMISSION TOMOGRAPHY UPTAKE FACILITIES.

Hector Aguilar  
Edmonton, Alberta



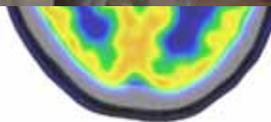
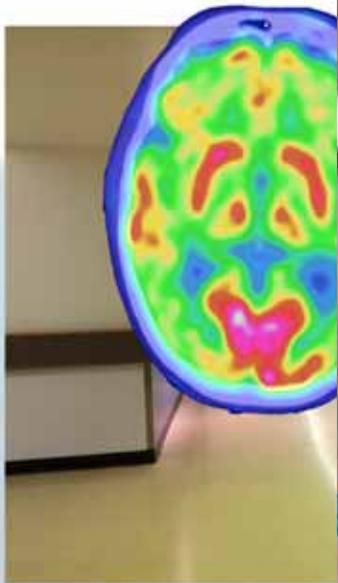
# DISCLOSURES

- none









# **Society of Nuclear Medicine Procedure Guideline for FDG PET Brain Imaging**

**Version 1.0, approved February 8, 2009**

*Authors:* Alan D. Waxman, MD; Karl Herholz, MD; David H. Lewis, MD; Peter Herscovitch, MD; Satoshi Minoshima, MD; PhD, Masanori Ichise, MD; Alexander E. Drzezga, MD; Michael D. Devous, Sr., PhD; James M. Mountz, MD, PhD

## **2. Pre-injection**

- a. Environment – Should be stable for at least 30 minutes prior to FDG injection and in the subsequent uptake phase (at least 30 minutes).
  - (1) The patient should be placed in a quiet, dimly-lit room.
  - (2) Background noise is acceptable with eyes open.



IDEAL  
~30 dB



NOT IDEAL  
~?? dB



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## Loudest band in the world

From Wikipedia, the free encyclopedia

**2008** [\[ edit \]](#)

Manowar achieved an [SPL](#) of 139 dB during the sound check (not the actual performance) at the Magic Circle Fest in 2008.<sup>[\[15\]](#)</sup>

139 dB!



ACCEPTABLE  
~50 dB

# DESIGN

**Ambient  
Sound Levels**

**30  
PET/CT**

♂ & ♀

**All Ages**



<10%

> 50 dB

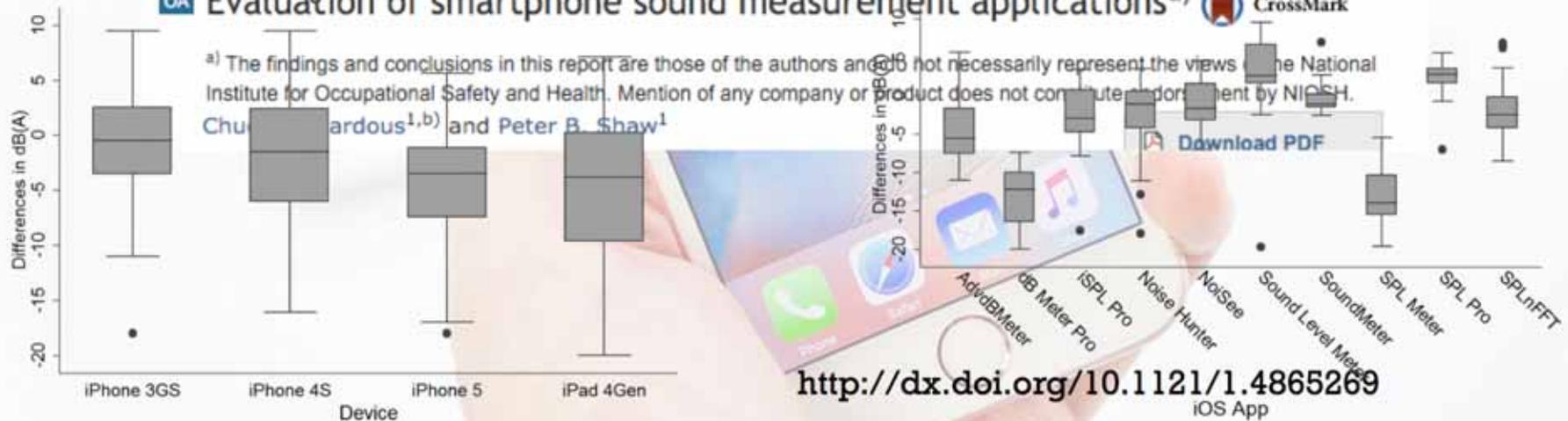
# METHODS



## Evaluation of smartphone sound measurement applications

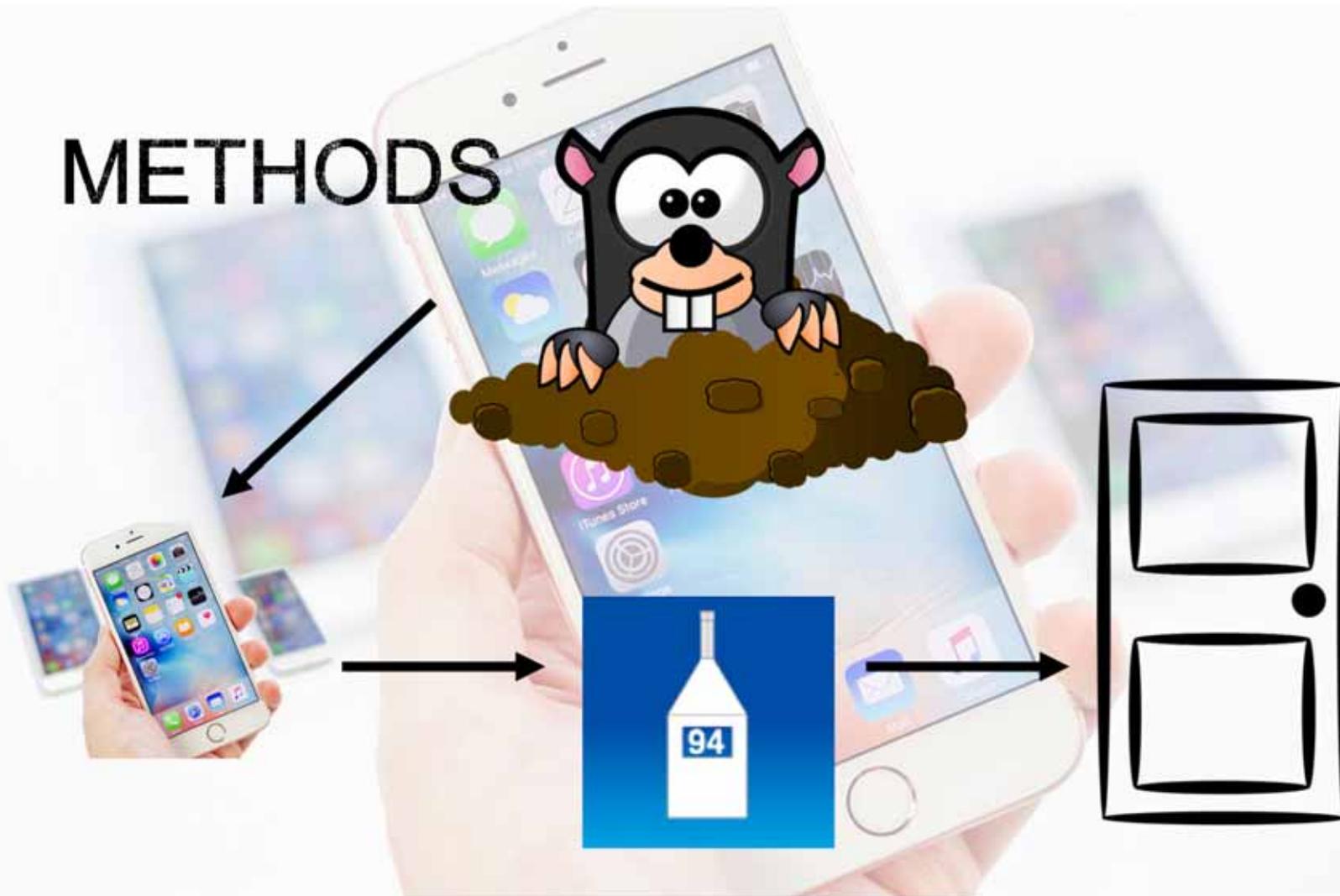
<sup>a)</sup> The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the National Institute for Occupational Safety and Health. Mention of any company or product does not constitute endorsement by NIOSH.

Chun-Hong Chiu<sup>1,b)</sup> and Peter B. Shaw<sup>1</sup>



<http://dx.doi.org/10.1121/1.4865269>

# METHODS



iTestMic

# 65.4

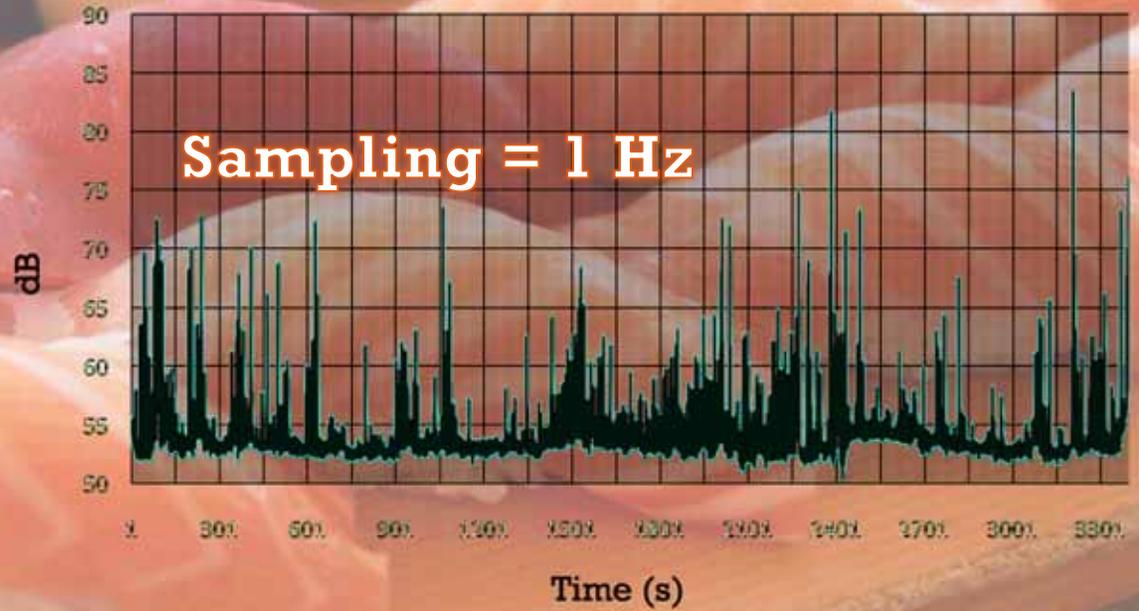
Max: 75.7    Peak: 80.9  
Quantity: Lp, F, Fast  
Elapsed Time: 0h 0m 34.39s

Level Type:    Weighting:  
 Lp    Leq     Flat    A    C  
Response:     Fast    Slow    Impulse



SoundMeter

Level Log



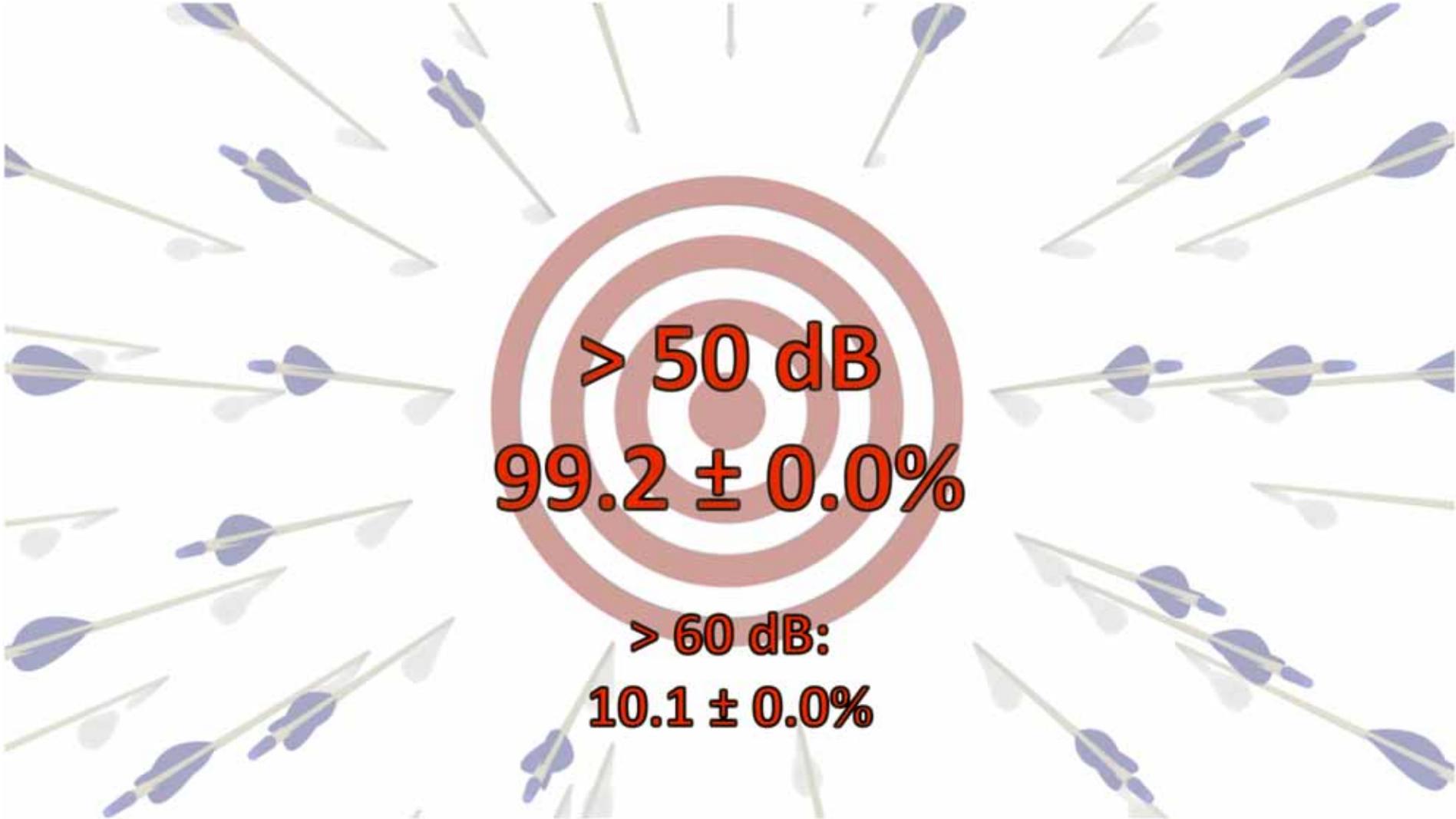
# RESULTS

1 brain  
1 cardiac  
28 oncologic

Avg. uptake  
time (s) :  
 $3551.9 \pm 204.6$

Avg. Max (dB):  
 $92.3 \pm 1$

Avg. Range (dB):  
 $33.2 \pm 0.8$

A target graphic with three concentric red rings and a central bullseye. Numerous blue arrows with green shafts are scattered around the target, some pointing towards it. The background is white with a faint pattern of arrows.

**> 50 dB**  
**99.2 ± 0.0%**

**> 60 dB:**  
**10.1 ± 0.0%**

# INTERVENTIONS)

3M™ E-A-Rsoft Yellow Neon Uncorded Earplugs

Noise Reduction Rating 33 Decibel

SOMETIMES  
JUST  
LEAD TO  
SHHHH



Canadian Centre for  
Occupational Health and Safety



[https://www.ccohs.ca/oshanswers/prevention/ppe/ear\\_prot.html](https://www.ccohs.ca/oshanswers/prevention/ppe/ear_prot.html)



ROUN  
D 2?

# THANK YOU

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