

Look Up Full Text Find PDF Export... Add to Marked List

1 of 3

Can FMA (Noise) 1989 Prevent Occupational Noise-Induced Hearing Loss? An Evaluation using Fault Tree Analysis

By: Ahmad, MA (Ahmad, M. A.)^[1]; Razali, A (Razali, A.)^[1]

INTERNATIONAL MEDICAL JOURNAL MALAYSIA
Volume: 18 Issue: 3 Pages: 59-63
Published: DEC 2019
Document Type: Article

Abstract

Introduction: Factory and Machinery Act (Noise Exposure) Regulation 1989 (FMA [Noise] 1989) has been implemented in Malaysia for nearly 30 years, but noise-induced hearing loss (NIHL) cases is still rising. Fault tree analysis is a top-down approach to analyzing incidences of 'failures', starting with establishing the single top event that will eventually cause NIHL, followed by identification of the contributing factors to the top event which are the immediate or basic events. Through its visual, structural and deductive approach; FTA is able to depict the temporal sequence of events and their interactions in a formal and logical hierarchy. Materials and Methods: Employees with permanent standard threshold shifts (PSTS) underwent further assessment confirming the presence of NIHL. A single common fault tree was constructed based on six cases of PSTS. The top event is the PSTS. Intermediate and basic events were identified and mapped with relevance to the provisions in the FMA (noise) 1989 indicating how failed control measures have resulted in the PSTS cases. Results: The constructed fault tree with its branches illustrated how breach or noncompliance of FMA (Noise) 1989 resulted in the eventual top event (NIHL). Conclusion: FTA provides a standardized perspective of errors within the system in preventing NIHL.

Keywords

Author Keywords: FTA; NIHL; FMA (Noise) 1989

Author Information

Reprint Address: Razali, A (reprint author)

+ Int Islamic Univ Malaysia, Kulliyyah Med, Dept Otorhinolaryngol & Head & Neck Surg, Kuantan 25200, Pahang, Malaysia.

Addresses:

+ [1] Int Islamic Univ Malaysia, Kulliyyah Med, Dept Otorhinolaryngol & Head & Neck Surg, Kuantan 25200, Pahang, Malaysia

E-mail Addresses: ailin@iium.edu.my

Publisher

INT ISLAMIC UNIV MALAYSIA, KULLIYAH MEDICINE, JALAN SULTAN AHMAD SHAH, KUANTAN PAHAN, 25200, MALAYSIA

Categories / Classification

Research Areas: General & Internal Medicine

Web of Science Categories: Medicine, General & Internal

See more data fields

1 of 3

Citation Network

In Web of Science Core Collection

0

Times Cited

Create Citation Alert

13

Cited References

View Related Records

Use in Web of Science

Web of Science Usage Count

0

Last 180 Days

0

Since 2013

Learn more

This record is from:

Web of Science Core Collection
- Emerging Sources Citation Index

Suggest a correction

If you would like to improve the quality of the data in this record, please [suggest a correction](#).

Cited References: 13

Showing 13 of 13 View All in Cited References page

(from Web of Science Core Collection)

- Applying fault tree analysis to the prevention of wrong-site surgery** Times Cited: 7

By: Abecassis, Zachary A.; McElroy, Lisa M.; Patel, Ronak M.; et al.

JOURNAL OF SURGICAL RESEARCH Volume: 193 Issue: 1 Pages: 88-94 Published: JAN 2015
- Minuteman for the Joint Fight** Times Cited: 1

- By: [Anonymous].
Strategic Studies Quarterly Published: 2018
3. Title: [not available] Times Cited: 1
By: [Anonymous].
FIND IT OSHA Published: 2013
Retrieved April 6, 2018, from
4. Title: [not available] Times Cited: 1
By: [Anonymous].
HEAR CONS PROGR CONS Published: 2002
OSHA USA. 2002. Hearing Conservation Program for Construction Workers. Retrieved April 5, 2017, from <https://www.osha.gov/laws-regs/federalregister/2002-08-05>.
5. **Basic fault tree analysis for use in protection reliability** Times Cited: 7
By: Beresh, R.; Ciufu, J.; Anders, G.
International Journal of Reliability and Safety Volume: 2 Issue: 1-2 Pages: 64-78 Published: 2008
6. **Fit for hearing protection with earplug testing** Times Cited: 3
By: Colucci, D. A.
Hear. J Volume: 67 Pages: 40 Published: 2014
7. Title: [not available] Times Cited: 19
By: DHILLON BS
INT J HLTH CARE QUAL Volume: 16 Pages: 306 Published: 2003
8. **Determining Preventability of Pediatric Readmissions Using Fault Tree Analysis** Times Cited: 7
By: Jonas, Jennifer A.; Devon, Erin Pete; Ronan, Jeanine C.; et al.
JOURNAL OF HOSPITAL MEDICINE Volume: 11 Issue: 5 Pages: 329-335 Published: MAY 2016
9. **Occupational Noise-Induced Hearing Loss** Times Cited: 83
By: Kirchner, D. Bruce; Evenson, Eric; Dobie, Robert A.; et al.
Group Author(s): ACOEM Task Force Occupational
JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE Volume: 54 Issue: 1 Pages: 106-108 Published: JAN 2012
10. **Fault tree analysis** Times Cited: 1
By: Kritzinger, Duane
AIRCRAFT SYSTEM SAFETY: ASSESSMENTS FOR INITIAL AIRWORTHINESS CERTIFICATION Book Series: Woodhead Publishing in Mechanical Engineering Pages: 59-99 Published: 2017
11. **The fit testing revolution.** Times Cited: 2
By: Laws, Jerry
Occupational health & safety (Waco, Tex.) Volume: 83 Issue: 5 Pages: 45-6 Published: 2014-May
12. **Using Fault Trees to Advance Understanding of Diagnostic Errors** Times Cited: 5
By: Rogith, Deevakar; Iyengar, M. Sriram; Singh, Hardeep
JOINT COMMISSION JOURNAL ON QUALITY AND PATIENT SAFETY Volume: 43 Issue: 11 Pages: 598-605 Published: NOV 2017
13. **Assessing risk: the role of probabilistic risk assessment (PRA) in patient safety improvement** Times Cited: 52
By: Wreathall, J; Nemeth, C
QUALITY & SAFETY IN HEALTH CARE Volume: 13 Issue: 3 Pages: 206-212 Published: JUN 2004

Showing 13 of 13 [View All in Cited References page](#)

Clarivate

Accelerating innovation

© 2020 Clarivate [Copyright notice](#) [Terms of use](#) [Privacy statement](#) [Cookie policy](#)

Sign up for the Web of Science newsletter [Follow us](#)

