Non-accidental deaths (NADS) in a global oil and gas company: a ten-year review

Dr Fredrick Eigbe, 2007

ABSTRACT

Background: This study reviews Non-Accidental Deaths within Shell Exploration & Production (E&P), assesses the relevant health needs, evaluates the Shell E&P AED standard with respect to cost effectiveness, and uses the findings as a basis for recommendations.

Results: 161 Non-Accidental Deaths (NADs) were reported over the period, 158 of which were suitable for this study. 125 NADs were presumed to be cardiac in origin, and 67 of these were witnessed and occurred in the workplace. According to literature based estimates (best case scenario), 29 of these victims could have survived to hospital discharge by the timely and effective use of an Automated External Defibrillator at a cost of £279,510.30 per life saved.

However, the quality of life of these survivors may have been poor; for 29 victims the benefit in terms of Quality Adjusted Life Years (QALY) was 1.5 QALY at a cost of £5,403,806 per QALY. The cost of life year saved was calculated as £11,362.20.

Hypertension and cardiac disease were identified as the foremost risk factors for cardiac arrest in this study.

This study also identified weaknesses in occupational health control measures including fitness to work standard, medical emergency response, and working and living conditions (e.g. a work-leave cycle of two years on followed by two weeks leave in some standalone contractor workforces).

Recommendations: The primary prevention of hypertension and cardiac disease is important because these were the two main risk factors identified for NADs in this study, and because simple initiatives can be effective.

Effective AED programmes are expensive and the cost per life saved is high.
A multi strategy approach towards NAD prevention should include: an integrated health and wellness strategy; policies to help smokers to quit; effective interventions to promote healthy eating; and the promotion of physical activities that encourage obese people to lose weight and maintain weight loss.

The prophylactic implant of an ICD is recommended as a cost effective device in populations with heart rate abnormalities likely to result in cardiac arrest.

Effective implementation by contractors of existing Shell HSSE policy would go a long way towards reducing contractor NADs.