



3<sup>rd</sup>  
INTERNATIONAL  
CONGRESS ON  
ENVIRONMENTAL  
HEALTH 2014

PORTO, 24<sup>th</sup> to 26<sup>th</sup> SEPTEMBER 2014

**PROCEEDINGS  
BOOK**

EMERGING RISKS AND CHALLENGES ON ENVIRONMENT,  
HEALTH AND SAFETY

Allied Health Sciences School of Polytechnic Institute of Porto,  
Portugal





**3<sup>rd</sup>  
INTERNATIONAL  
CONGRESS ON  
ENVIRONMENTAL  
HEALTH 2014**

**PORTO, 24<sup>th</sup> to 26<sup>th</sup> SEPTEMBER 2014**

**PROCEEDINGS  
BOOK**

**EMERGING RISKS AND CHALLENGES ON ENVIRONMENT,  
HEALTH AND SAFETY**

**Allied Health Sciences School of Polytechnic Institute of Porto,  
Portugal**

**Title:**

3<sup>th</sup> International Congress of Environmental Health: Proceedings Book  
3<sup>o</sup> Congresso Internacional de Saúde Ambiental: Livro de Resumos

**Edition:**

1<sup>st</sup> Edition / Book in 1 Volume, 520 pages

**Authors / Editors:**

Vieira da Silva, Manuela; Oliveira, Rui; Rodrigues, Matilde; Nunes, Mafalda;  
Santos, Joana; Carvalhais, Carlos; Rebelo, Andreia; Freitas, Marisa; Xavier, Ana

**Publisher:**

(ESTSP-IPP)

Scientific Area of Environmental Health of Allied Health Sciences School of Polytechnic Institute of Porto  
Área Científica da Escola Superior de Tecnologia da Saúde do Instituto Politécnico do Porto

**Design / Layout:**

4CS

**Local / Date:**

Porto / November 2014

**ISBN:**

978-989-20-5086-7

**Legal Deposit:**

384046/14

**DISCLAIMER:**

This book contains information obtained from authentic sources. Reasonable efforts have been made to publish reliable data and information, but the authors, as well as the publisher, cannot assume responsibility for the validity of all materials or for the consequences of their use. Neither this book nor any part may be reproduced or transmitted in any form or by any means, electronic or physical, including photocopying, microfilming, and recording, or by any information storage or retrieval system, without prior permission in writing from the Scientific Area of Environmental Health of ESTSP.

All rights reserved. Authorization to photocopy items for internal or personal use may be granted by Scientific Area of Environmental Health of ESTSP.

**Trademark notice:** Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation, without intent to infringe.

**(ESTSP-IPP)**

**Scientific Area of Environmental Health of  
Allied Health Sciences School of Polytechnic Institute of Porto**

Rua de Valente Perfeito, 322  
4400-330 Vila Nova de Gaia  
Porto - Portugal  
t. +351 222 061 000  
f. +351 222 061 001  
e. geral@estsp.ipp.pt  
w. www.estsp.ipp.pt

# Characterization of commuting accidents that occurred in workers of Portuguese health institutions

**Authors:** Matilde Martins<sup>1</sup>, Maria do Céu Barbieri<sup>2</sup>, Teresa Correia<sup>3</sup>

*1 School of Health Sciences, Polytechnic Institute of Bragança, Research Centre for Sport Health and Human Development; Institute of Biomedical Sciences Abel Salazar University of Porto, Bragança, Portugal.*

*2 School of Nursing of Porto, Institute of Biomedical Sciences Abel Salazar University of Porto, Porto, Portugal.*

*3 School of Health Sciences, Polytechnic Institute of Bragança, Research Centre for Sport Health and Human Development, Bragança, Portugal.*

**Presenting Author:** Email: matildemartins@ipb.pt | Tel.: +351 962 777 141

## INTRODUCTION:

According to Portuguese legislation in itinere work accident is something that occurs while traveling outside of the workplace on work travelling between their home and place of work and vice versa. (Law No. 102/2009).

Commuting accidents have been little investigated by the scientific community possibly because they are associated with multiple circumstances.

These health institutions occupy the fourth place in the scale of industrial accidents, and it has been in these that were observed the largest average growth rates in the period 1997-2007, 23.27 %. (ACSS, 2009).

## OBJECTIVES:

Characterize in itinere workplace accidents in workers of Portuguese public health institutions between 2009 and 2010; Describe the epidemiological profile of the injured; Identify the main causes and consequences of accidents while traveling.

## MATERIALS AND METHODS:

Retrospective cross-sectional study using the information of records, anonymously, data based in Excel of the Central Administration Health Services program, upon request and subsequent approval of the President of the institution. We have obtained a sample of 999 workers who were hurt during the route between home and the workplace, in the period from January 1st 2009 to December 2010. Data were selected, transported and analyzed by the identification number, on the computer program Statistical Package for Social Sciences version 21.0 for Windows respecting the confidentiality of the participants.

## RESULTS AND DISCUSSION:

During the study period there were 999 in itinere accidents representing 8.4 % of all accidents occurred during the 2 years of the study. The year 2010 registered the highest prevalence of notifications, 58.0 % and ARS Lisbon and Tagus Valley 55.0 %. The most affected professional category was Operational Assistants Auxiliary Medical Action and Nurses 28.4% , the females 84.4%, among the age group 50-54 years 17.2%, with service time superior to 10 years 52.0%, below the level of 12th grade education 57.0%, with an employment contract in public functions 48.2 % and fixed practice hours 53,8%. Although there are no studies that make comparisons, these data are similar to those found in other studies on occupational accidents in health institutions and typical accidents. (ACSS, 2009; Martins, Silva and Correia, 2012, Secco et al, 2008). This rugged profile may be due to the fact professional group of nurses and auxiliary medical action is mostly made up of women and represent the largest contingent workers in health institutions. A higher prevalence of accidents on Monday 19.4 %, 1 hour before of onset labor 65.2%, between 07-08 am 44.7%, on day 3 after weekly rest 31.7% and on emergency service 86.6%. Most workers in health institutions start their work schedule at 8 o'clock, which justifies the high prevalence between 7 and 8

o'clock, data that doesn't agree with the found on typical accidents in other studies, where the highest prevalence was found between 9 and 12 hours. (ACSS, 2009; Ribeiro, Ribeiro, Jr., 2010; Martins, Silva and Correia, 2012).

The main cause was the fall of workers 52.8%, fact which may be due to the rush not to be late for work. The main effects were sprains / strains 27.1% and fractures 12.2%, *have reached multiple parts of the body 25.1% and led to absenteeism 70.4% with 27,463 days lost work.*

#### **CONCLUSION:**

There has high prevalence of in itinere accidents from workers' falls, with high rates of absenteeism and consequently with enormous economic, personal, familiar, social and institutional burdens. We emphasize the need for further research on this issue to deepen the knowledge about in itinere accidents that will lead to prevention interventions of these accidents, which can be traumatic to the worker.

#### **ACKNOWLEDGMENTS:**

Accidents at work; Initinere; Occupational Health; Health promotion.

#### **REFERENCES:**

1. Administração Central do Sistema de Saúde. (2009). Acidentes de Trabalho 2007. Lisboa: Unidade Funcional de Planeamento de Estudos e Recursos Humanos.
2. Portugal. (2009). Regime jurídico da promoção da segurança e saúde no trabalho. Publicado em D.R. I Série A, Lei 102 (10 set, 2009).
3. Martins, M.D.S.; Silva, N.A.P.; Correia, T.I.G. (2012). Accidents at work and its impact on a hospital in Northern Portugal. *Revista Latino-Americana de Enfermagem*. Ribeirão Preto. 20(2): 217-225
4. Ribeiro, P.C.; Ribeiro, A.C.C.; Júnior, F.P.B.L. (2010). Perfil dos acidentes de trabalho em um hospital de Teresina, PI. *Cogitare Enferm*. 15(1):110-6.
5. Sêcco, I.A.O.; Robazzi, M.L.C.C.; Shimizu, D.S and Rubio, M.M.S. (2008) Acidentes de trabalho típicos envolvendo trabalhadores de hospital universitário da região sul do Brasil: epidemiologia e prevenção. *Rev. Latino-Am. Enfermagem*, 2008.16(5):824-831.