



## PHARMACEUTICAL CARE NETWORK EUROPE

### Working Conference 2011 – Abstract

Does pharmaceutical care impact on the safety of individual patients?

Title/Name : PhD pharm Linda Aagaard Phone: + 45 4820 6379  
Thomsen  
Institute : Pharmakon Fax: +45 4820 6060  
Street : Milnersvej 42 Skype:  
Postal code : 3400 Hillerød  
+ City  
Country : Denmark Email address: lat@pharmakon.dk

The above mentioned participant in the PCNE WC 2009 wishes to submit following abstract for a poster or short oral communication (please type & then fax the form to the secretariat). Max. 350 words.

<b>Title</b> From machine to mouth: How can automated dose dispensing lead to safer and more effective patient medication?
<b>Author(s)</b> Linda Aagaard Thomsen, Hanne Herborg, Charlotte Rossing
<b>Type of abstract</b> <input checked="" type="checkbox"/> Research <input type="checkbox"/> Practice development <input type="checkbox"/> Practice implementation
<b>Aim of project/study</b> Automated dose dispensing (ADD) of medicines involves a complex range of processes. Ten years after implementing ADD in Danish primary healthcare, evidence concerning effects on patient safety and best practice is still limited. We aimed at investigating ADD practices targeting patient safety.
<b>Method</b> We performed a systematic review of the literature and analysed Danish documentary data. We included materials describing perceptions and evidence concerning patient safety aspects of ADD in primary healthcare. A Danish health technology assessment report on ADD from 2005 and its literature update from 2010 provided the scientific literature. Additional literature was searched September 2010 using Google and Danish healthcare related web pages. Local councils were asked to provide further documentary data. The qualitative analysis used thematic framework analysis.
<b>Result(s)</b> We included 47 references to the literature and documentary data from 11 local councils and 3 regions. There is evidence that ADD results in fewer dispensing errors (0.01%). Effects on patient safety issues are based on perceptions whereas evidence is limited. Healthcare professionals' perspectives on ADD vary, being optimistic, skeptical or pragmatic. They associate ADD with a number of advantages for patient safety, patients, healthcare, and society, but also with potential failure modes. Healthcare professionals believe patient safety can be improved through interdisciplinary cooperation, clarification of responsibilities, implementation of best practice guidelines,

availability of a single continuously updated electronic medication list, and better knowledge on medication errors related to ADD. Also, they suggest avoiding ADD when medication therapy is unstable, or when multiple dispensing systems are needed. Furthermore, they recommend conducting medication review before initiating ADD to ensure rational therapy.

Healthcare professionals associate ADD with increased risk of medication errors at hospital admission. They suggest improving guideline implementation and increasing hospital staff's knowledge and awareness of ADD.

In conclusion, ADD is a safe way of dispensing medicine, but evidence is needed on how possible failure modes affect patient safety. Results from this study, together with results of a failure mode and effects analysis of ADD in primary health care, may help guide the development of best practice guidelines for health care professionals with a focus on patient safety.

+++ NB: PhD students get 50 Pound reduction on the conference fee if their abstract is accepted ++++