Effectiveness of Periodical Medical Examination to Prevent Work-Related Ill-Health

Introduction
Periodic health examinations (PHE) have been a fundamental part of occupational health and safety (OHS) practice for decades. Nonetheless, PHE have not received a great deal of attention in health economics and ethics literature, which poses many interesting challenges from an efficiency and an equity perspective.

Methods
We performed electronic searches in databases as EMBASE, PUBMED and Cochrane Library from September 2007. Search terms included MeSH, EMTREE and free text terms related to economic evaluation, occupational health intervention and productivity. We independently included all studies based on three criteria:

1. The analysis was a full or partial economic evaluation (cost analyses);
2. Included OHS interventions targeted at an employed population; and
3. Were written in English, French, or Dutch.

Results
The best available evidence assessing benefits of OSH interventions consisted of 156 economic evaluations. A broad range of intervention types was studied in the literature, most frequently health promotion (27%), or multiple intervention types within one study (31%). However, none of these studies specifically focused on PHE. Studies mainly came from Europe (39%) and North-America (51%), and originated in diverse sectors and industries, most frequently health care (15%).

Conclusions
Determining the value of OHS proved a theoretically complex endeavour and there are hardly data available on the value of PHE. While the majority of OHS interventions had positive conclusions, most studies were conducted in similar settings and showed substantial methodological deficiencies. Consequently, we need to be cautious to transfer results across settings or countries. Nonetheless, we rendered valuable insight into the potential cost-effectiveness of PHE and key-elements to design a high-quality study. We have now set up a study in Belgium comparing short-, medium- and long-term outcomes in employees undergoing PHE, with a group without an intervention.