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DIRECTORATE FOR EMPLOYMENT, LABOUR AND SOCIAL AFFAIRS
HEALTH COMMITTEE

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Expert group -- Incentives for Implementation of Information, Communication Technologies in the Health Sector

DRAFT WORK PLAN IN THE AREA OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE HEALTH SECTOR

This Document is submitted for Discussion at the Expert Group Meeting on " Implementation of Information and Communication Technologies in the Health Sector" to be held at OECD Headquarters on April 13, 2007.

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INTRODUCTION

1. This document is intended to inform discussions on the OECD project: "*Assessing incentives for implementation of information, communication technologies (ICTs) in the health sector"* at the Expert Group meeting of April 13, 2007. The document discusses plans for work in the priority areas agreed by Health Committee members at their meeting of 14-15 November 2006.

2. Experts are invited to comment on the general approaches of the work plan, on the particular projects proposed by the Secretariat, alternatives or further topics to be addressed, and highlight specific issues that are important for their countries.

3. The Secretariat is particularly interested in comments on the following questions:

- **What is the added value in the project areas and approaches considered?**
- **Can experts help identify national/international initiatives and recent substantive studies relevant to the proposed work?**
- **Which of the proposed project components should be given priority?**
- **What new information is needed and how can this be addressed through the proposed OECD project (e.g., broad survey, country reviews, and case studies)?**

4. The remainder of this document is organised as follows: Following a brief presentation of the background to the project, the document provides a proposal for project work that could be taken forward. It outlines limitations and key issues to be considered by the expert group, a possible methodology for conducting the work, process and timelines.

Background

5. At its meeting of 14-15 November 2006, the Health Committee agreed to include work on information, and communications technologies (ICTs) in its programme of work and budget (PWB) for 2007-2008 subject to receipt of voluntary contributions needed to finance the work. The Committee also discussed the orientation that the work should take. Document DELSA/HEA(2006)8 served as a basis for these discussions. It provides an overview of current understanding of the opportunities offered by ICTs to improve efficiency in health care and of barriers to their uptake and diffusion. It lays out possible objectives for the project options or workstreams for future work and the different levels of analysis.

6. The Secretariat drew four broad conclusions from the discussion:

1. OECD work should seek to:

   Gain a better understanding of costs and benefits of ICTs in the health sector, financial sustainability and organisational constraints;

Identify conditions and policies for achieving efficiency improvements in the health sector through the use of ICTs;

Identify emerging best practices.

2. It was important for the work to concentrate on addressing economic aspects and policy frameworks essentially along the lines of workstreams 1 and 2 in document DELSA/HEA(2006)8. Namely, work should focus on evaluating returns on ICT investment, impacts on quality of care, efficiency and productivity, government or system incentives and framework policies that may affect uptake.

3. Work should draw on lessons learned, particularly from applications of ICTs to chronic care and the on-going OECD work on coordination of care.

4. It was important to convene an expert meeting to refine the proposed project and better define the scope of the work to be carried out.

Proposed Work Plan

7. In this section the Secretariat sets out a work plan that retains the aims and objectives agreed by the Health Committee. The plan below is presented as two complementary workstreams. Each workstream will have set tasks, timelines and responsibilities and will be carried out in parallel. They will, however, be brought together into a single report at the end of the project.

Workstream 1-Challenges of valuing ICTs in health care

8. The need for analysis under this workstream is two-fold. First, increasing pressures on health care resources have stimulated interest over the past decade in health services efficiency and in ways to improve it. And many observers today argue that ICT implementation can improve both the quality and cost-effectiveness of care. Second, as more ICT initiatives and projects are implemented, there is a growing need to develop evaluation frameworks that can measure effectively the impacts of these technologies. The objective of this workstream, therefore, is to assist governments in gaining a better understanding of the impacts of ICTs on health care systems and identifying variables and levers to support decision making.

9. Measurement of the costs and benefits of implementing an ICT system is, however, a notoriously complex undertaking. A research agenda for investigating the value of ICT in health care could expand rapidly and in many different directions. In drafting this section, the Secretariat took therefore note of the suggestion made by Health Committee delegates regarding the need to refine proposals for work in this area while maintaining linkages with the current work on efficiency of health care systems.

Proposed Project Components

10. The workstream would be implemented in two phases. The objective of the first phase is to provide i) an improved understanding of the range of analytical approaches and evaluation methods that are available to study the impacts of ICTs; and ii) an inventory or typology of the most common indicators used across OECD countries for benchmarking ICT adoption.

11. The work could be accomplished essentially through a stock-taking exercise of information previously collected and/or analysed on ICTs in the health sector. The review would also provide the information base for subsequent case-study work.

12. Given the broad range of possible domains for exploration, the analysis would need to be framed by a clearly defined framework, search strategy, taxonomy, inclusion and exclusion criteria. It would also require participating countries and institutions to nominate experts to conduct together with the Secretariat a structured review and evaluation of the identified indicators.

13. The advantage of this approach is that it can i) be done by building on recent major systematic literature reviews; and ii) exploit insightful analytical work already underway in several OECD countries.

14. A main drawback is that, at present, it is unrealistic to expect comprehensive measurements of effects of ICT implementations in the health sector across a large number of OECD countries. A recent study by the Southern California Evidence-Based Practice Center[1] notes how the majority of studies published between 1995 and 2004 emanated from just four "benchmark" institutions. Moreover, the published literature is relatively weak, heterogeneous and poorly indexed. It generally fails to report in detail descriptions of both the ICT intervention and the organizational/economic environment in which it is implemented. The paper by Andrew Street on: "The contribution of ICT to health care system productivity and efficiency: what do we know?" (Room Document 1) further elaborates on these issues. It also provides a critical assessment of the analytical approaches that are available to study the impact of ICT on productivity and efficiency.

15. The second phase of the project would attempt to fill in some of the gaps within the presently available data through an analysis of case studies. Work would focus on specific ICT projects or programmes in a number of OECD countries. Decisions on the criteria for the selection of case studies, the level(s) at which this analysis would be cast, the analytical framework for the study will be taken after discussion with the expert group. Given the interest expressed by Health Committee delegates in the use of ICTs for the management of chronic diseases and improved coordination of care, the case studies could focus on ICT implementation for these purposes.

16. Analysis of the case studies would be carried out through semi-structured expert interviews at country level and could be complemented by the collection of quantitative data. Such an approach would require the Secretariat to work with a small number of experts from various countries or other participants. Case studies developed in such a way are much more likely to get to the key issues than, for example, surveys. A potential drawback to such an approach would be a fair degree of variability between case studies, which will hinder the generalisation and transferability of the findings.

17. The number of case studies to be conducted and the selection of countries would be determined by an assessment of the characteristics of the proposed case studies, the variables under investigation, the need to ensure the validity and reliability of findings, and the resources available. The Secretariat's working assumption is, however, that the total number of case studies should be in the range of 3-5.

Workstream 2- Drivers and incentives for implementation

18. It is difficult to obtain reliable figures on how much the health care industry is spending on ICTs and the extent of adoption and diffusion. Nonetheless, the weight of the available evidence is that diffusion of ICT in the health care system to date is limited compared to other service and business sectors in OECD countries, and much remains to be done to implement their use. Document DELSA/HEA(2006)8 offers perspectives on why this is the case.

[1] Costs and Benefits of Health Information Technology- Southern California Evidence-Based Practice Center-AHRQ Publication No.06-E006.

19. A significant barrier to investment in ICTs is the widely recognized fact that any cost savings resulting from technology changes are not always captured by the implementer; rather they are often passed on to a third party. In essence, revenues/benefits appear at one site and in one budget, while a large share of the cost/resource commitments appear at another site and in another budget. In addition recent evidence indicates that there are strong institutional, organisational and cultural barriers to the uptake of ICTs.

20. A number of direct and indirect incentive programmes have thus emerged and are being tested in both public and private sectors. To date there has been no comprehensive study on the incentive instruments in use. The existing body of evidence is small and fragmented and conclusions are preliminary in nature. As a result, countries are not benefiting fully from each other's experiences. This workstream intends to address this gap. While the specific incentive programmes may not be transferable between health care sectors or locations, an analysis of the factors that promote or hinder ICT implementation could provide very useful lessons for policy.

21. To a large extent examination of the incentives to ICT adoption and implementation is also a logical next step in work on valuing the impacts of ICTs. Recent evidence, for example, has shown how incentive programmes developed and designed essentially to promote change and improved quality of care can also provide an obvious rationale and impetus for ICT adoption and implementation. The use of ICTs can increase the accuracy, timeliness and availability of information to support the determination of quality of care by purchasers and payers administering performance-based incentive programmes.

22. An important outcome from this workstream would be an increased understanding of the role of public sector incentives to improve health care performance with information technology.

Proposed Project Components

23. A work plan under this Workstream could also take a staged approach.

24. In Phase 1, the Secretariat could examine through a preliminary literature review i) rates of adoption of ICT in health care and factors, (e.g., framework policies, programme characteristics and technical hurdles) that may affect ICT uptake; ii) the range of incentives or mechanisms that have been applied to influence introduction and diffusion; iii) and the objectives assigned to these incentives or mechanisms and the evidence about the impacts of these incentives.

25. Once a preliminary review is developed, Phase 2 would aim to assess the impacts of a selected number of incentives "in practice", drawing from case studies in comparable settings and across different health care systems. The case studies should ideally serve to:

- illustrate both good practices and failed experiments, which are seldom published but provide useful lessons;
- characterise strategies, and actions that are useful to enhance the effectiveness of incentives;
- identify critical lessons and guiding principles for their successful application.

26. This phase of the work could be carried out through expert interviews at country level and may perhaps be merged with the case study work under workstream 1.

27. An alternative to the above proposed methodology would be to develop a survey instrument that seeks to elicit the desired information from various countries. The main advantage of this approach would

be that it permits a standardised approach to data collection. However, surveys are relatively resource-intensive and OECD countries will need to actively cooperate in the collection of data.

28. Decision on whether to undertake Phase 2 and on the appropriate methodology will inevitably depend on the information gathered in Phase 1, the prevalence of the various incentive models across OECD member countries, the extent of their implementation and access to data on programme evaluations.

Process and Timelines

29. The following preliminary timetable and process is proposed:

(i) A preliminary discussion of the proposed work plan and potential case studies should be had at the first expert meeting in Paris on **13 April, 2007**.

(ii) Provided the Health Committee meeting of **24-25 May, 2007** endorses the priorities assigned by experts, by the **end of July**, lead countries should have indicated their interest in participating in this project and identified a national contact.

(iii) The review of the research literature, and other material should be completed by **Winter 2007**.

(iv) Most substantive work on case studies should be completed by **Spring 2008**.

(v) A second meeting of experts in the **Spring of 2008** will discuss reports from the literature review, case studies, and planning for the conference.

(vi) A conference in the **Fall of 2008** would provide an opportunity for discussion of a first draft synthesis report, the findings and for agreement on conclusions and recommendations emerging from the work.

Outputs and Deliverables

30. The outputs envisaged from this project include:

- Expert Reports and Briefing Papers;
- A synthesis report drawing on review of the literature and case studies;
- Monograph presenting proceedings from the proposed 2008 conference.