Day Surgery Data Project

DSDP is co-funded by the European Commission
under the Programme of the Community Action
in the field of Public Health 2008-2013

Grant Agreement 2008 1305

FINAL REPORT
01/09/2009 – 31/08/2012

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SECTION I

Declaration by the scientific representative of the project coordinator

I, as scientific representative of the coordinator of this project and in line with the obligations stated in the Grant Agreement declare that:

X The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;

The project:

x has fully achieved its objectives and technical goals for the period;
❑ has achieved most of its objectives and technical goals for the period with relatively minor deviations.
❑ has failed to achieve critical objectives and/or is not at all on schedule.

The public website, if applicable,

x is up to date
❑ is not up to date
x to my best knowledge, the financial statements that are being submitted as part of this report are in line with the actual work carried out and are consistent with the report on the resources used for the project and, if applicable, with the certificate of the financial statement.
x all beneficiaries, in particular non-profit public bodies, have declared to have verified their legal status. Any changes have been reported under section wp1 Coordination and project management, in accordance with the requirements of the Grant Agreement.

Name of the scientific representative of the project Coordinator:

Ugo Baccaglini

Padova, 31 October 2012

SECTION II

Checklist: please see the separate checklist

SECTION III

3.1 SPECIFICATION OF THE PROJECT

Contract number:	2008 13 05
Proposal title:	DAY SURGERY DATA PROJECT
Acronym:	DSDP
Starting date:	01/09/2009
Duration of the project:	36 months
Reporting period:	01/09/2009 – 31/08/2012
Total amount of the project:	1.465.150,00 Euros
EC Co-funding:	300.000,00 Euros
First pre-financing payment:	90.000,00 Euros
Second pre-financing request:	60.000,00 Euros
Third pre-financing request:	60.000,00 Euros
Priority area:	Generate and disseminate health information and knowledge (HI-2008)
Action:	3.1 Development of a sustainable health monitoring system with mechanisms for collection of comparable data and information, with appropriate indicators

Main partner: Agenzia Regionale Socio Sanitaria del Veneto, Italy – ARSS Veneto
Contact person: Costantino Gallo - costantino.gallo@arssveneto.it

Associated partners information and contact person:

- Institut National d'Assurance Maladie * National Institute for Health and Disability Insurance - NIHDI – established in Belgium
  Contact person: Mickael Daubie – Mickael.Daubie@inami.fgov.be
- Caisse Nationale d'Assurance Maladie des Travailleurs Salariés - CNAMTS – established in France
  Contact person: Michel Marty – michel.marty@cnamts.fr
- Europ-Med Orvosi Szolgaltato Kft * Europ-Med Medical Company limited – EUROP-MED Kft – established in Hungary
  Contact person: Gamal Eldin Mohamed – gamal13@gmail.com
- Agenzia Nazionale per i Servizi Sanitari Regionali - AGE.NA.S – established in Italy
  Contact person: Donata Bellentani – bellentani@agenas.it
- Azienda Ospedaliera di Padova – AOP – established in Italy
  Contact person: Ugo Baccaglini – daysurg@unipd.it
- Centro Hospitalar Do Porto – CHP – established in Portugal
  Contact person: Paulo Lemos – paulo.f.lemos@netcabo.pt
- Spitalul Clinic judetean de Urgenta Timisoara * Clinical Emergency County Hospital Timisoara – SCJUT – established in Romania
  Contact person: Florentina Cadariu – cadariuf@yahoo.com
- King's College NHS Foundation Trust - KCH – established in the United Kingdom
  Contact Person: Paul Baskerville – paulbaskerville@mac.com
- Danske Regioner * Association of Danish Regions - ADR – established in Denmark
  Contact person: Claus Toftgaard – clto@post.tele.dk
- Haute Autorité de Santé – HAS – established in France
  Contact person : Catherine Grenier - c.grenier@has-sante.fr

List of collaborating partners:

- International Association for Ambulatory Surgery – IAAS – United Kingdom
- Australian Day Surgery Council – ADSC – Australia
- Belgian Association of Ambulatory Surgery – Belgium
- Dansk Selskab for Dag-Kirurgi – Denmark
- Suomen Päiväkirurgiset Anestesiologit – Filand
- Association Française de Chirurgie Ambulatoire - France
- Bundesverband für Ambulantes Operieren e. V. – Germany
- Multidiszciplinaris Egynapos Sebészeti Társaság – Hungary
- Nederlandse Vereniging voor Dagbehandeling en Kort verblijf – The Netherlands
- Norsk Dagkirurgisk Forum – Norway
- Associação Portuguesa de Cirurgia Ambulatoria – Portugal
- Associacion EspaŇola de Cirugia Mayor Ambulatoria – Spain
- Svensk Dagkirurgi – Sweden
- British Association of Day Surgery – United Kingdom
- Society for Ambulatory Surgery – United States

3.2 FOREWORD

3.2.1 What this report is about

This report describes the objectives, activities, results with their implications, and recommendations of the Day Surgery Data Project (DSDP).

3.2.2 Why the project is important

DSDP highlighted the best practices and main problems with regard to DS health information systems used by European countries.

DSDP proposed standard lists of essential and ideal Day Surgery (DS) indicators. When shared at international and national levels, such sets represent a precondition for comparison of performance and learning across countries, regions and local care systems.

DSDP elaborated an approach explicitly integrating a standardized DS information system with a continuous quality improvement strategy. Together, these have the potential to significantly enhance the performance of DS delivery.

3.2.3 What the key findings are

The "diagnostic" component of DSDP investigated signs and symptoms of poor design and performance of DS information systems. The scientific literature, both peer and grey, search has produced a large number of indicators, about one hundred, useful for monitoring DS systems' key dimensions. An important finding was that the great majority of indicators found in the peer review and grey literature are not integrated within health information systems, including EU projects and international health databases. The vast majority of such indicators are either used *ad hoc* in scientific publications or considered from a theoretical perspective. Process and outcome indicators are mentioned much more frequently than input and output indicators as the emphasis is on monitoring organizational functioning and technical results instead of resources (input) and activities carried out (output). Safety, timeliness and patient satisfaction are investigated much more frequently than efficiency, equity and effectiveness. Most identified documents and articles do not distinguish between "day surgery indicators" and "surgery indicators". Such distinction is important in the design of a functional health information system. Significant differences among peer review articles, grey literature, EU projects and international databases were identified in DS indicators definitions and terminology. Also, DS terminology differs among health institutions and care settings rendering comparisons among indicators impractical. Although the ideal set of DS indicators necessarily varies, as the information needs are different, according to care and management level, i.e. DS unit, surgical department, hospital, regional/provincial level and national level, in general, there is no explicit differentiation among these levels when proposing or using a set of DS indicators. For each indicator it is rarely mentioned whether it has just face validity or whether it has been scientifically validated. In other words, it is not clear how far the proposed indicators are really able to reflect the dimensions they purport to

monitor. There is no definition of Day Surgery common to all MSs. MSs have different coding systems for computerization of procedures, and transcoding is not always feasible. Data collection, including definition of variables, is not standardized. The design of Databases does not allow adaptation to definitions different from those already established. In other words, the design of current Databases does not allow the extraction of data according to specific definitions, different from those already established within MSs. Therefore it is not sufficient to establish standard definitions for the variables of interest and an additional effort is needed to make different information systems compatible. In conclusion several problems and weaknesses were observed which preclude a sensible use of DS indicators, both for policy formulation and managerial purposes.

3.2.4 Who might benefit from the outputs/outcomes

International institutions, such as the EU Commission, OECD and WHO, together with Ministries of Health and local organizations, for instance regional and local health authorities, hospitals and Day Surgery units might benefit from the analysis and tools produced by DSDP.

3.2.5 What the target groups should do differently as a result

The target groups at international and national/regional level should systematically analyze and streamline the structure, processes and outputs of their DS information systems. They should also formulate a strategy capable to combine a set of routine indicators with temporary data collection. Furthermore they should explicitly formulate a policy concerning their DS information system, which integrates system and statistical thinking with continuous quality improvement, i.e. tools, capability and use of cycles of small experiments leading to breakthroughs.

3.3 ACKNOWLEDGMENTS

On behalf of the Day Surgery Data Project (DSDP), I would like to thank all those who contributed to what has been a complex and challenging effort. DSDP aimed at identifying and validating a set of Day Surgery indicators and, as such, relied on the expertise and enthusiasm of national professionals from all participating countries.

In addition to each of the DSDP partners, I am grateful to the collaborating members of the International Association for Ambulatory Surgery – IAAS - in particular the local Project Managers who participated in this project.

The Project Management Team proved to be a successful arrangement. Ugo Baccaglini, the Project Leader, deserves real gratitude for carrying out a difficult task with great care, persistence and attention to details. I want to reserve a special thanks for Evelino Perri who had the role of Project Administrator. I would also like to thank two colleagues, who assisted me for the administrative aspects, Tiziana Grossele and Davide Bilardi, for their excellent work.

Leading the Expert Team, Roberto Gnesotto's contribution was invaluable in keeping the project focussed and moving forward. It is fair to say that the project would have had little hope of meeting its objectives without his dedicated efforts. A special thanks to our expert in Public Health, Claudio Beltramello, who played an important part in all scientific aspects of the project.

A special thanks to our expert in Statistics, Nicola Gennaro who played a crucial role in designing protocols, collecting, analysing and integrating data and offering solutions, to our expert in Epidemiology, Marcello Vettorazzi, who did very valuable work and to our expert in Biostatistics, Rino Bellocco.

A special thanks goes to Attilio Nosadini who collaborated with us on the improvement of the research protocols and the analysis of data.

Crucial has also been the support of the 'Assessment Team: special thanks to Carlo Castoro, Paul Jarrett and Gérard Parmentier whose contribution was freely and actively given.

I would also like to thank the officers in Luxembourg for their continuous assistance on technical and financial matters throughout the course of the project. I would especially like to acknowledge the assistance of Paola D'Acapito for her specific support and Guy Dargent who has sustained and encouraged this work from its very beginning.

I think I can speak for the entire project when I say that it has been a pleasure to meet and work with partners and to express the hope that we may have the opportunity to build on this important work further in the future.

Pascale Camporese
Project Coordinator, AOP

3.4 LIST OF TABLES AND FIGURES (if applicable):

Table I and Table II	Implementation of the technical WPs
Table III	Key information for each technical WP
Table IV	Project timeline

3.5 KEYWORDS PubMed Mesh:

- Ambulatory surgical procedures OR day surgery OR ambulatory surgery OR office based surgery AND quality indicators health care
- Models, Organizational AND Quality indicators health care
- Ambulatory surgical procedures AND models organizational
- Surgicenters AND quality indicators health care
- Process assessment AND ambulatory surgical procedures
- Outcome and process assessment AND ambulatory surgical procedures

SECTION IV

FINAL PUBLISHABLE EXECUTIVE SUMMARY

4.1 FINAL PUBLISHABLE EXECUTIVE SUMMARY

4.1.1 Summary description of the project scope and general and specific objectives

In most developed countries Day Surgery (DS) is now considered the best option for over 80% of elective surgical operations providing a safe and effective approach. DS represents an innovative tool for health sector reform in Europe contributing to several common objectives such as improving quality of care, controlling cost, enhancing efficiency and possibly equity. Most MSs do not use DS to its full potential. One of the reasons behind such situation is the paucity of knowledge concerning critical aspects of DS organization and performance. Available DS data and indicators present important limitations curbing the adoption of evidence-based decisions and slowing DS growth. Knowledge gained through a better designed information system is invaluable for an evidence-based formulation and implementation of technically effective, managerially sound, economically sustainable, socially acceptable and equitable DS systems of care in Europe.

The general objective of the project was to identify and validate sets of DS indicators and to develop the Information Systems on DS in Europe. The specific objectives of the project included: to review existing DS indicators at international level, to assess DS data and indicators in participating MSs, to standardize data and indicators and define a set of DS indicators for integration in EU indicators framework, to develop guidelines for DS indicators presentation, interpretation and use at national, regional and local level, and to promote the use of information and knowledge on DS services. The project also intended to integrate the standardized DS indicators in the European Community Health Indicators (ECHI).

4.1.2 Description of the work achieved including methods and means

The first activities carried out by DSDP involved the analysis of existing DS indicators at international level, the assessment of DS data and indicators in participating MSs, together with an extensive literature review of peer and grey publications, EU projects; and international health databases. The literature search, from publications in English, French, Spanish and Portuguese, has identified 95 DS indicators. These were classified on the basis of a framework founded on system thinking, comprising the following categories: Input, Patients characteristics, Access, Process, Output, Outcome, Safety, Satisfaction/Responsiveness, Cost/Productivity. Such step represented a prerequisite of the identification of a set of indicators capable to illuminate every important dimension of DS performance.

The assessment of DS data and indicators in participating MSs looked at the following dimensions: face validity, relevance, bias, comparability, promotion of quality improvement, and availability. Availability and face validity were assessed for all 95 indicators through expert opinion. Then a short list of 22 indicators was

defined on the basis of high availability and face validity: this group of indicators was assessed on their importance, bias, robustness, manipulation, applicability and adjustment. Other indicators' dimensions, i.e. precision and construct validity, were studied through an empirical approach, appling statistical methods, in particular analysis of variance, R-squared index and funnel plots, to datasets produced by participating MSs.

DSDP also offered a contribution toward the strengthening and standardization of European DS information systems, bringing forth the opinion of experts on ideal and basic sets of DS indicators. Given the opportunities and constraints faced by DSDP, the research group was convinced that the most appropriate, rapid and cheap method to reach consensus on such a topic was the Delphi technique, i.e. a multi-staged survey involving a group of experts. A basic premise of this method is that the opinion of several interacting experts is more valid than that of a small group of disconnected professionals.

4.1.3 Final results in terms of outputs and outcomes, and their potential impact and use by the target group

The study of DS data and indicators in participating MSs revealed that a key problem affecting many DS Information Systems lies in the fact that sometimes data are unavailable and as a consequence indicators cannot be calculated; on occasion, even if data are available, indicators are not computed. Another serious constraint derives from vague and/or different definitions and the adoption of dissimilar coding criteria by MSs. Discrepancies in terms of availability and reliability of data preclude comparisons of performance across and also within countries, prevent identification of benchmarks and consequently hinder learning. The limitations of DS information systems appear manifest also in the international organizations reports where acknowledgment of DS strategic importance contrasts with the paucity of available data.

DSDP identified essential and ideal sets of DS indicators for the National/Regional and DS unit levels with two purposes: first, to permit comparisons of performance across countries and, second, to improve their current DS information system. DSDP reached consensus among professionals about definitions of Day Surgery/Ambulatory Surgery, Office based surgery and Short stay surgery and the list of basket procedures that should be considered when reporting at international level.

DSDP developed a health system framework which places DS into a large context made of the environment, the health system and health services. The model emphasizes that planning, management and evaluation of a system presuppose a clear idea regarding its purposes, its constituent parts and their relationships. It identifies three areas, i.e. context, health care system and health services,

elaborating more in depth on the latter element, which consists of a macro-, a meso-and a micro-system.
DSDP offered principles and practical guidance to MSs on how to formulate and implement policies concerning DS information systems. It clarified why any organization, including DS, requires aims, strategies and systems, why system and statistical thinking are necessary elements of planning and running DS, why CQI represents the essential approach to DS advancement and how a DS information system should be a central part of such an effort. Further, the document identified DS information system goals, the most important end users and their information needs. It also highlighted the importance of Statistical Process Control techniques and described how information drawn from surveys, audits and small, cyclical experiments should combine with routine indicators in order to illuminate different dimensions of DS performance. Finally, it clarified how a DS information system should be devised and used as one of the main tools for both strategic and operational decision-making including Continuous quality improvement.

A potentially important output produced by DSDP consisted of Principles for a policy concerning a Day Surgery Information System. This document stressed the relevance of system and statistical thinking and continuous quality improvement, together with a managerial culture inspired by the wish to constantly improve responsiveness to users' needs and create a productive work environment about which providers feel proud. Central aspects of the policy document include: goals, sources of data, dimensions of performance, secondary users, analysis and presentation of indicators, and promotion of measures' use.

The project's strategies and results are fully applicable to the European context and congruent with the EU effort in the development of information and knowledge systems. Most of DSDP methods and analyses can be easily reproduced by international, national and local health administrations not involved in the initiative. Stakeholders who might benefit from the analysis and tools produced by DSDP include international institutions, such as the EU Commission, OECD and WHO, together with Ministries of Health and local organizations, for instance regional and local health authorities, hospitals and Day Surgery units.

4.1.4 Strategic relevance and contribution to the Health Programme

One of the most important instruments to monitor and improve DS performance is its information system. The managerial principle which states that it is impossible to improve performance without measuring it logically leads to the statement that a streamlined DS information system represents one of the most important preconditions for improving whole DS systems and their components. A state-of-the-art DS information system will also improve accountability of clinicians, managers and policy-makers. This aspect fully matches current dominant values

and concerns regarding transparency about policies' effects, managers' capability and providers' competence.
DSDP represents a contribution towards the attainment of the objectives of the Second Health Programme, i.e. first and foremost to generate and disseminate health information and knowledge and, secondly, to promote health, including the reduction of health inequalities.

4.1.5 Conclusions and recommendations

The bottom line is that improvement of performance implies information on performance. Building and running a health information system is not enough to ensure its competent and productive utilization. This tool can deliver its potential only if it is embedded in a comprehensive CQI effort bringing together system theory and statistical methods. Otherwise the risk is that data are piled, maybe indicators assembled and graphs displayed, but interpretation remains inadequate, key customers' expectations and clinical processes are not understood and those with the responsibility to improve them exaggerate their reactions to normal variability and ignore special causes. As the American Quality Society (AMQ) bluntly stated "Without data, everyone is an expert; team discussions tend to produce more heat (anger) than light (insight and learning)." Too often there is a gap between what a healthcare system achieves in terms of quality, safety, efficiency and equity and what it could and should deliver. Gaps and even chasms are invisible to healthcare systems which do not use sound information systems. Medicine has been rightly called the greatest benefit to humanity; it cannot afford to let down its potential beneficiaries because of mediocre information, lack of knowledge of improvement methods and fear of change. DSDP strived to contribute to such a high aim.

MSs should (if they have not done so yet):

- analyze databases and data composing them, together with their definitions,
- review and revise current list of indicators, their interpretation and use,
- adopt the definitions of Day Surgery/Ambulatory Surgery, Office based surgery and Short stay surgery agreed by the DSDP panel,
- use the OECD list of basket procedures, after excluding hysterectomy, mastectomy and cholecistectomy (51.2 NON laparoscopic) when reporting DS indicators at international level,
- ensure classifications of procedures used by MSs are comparable through a process of transcoding,
- classify DS indicators on the basis of the nine categories above specified,
- outline and standardize the procedures for assembling the indicators,
- promote local, regional and international comparisons,

- explicitly identify DS information system's goals,
- focus on high reliability measures whose potential for important improvements of care is firmly established,
- endorse a set of essential, high-value and high-leverage measures built on a broad process of consensus building involving managers, citizens, and providers,
- provide full measure specifications and spell out where and how measures are used,
- align measures to make reporting lean and make explicit the link between each measure and its end use,
- define standards (e.g. data fields and not free text) for electronic health records (EHRs) and devise strategies for their diffusion,
- prepare guidelines and train staff on data collection and analysis,
- design a user friendly web-site and disclose measures at regular intervals,
- establish a solid structure responsible for the overall management of the initiative able to monitor and support primary and secondary end users and guarantee validity and reliability of measures,
- be transparent in divulging the scientific evidence base of the measures in order to promote its acceptability among clinicians.

The following tables (*Tab. I and II*) show how the technical WPs were implemented and the phases necessary to achieve the results

Table I

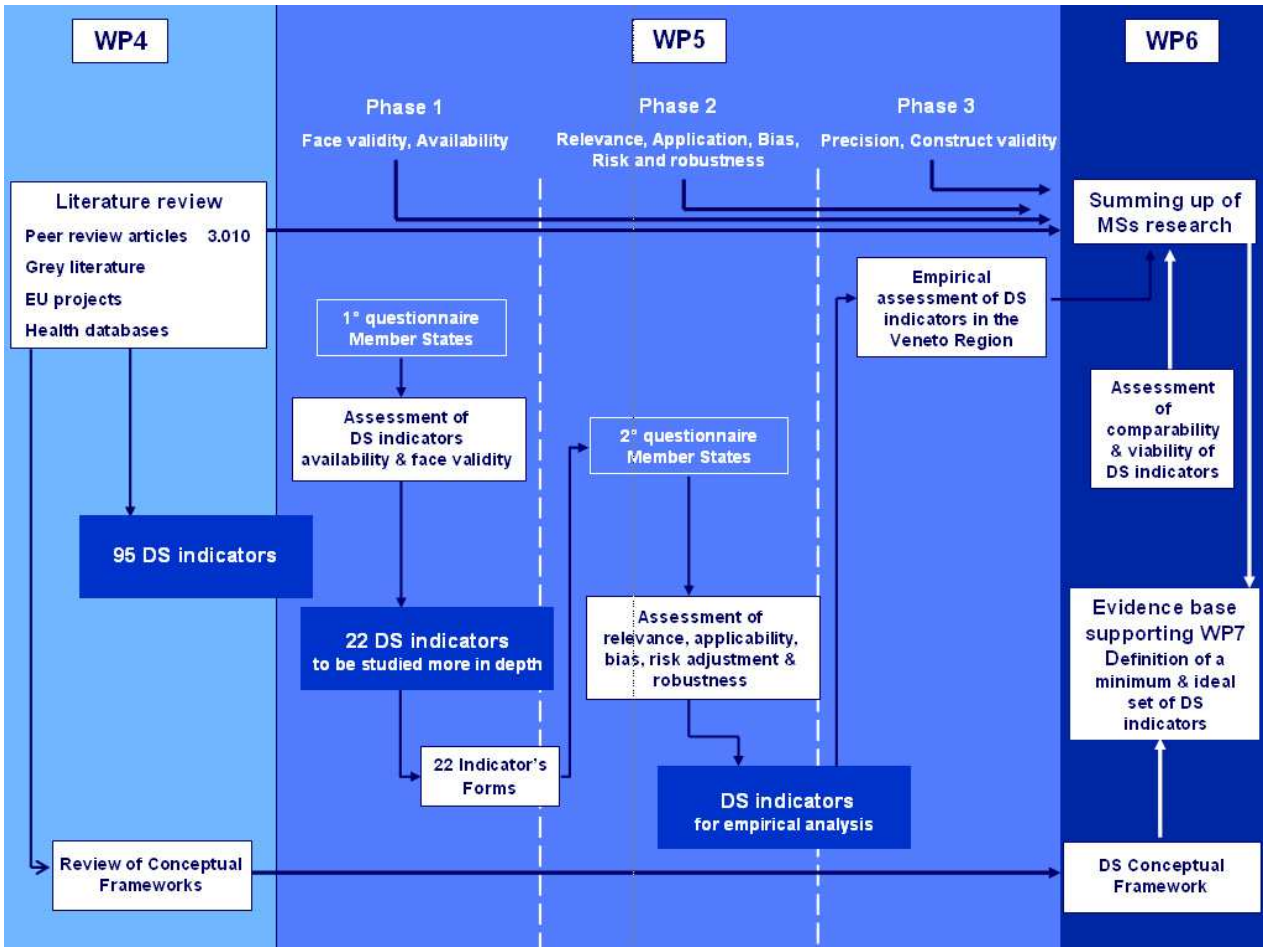
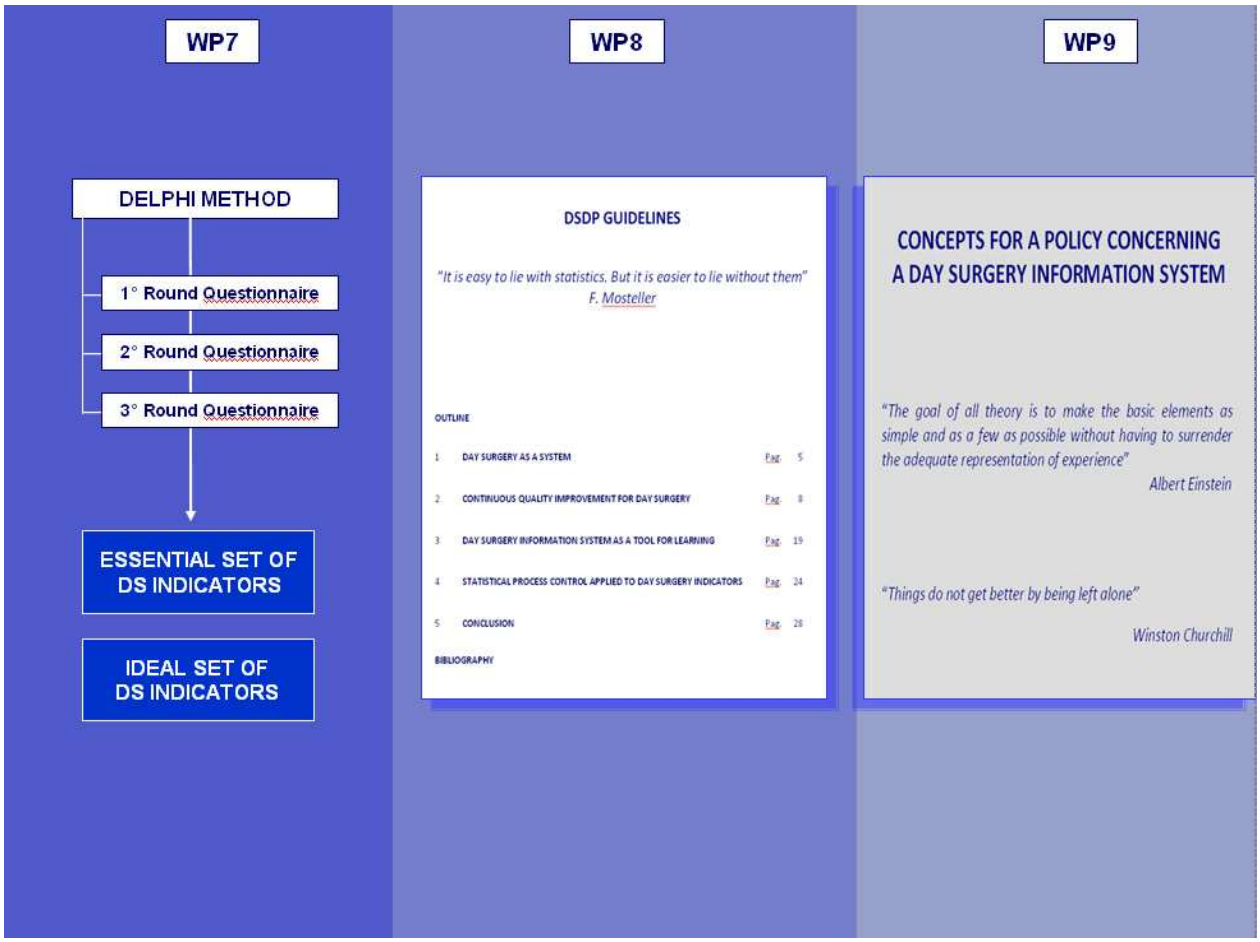


Table II


WP7
DELPHI METHOD
1° Round Questionnaire
2° Round Questionnaire
3° Round Questionnaire
ESSENTIAL SET OF DS INDICATORS
IDEAL SET OF DS INDICATORS
WP8
DSDP GUIDELINES
"It is easy to lie with statistics. But it is easier to lie without them"
F. Mosteller
OUTLINE
1 DAY SURGERY AS A SYSTEM Pag. 5
2 CONTINUOUS QUALITY IMPROVEMENT FOR DAY SURGERY Pag. 8
3 DAY SURGERY INFORMATION SYSTEM AS A TOOL FOR LEARNING Pag. 19
4 STATISTICAL PROCESS CONTROL APPLIED TO DAY SURGERY INDICATORS Pag. 24
5 CONCLUSION Pag. 28
BIBLIOGRAPHY
WP9
CONCEPTS FOR A POLICY CONCERNING A DAY SURGERY INFORMATION SYSTEM
"The goal of all theory is to make the basic elements as simple and as a few as possible without having to surrender the adequate representation of experience"
Albert Einstein
"Things do not get better by being left alone"
Winston Churchill

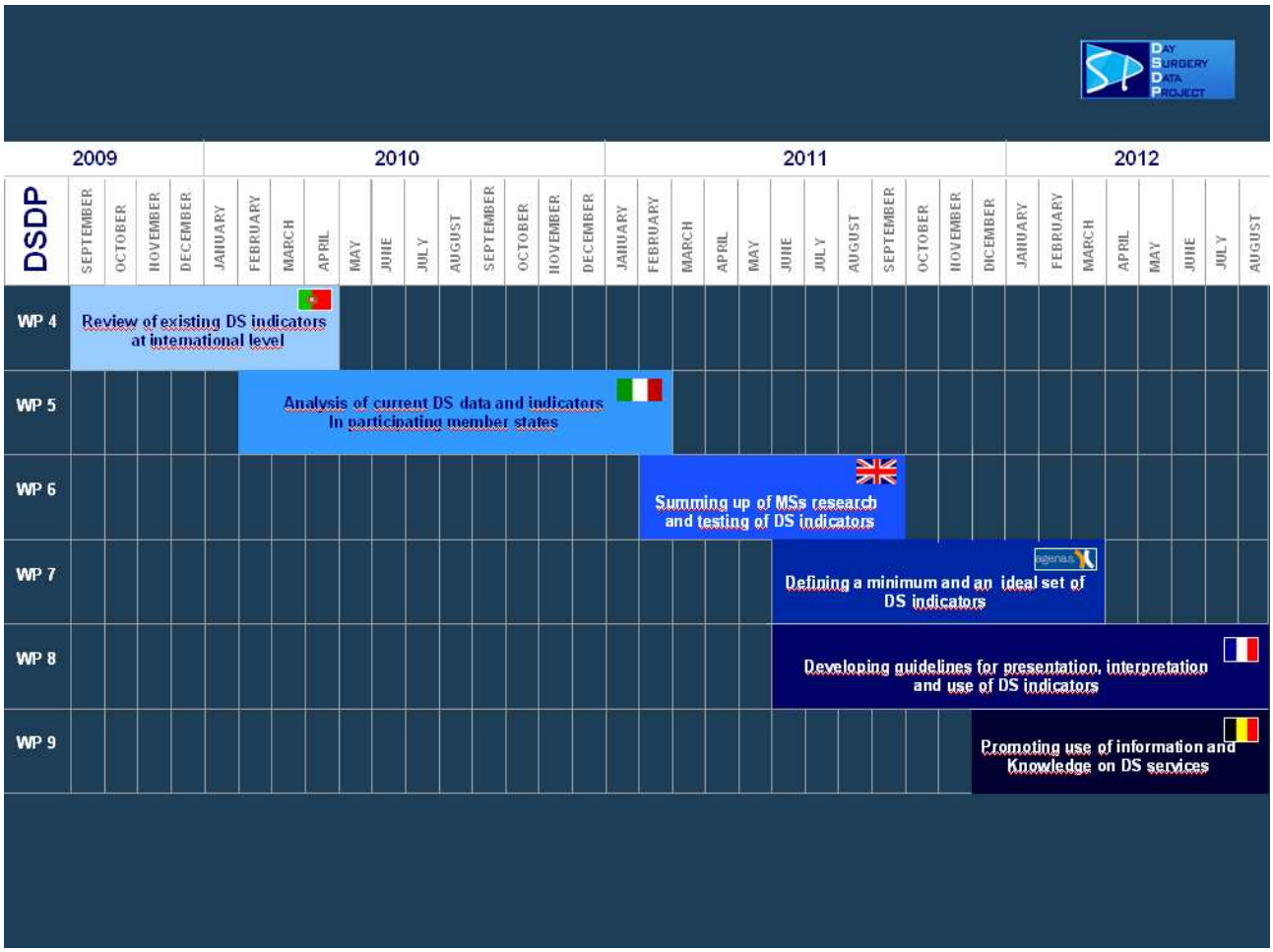
The following table (*Tab. III*) summarizes the key information for each technical WP:

- WP Title
- WP Project Leader
- Timing
- Level of achievement

Table III

The following table (*Tab. IV*) shows the Project timeline.

Table IV



SECTION V

TECHNICAL ASPECTS OF THE PROJECT

5.1 TECHNICAL ASPECTS OF THE PROJECT

5.1.1 Background and project scope

European healthcare systems confront several important challenges, in particular an aging population, the adoption of costly technology, an increasing expenditure above inflation together with shrinking resources and unequal access and quality of services. Some systems experience even tougher choices given a sluggish economy and a health system infrastructure mainly based on large hospitals. In response to such context, policy-makers must take strategic decisions capable not only of controlling health-related costs, but above all gaining efficiency, both allocative and operational. Policies must as well ensure a good and continually improving quality of health services in all its dimensions, i.e. effectiveness, safety, access and citizens' satisfaction. In addition, policy-makers must guarantee that different population groups have equitable access to services of similar quality and contribute their fair share to its financing. Another challenge originates from the implementation of policies, making sure they do not remain just good intentions or, worse, produce unintended consequences, and are transformed instead into programs and practices.

In most developed countries DS is now considered the best option for over 80% of elective surgical operations providing a safe and effective approach. DS rather than inpatient surgery, is increasingly being considered the norm for all patients undergoing elective surgery (*NHS Modernisation Agency 2004*), rather than simply an alternative form of treatment for a few. The rationale for DS is that it is as safe, if not safer, and of the same quality as those procedures done as inpatient surgery (*Policy Brief "Day Surgery Making it Happen", European Observatory on Health Systems and Policies with the collaboration of IAAS, 2007*).

Although there are very few clinical trials comparing traditional inpatient and DS, those that have been undertaken show no significant difference in outcomes (*Castells et al. 2001; Corvera et al. 1996; Dirksen et al. 2001; Fedorowicz et al. 2005; Hollington et al. 1999*). These, along with a number of non-randomized studies, demonstrate that DS is a safe approach when all the recommended guidelines and organizational principles of a DS programme are followed. Mortality and major morbidity directly associated with DS is extremely low (<1%) (*Lemos and Regalado 2006; Shnaider and Chung 2006*). Unplanned return visits to hospital and re-admissions within 30 days directly related to day-surgery procedures range from 0.28% to 1.5% (*Coley et al. 2002; Mezei and Chung 1999; Twersky et al. 1997*). Unplanned admissions following surgery can be decreased through the use of appropriate clinical pathways, with one study finding that pathway implementation was associated with an increase in same-day discharges from 21% to 72% and a steady reduction in unplanned postoperative admissions as experience with the pathway increased (*Calland et al. 2001*).

Most MSs do not use DS to its full potential, as shown, for example, by the results of a recent survey conducted by the International Association for Ambulatory Surgery in 19 countries. Another study shows that the percentage of hernia repairs performed as day cases by MSs health services varies between 6 and 73%. The same investigation reveals that such percentage in the USA is almost 90%. Similar variability is apparent for other common procedures like cataract removals. Again EU is lagging behind USA and, in this case, Canada too.

Wide inconsistencies concern not only output measures but also policies, strategies, practices and, presumably, outcomes within the same nation and among countries. The incompleteness and unreliability of available data concerning DS in Europe makes the problem more complex. For example, there is ambiguity about data definition (e.g. ambulatory surgery vs DS), discrepancies in databases content and disagreement on the basket of procedures to be monitored. Very little is known about the gender and ethnic perspectives applied to DS services. The evidence regarding this strategic issue for the health sector in Europe is thin and this limits evidence based decisions. Reliable, accurate, timely and relevant information represents the basis on which knowledge can be generated and sound decisions made at all levels, i.e. strategic, managerial and operational.

DS represents an innovative tool for health sector reform in Europe contributing to several common objectives such as improving quality of care, controlling cost, enhancing efficiency and possibly equity. Up to now efforts to promote DS in MSs and Europe have been rather patchy, lacking a strategic prospective. One of the reasons behind such situation is the paucity of indicators and knowledge concerning critical aspects of DS organization and performance, e.g. systems of incentives for providers, outcomes for different procedures and gender issues. Available DS data and indicators present important limitations curbing the adoption of evidence-based decisions and slowing or, worse, distorting, DS growth. The managerial principle which states that it is impossible to improve performance without measuring it logically leads to the statement that a streamlined DS information system represents one of the most important preconditions for improving whole DS systems and their components. A state-of-the-art DS information system will also improve accountability of clinicians, managers and policy-makers. This aspect fully matches current dominant values and concerns regarding transparency about policies' effects, managers' capability and providers' competence.

DSDP aimed at closing the gaps in data, information and knowledge concerning DS in Europe. Such knowledge will be invaluable for an evidence-based formulation and implementation of technically effective, managerially sound, economically sustainable, socially acceptable and equitable DS systems of care in Europe. The project intended to integrate the standardized DS indicators in the European Community Health Indicators (ECHI).

DS expansion is a priority for most European countries representing an important opportunity for health systems reorganization. Increasingly in the future EU health systems will face an ethical dilemma regarding how to assure sustainable and equitable access to effective and safe procedures. The design and implementation of DS systems based on valid and reliable evidence will contribute to the solution to the above mentioned issues.

5.1.2 General objective of the project

The general objective of the project was to identify and validate a set of Day Surgery (DS) indicators and to develop the Information Systems on DS in Europe. More specifically, DSDP intended to analyse and then streamline and standardize existing data and health indicators on DS. DSDP expected impact is a streamlined and standardized DS information system integrated into the EU indicators framework, used by health care policy-makers, DS managers and providers in order to expand DS and continuously improve its quality, efficiency and equity.

5.1.3 Specific objectives of the project

Table IV

N°	Title and description	Link to the WPs (*Table V*)	Link to the deliverables (*Table V*)	Level of achievement (measured Indicators)
1	**To review existing DS indicators at international level**, i.e. collection and analysis of DS indicators available at EU level and other International organizations.	**4**	**D4**	Review of all relevant literature on DS indicators completed (including documents of International organizations and EU). Gaps in current DS indicators identified.
2	**To assess DS data and indicators in all participating countries**, i.e. analysis of data definition, set of available indicators, database content and report produced by different MSs.	**5**	**D5**	% of assessed DS information systems in participating MS.
3	**To summarize the MSs research and test indicators** i.e. to summarize the analysis of literature review and the empirical studies on DS indicators and to verify viability and comparability of DS data and indicators in the context of MSs health information systems.	**6**	**D6**	Comparability and viability of DS indicators verified. Common gaps in current DS data, databases and indicators identified.
4	**To standardize data and indicators and define a set of DS indicators for integration in EU framework indicators and MSs**: i.e. standard definitions of key data, consensus on a minimum and an ideal set DS indicators.	**7**	**D7 – D8**	Recommendation of a minimum and a ideal set of DS indicators for integration in MSs completed.
5	**To develop guidelines for DS indicators' presentation, interpretation and use at national, regional and local level**, i.e. description of principles and techniques to be adopted in the presentation, reading and utilization of indicators.	**8**	**D9**	Guidelines developed and validated by all Countries involved in the project.
6	**To promote use of information and knowledge on DS services**, i.e. making DS indicators and their interpretation available at EU level and accessible to all MSs.	**9**	**D10**	Recommendations for implementation in ECHI indicators completed.

5.1.4 OVERVIEW OF THE WORKPACKAGE AND DELIVERABLES

Table V

WP	WP TITLE	Deliverables	Description	Confidentiality	Expected month of delivery	Actual delivery month	Justification for the delay
1	COORDINATION OF THE PROJECT	D1a - FIRST INTERIM REPORT	Document regarding the main aspects of the project management	Internal	M12	M12	
		D1b - SECOND INTERIM REPORT	Document regarding the main aspects of the project management	Internal	M24	M24	
		D1c - FINAL REPORT	Document regarding the main aspects of the project management	Internal	M36	M36	
2	DISSEMINATION OF THE RESULTS	D2 - WEBSITE	Implementation of official project website; publication of supplement to Ambulatory Surgery Journal	Public	M3	M3	
3	EVALUATION OF THE PROJECT	D3a - INTERIM EVALUATION REPORT	Report of the Assessment Group	Internal	M24	M24	
		D3b - FINAL EVALUATION REPORT	Report of the Assessment Group	Internal	M36	M36	
4	REVIEW OF EXISTING DS INDICATORS AT INTERNATIONAL LEVEL	D4 - REPORT ON THE ANALYSIS OF DS INDICATORS AVAILABLE AT INTERNATIONAL LEVEL	- Definition of conceptual frameworks on principles and utilization of Health Services relevant to DS. - Review of all relevant literature/documents on DS indicators. - List and critical analysis of the DS indicators identified. - Identification of major gaps in current data and indicators identified.	Public	M8	M8	

5.1.4 OVERVIEW OF THE WORKPACKAGE AND DELIVERABLES (FOLLOWS)

WP	WP TITLE	Deliverables	Description	Confidentiality	Expected month of delivery	Actual delivery month	Justification for the delay
5	ANALYSIS OF CURRENT DS DATA AND INDICATORS IN PARTICIPATING MEMBER STATES	D5 - REPORT ON THE ANALYSIS OF DS AVAILABLE DATA AND INDICATORS AT MSs LEVEL	Analysis of availability, reliability, validity, comparability, relevance, presentation, interpretation and utilization of DS data and indicators available to MSs and regions. Investigation of databases structure and coding systems of DS procedures.	Public	M18	M18	
6	SUMMING UP OF MEMBER STATES RESEARCH AND TESTING DS INDICATORS	D6 - REPORT ON THE VIABILITY AND COMPARABILITY OF DS DATA AND INDICATORS IN MSs INVOLVED IN THIS WP	To summarize the analysis of literature review and the empirical studies on DS indicators and to verify viability and comparability of DS data and indicators in the context of MSs health information systems.	Public	M22	M25	Partial revision of WP6. Notification to our Project Officer in Luxembourg. *See Annex 1*
7	DEFINING A MINIMUM AND AN IDEAL SET OF DS INDICATORS	D7 - MINIMUM AND IDEAL SET OF DS INDICATORS TO BE ADOPTED BY EU MEMBER STATES	Standardization of DS data and indicators. Definition of a set of DS indicators	Public	M28	M31	Postponement from M28 to M31 as notified to our Project Officer in Luxembourg. *See Annex 2*
		D8 - FACT SHEETS OF DS INDICATORS	Description, definition, sources and computations for the recommended minimum and ideal sets of DS indicators	Public	M28	M31	

5.1.4 OVERVIEW OF THE WORKPACKAGE AND DELIVERABLES (FOLLOWS)

WP	WP TITLE	Deliverables	Description	Confidentiality	Expected month of delivery	Actual delivery month	Justification for the delay
8	DEVISING GUIDELINES FOR INDICATORS' STATISTICAL ANALYSIS, PRESENTATION, INTERPRETATION AND UTILIZATION	D9 - GUIDELINES FOR PRESENTATION, INTERPRETATION AND USE OF DS INDICATORS	Principles and techniques to be used in the presentation, understanding and utilization of individual indicators at various level.	Public	M36	M31	
9	POLICY MAINSTREAMING	D10 - RECOMMENDATIONS FOR IMPLEMENTATION IN ECHI INDICATORS	Background of a policy concerning a Day Surgery Information System. Policy concerning a Day Surgery Information System.	Public	M36	M36	

5.1.5 Main activities carried out including methods and means

DSDP was conceived as a two parts initiative:

- a first component with a "diagnostic" intent investigating signs and symptoms of poor design and performance of DS information systems;
- a second one with a "therapeutic" aim producing recommendations apt to improve DS European information systems' standardization, comparability and relevance.

DSDP activities started off with the **analysis of existing DS indicators at international level** and a **scientific literature search of DS indicators** mentioned in documents published in English, French, Spanish and Portuguese.

The literature search of DS indicators was carried out within the following four categories: **peer review articles; grey literature; EU projects; and international health databases.**

The **assessment of DS data and indicators in participating MSs** looked at the following dimensions: **face validity, relevance, bias, comparability, promotion of quality improvement, availability**, **importance, bias, robustness, manipulation, applicability and adjustment**. Other indicators' dimensions, i.e. **precision and construct validity**, have been studied through an empirical approach, i.e. through application of statistical methods, in particular **analysis of variance, factor analysis and analysis of correlation**, to datasets produced by participating MSs.

The scientific literature, both peer and grey, produced a large number of indicators useful for monitoring DS systems' key dimensions. What is generally missing are data necessary to build the indicators and the integration of several indicators into the design of DS health information systems. In other words sometimes data are unavailable and as a consequence indicators cannot be calculated; some other time available data are not transformed into indicators. Lack of standardized definitions of indicators represents a further problem, also because coding systems differ.

WP6 made sense of all the information collected at an international and national level and completed the diagnostic phase of the Project. The objective of testing new DS indicators was abandoned, instead WP6 investigated the **comparability of DS data and indicators across MSs** and assessed the **viability of a potential core set of DS indicators** in MSs. These objectives implied an **empirical analysis**, as comprehensive as possible, of MSs actual data. The project examined the reliability of empirical indicators by analysing whether the studied measures are able to bring to light real differences between hospitals or areas or if the differences are only attributable to chance, i.e. to distinguish between indicators' natural variability and valid signals. To this end, the following methods were adopted: **Analysis of variance (ANOVA)**: **R-Squared Index**, and **Funnel plot.**
DSDP also offered a contribution toward the strengthening and standardization of European DS information systems, bringing forth the opinion of experts on an ideal and a basic set of DS indicators, which hopefully will represent yardsticks for

Member States. method to reach such objectives was the **Delphi technique,** i.e. a multi-staged survey which aims at reaching consensus among a group of experts on a topic of interest.

A health information system supporting DS should shed light on each of its key components. However DSDP also highlighted that building and running a health information system is not enough to ensure a competent and productive utilization. Its potential can only be attained when information interpretation and use are performed from a perspective of services' improvement. In other words, not only a health information system should fit in an overall continuous quality improvement's strategy but also building a new information system for DS or strengthening an existing one should be based on the same principles. Therefore the project devised a coherent sets of principles and strategies around this idea.

5.1.6 Target groups

DSDP's target groups included providers, managers and policy-makers working for a MSs public or private health service. More specifically, providers included surgeons, nurses working within DS units and delivering home care, and general practitioners. Target groups also comprised healthcare policy makers at international, national and regional level, and health managers of local health authorities, hospitals, DS systems and units. Finally a project's target was the International Association for Ambulatory Surgery – IAAS, in particular its Executive Committee and General Assembly together with the National Associations for Ambulatory Surgery of Europe and beyond.

5.1.7 Evaluation of the degree of achievements of the objectives and discussion based on the project's indicators as outlined in your evaluation plan/WP3

Effectiveness: To what degree the implemented outputs correspond to the agreed plan?

DSDP has successfully completed the agreed plan of work. The project carried out a thorough diagnosis of DS information systems looking at how MSs have designed and manage their own systems, and searching the scientific literature, which led to the identification of a wide set of indicators. The project concludes that many countries have not formulated policies promoting the expansion of DS and as a consequence the component of health information system concerning DS is frequently inadequate. The scientific basis of many widely adopted indicators is weak, meaning that the main criteria which led to their selection were face validity, instead of reliability and content validity. These limitations are reflected in the scarcity of DS indicators presented by international organizations like OECD and WHO. In Europe, there is an obvious tension between the importance of DS as the best option to deliver more than 80% of procedures and the lack of strategic design capable to make this kind of services widely available.

The project has also provided a series of answers which can contribute to the strengthening of DS information systems. Indicators found in the literature were "cleaned" and classified both by dimensions and level of care and management. A conceptual framework concerning health systems and services, which is also relevant to DS, was elaborated. The project identified essential and ideal sets of DS indicators both for the National/Regional and DS unit levels with two purposes: first, to permit comparisons of performance across countries and, second, to improve their current DS information system. The lists were selected based on theoretical considerations, a benchmarking exercise among current information systems' structures and the involvement of the professionals participating in the project. Such research and analysis represents an important contribution for the design of DS information systems as well as future studies on DS. More importantly, the project's recommendations regarding a DS information are flexible and adaptable to different contexts.

DSDP explicitly offered principles concerning policy formulation for DS information systems, appropriately attempting to combine ideas from system and statistical thinking with continuous quality improvement principles and methods. DSDP offered principles and practical guidance to MSs on how to formulate and implement policies concerning DS information systems. It clarified why any organization, including DS, requires aims, strategies and systems, why system and statistical thinking are necessary elements of planning and running DS, why Continuous Quality Improvement (CQI) represents the essential approach to DS advancement and how a DS information system should be a central part of such an effort. Further, the document identified DS information system goals, the most important end users and their information needs. It also highlighted the importance of Statistical Process Control techniques and described how

information drawn from surveys, audits and small, cyclical experiments should combine with routine indicators in order to illuminate different dimensions of DS performance. Finally, it clarified how a DS information system should be devised and used as one of the main tools for both strategic and operational decision-making including CQI.

The deviations from the plan were rather marginal, and the revised activities were not only feasible but also more congruent with the aims. Such amendments did not distort the overall logic of the project, on the contrary made it more compact

Efficiency: How sound was the project's use of main resources (time, staff, money)?

A general overview on the project shows that partners have actively worked and carried out the planned activities with positive outputs.

Such a big involvement is confirmed by the costs declared under *national officials* which are higher than it was planned at the project start because as the project unfolded the commitment on behalf of personnel increased.
The commitment of *not national officials* grew up as well from the first to the second year and remained almost the same on the third year. We can clearly state that in general the costs incurred for this item are in line with the original budget.

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Partner	Partner number	Total Working days	Working days in budget	Real total costs Y1	Real total costs Y2	Real total costs Y3	Total cost in budget	Total
ARSS Veneto		636	472	52.998,93	73.286,17	81.954,15	173.600,00	208.239,25
NIHDI		382	225	23.250,00	37.000,00	38.150,00	82.250,00	98.400,00
CNAMTS		431	435	36.756,00	43.546,00	66.076,00	122.320,00	146.378,00
EUROPMED		53	53	2.891,15	0,00	0,00	2.891,15	2.891,15
AGE.NAS		371	375	33.318,00	69.696,50	68.189,13	142.750,00	171.203,63
AOP		843	449	35.974,25	75.832,36	70.167,26	152.130,00	181.973,87
CHP-EPE		263	275	19.210,00	17.650,00	15.890,00	44.000,00	52.750,00
SCJUT		619	250	3.090,95	6.839,92	8.073,03	15.000,00	18.003,90
KCH		555	505	34.034,00	113.318,00	86.260,00	194.950,00	233.612,00
ADR		363	305	37.050,00	69.000,00	46.050,00	126.750,00	152.100,00
USO		25	25	6.000,00	0,00	0,00	6.000,00	6.000,00
HAS		207	295	0,00	53.558,33	47.333,00	84.250,00	100.891,33
		4748	3664					
				284.573,28	559.727,28	528.142,57	1.146.891,15	1.372.443,13

NOT PUBLIC STAFF - Summary				
Partner	**Total Costs Y1**	**Total Costs Y2**	**Total Costs Y3**	**TOTAL**
NIHDI		6.720,00	11.280,00	18.000,00
EUROPMED	3.745,91	15.742,35	8.346,15	27.834,41
TOTAL	3.745,91	22.462,35	19.626,15	45.834,41

Impact: How many participating organizations/institutions have committed themselves and taken substantial steps toward the streamlining of their databases and the adoption of the lists of indicators developed by the project?

The project coordinator is unable to provide a valid answer to the above question because transforming information systems, even a subcomponent limited to DS, is a complex endeavour which not only takes substantial time, but also requires the commitment of multiple actors who face multiple technical, managerial and political pressures.

A positive signal is that DSDP partners who represent national and regional institutions, such as HAS in France, NIHDI in Belgium and the Italian National Agency for Healthcare, have expressed the intention to strengthen both the policy formulation and the information system concerning DS. HAS has received the mandate from the Ministry of Health to formulate an important research initiative looking at constraints of DS expansion, of which information systems is one. MSs whose DSDP partners were units delivering services will have more difficulty in influencing decision makers, not only because clinicians are more physically distant from national institutions, but also because the language and the logic of clinical work is far-off from that of strategic planning.

5.1.8 Results and key findings

Outputs and outcomes and their potential impact and use by the target group

A **wide-ranging literature search identified 3.010 articles** and a **broad set of 95 DS indicators**. Another DSDP output consisted of the **assessment of DS data and indicators in participating MSs and international organizations.**

A central problem with the currently available indicators is that most indicators are either used in scientific publications or considered from a theoretical perspective, however not integrated in structured health information systems, and are not used routinely in monitoring and evaluation of DS services. An appraisal of completed EU projects and of International Health Databases led to the same conclusion: DS indicators are rarely considered as only a few institutions have formulated DS policies and developed corresponding information systems. Lack of standardized definitions of indicators represents a further problem, also because coding systems differ and transcoding is not always feasible. Even more basically, there is no definition of Day Surgery common to all MSs and data collection, including definition of variables, is not standardized.

Most relevant indicators have been grouped on the basis of **a logical frame based on system thinking, which identified the following categories: Input, Patients characteristics, Access, Process, Output, Outcome, Safety, Satisfaction/Responsiveness, Cost/Productivity**. Such step represented a prerequisite of the identification of a set of indicators capable to illuminate every dimension of DS performance.

Special attention was also dedicated to identify DS indicators adopted by EU health projects (i.e. ECHIM, PATH, HDP and ISARE, etc.) because it was deemed crucial to integrate the DSDP recommendations within broader initiatives aiming at strengthening the European health information system. Finally DSDP explored the availability and standardization on DS indicators among different international organization. The only international organization explicitly integrating a DS indicator is OECD, albeit only one.

DSDP also fleshed out **a health system framework** which places DS into a large context made of an environment, the health system and health services. Planning, management and evaluation of a system presuppose a clear idea regarding its purposes, its constituent parts and the relations between the latter and the whole system with the surrounding environment. The model, which originated from systems theory, while remaining an approximate representation of reality, hopefully improves its intelligibility on the part of decision-makers and professionals, facilitating identification and management of essential dimensions. DSDP model was inspired by several schemes, including those produced by OECD, AHRQ, WHO and Donabedian, and adopted a general approach, i.e. not specific for surgery or DS. The conceptual scheme proposed here is mainly directed to decision-makers at national and regional level, but it can be useful also for local health authorities and individual units that manage or provide health services. The

analysis of the health system that this model entails involves the use of various disciplines, namely public health, epidemiology, biostatistics, clinical medicine, theory of organisations, sociology, economics and political sciences.
WP6 made sense of all the information collected at an international and national level and completed the diagnostic phase of the Project. In summary DS Information Systems do not allow a thorough assessment of DS systems in all MSs. Discrepancies in terms of availability and reliability of data preclude comparisons of performance across and also within countries, prevent identification of benchmarks and consequently hinder learning. The limitations of DS information systems appear manifest also in the international organizations reports where acknowledgment of DS strategic importance contrasts with the paucity of available data. The International Association for Ambulatory Surgery (IAAS) has recommended a set of useful DS indicators but it has not distinguished between managerial and clinical levels nor has it classified the indicators around an explicit framework such as system theory.

The Delphi exercise led to consensus around a few key assertions regarding DS and its information system including the **definitions of Day Surgery/Ambulatory Surgery, Office based surgery and Short stay surgery and the list of basket procedures** that should be considered when reporting at international level. DSDP also identified **a set of procedures** considered appropriate, by the expert panel, **for DS activities monitoring**. DSDP list is based on the OECD Surgical Procedures, the only exceptions being the exclusion of hysterectomy and mastectomy.

Basket of DS Procedures *(from OECD Surgical Procedures)*

- Cataract surgery (13.1-13.7)
- Tonsillectomy with or without adenoidectomy (28.2-28.3)
- Ligation/stripping of varicose veins (38.5)
- Cholecystectomy (51.2)
- Laparoscopic cholecystectomy (51.23)
- Inguinal and femoral hernia (53.0-53.1)
- Prostatectomy (transurethral) (60.2)
- Hysterectomy (vaginal only) (68.51)
- Breast conserving surgery (85.21)
- Mastectomy (85.4)
- Knee arthroscopy (80.26).

An important DSDP objective was to explicitly identify sets of DS indicators which can be adopted by MSs with two purposes: a), to permit comparisons of performance across countries and, b), to improve their current DS information system. This investigation started from the lists of DS indicators identified in the course of the gray and peer review literature. The **sets of DS indicators** which met the consensus of respondents regard the <u>essential</u> sets for the National/Regional and DS unit level, respectively. The last two refer to the <u>ideal</u> lists for the National/Regional and DS unit setting.

DSDP approach to the selection of DS indicators was based, first and foremost, on system theory. Such theory suggests that DS should be analyzed through an approach discerning between customers, inputs, processes, outputs and the relationship between inputs and outputs. Customers are both DS beneficiaries and professionals. Inputs refer to the resources necessary to deliver the services. Processes are means which transform inputs into outputs which satisfy users' needs and demands. Outputs are products or services and represent the end result of processes. Finally it is important to clarify the cost of inputs as a whole and average cost per procedure, and the relationship between outputs and inputs, i.e. productivity and efficiency. Further, being DS a surgical service, it is important to gain insight on aspects peculiar to healthcare, i.e. access, safety and outcomes. Access concerns the availability of DS units in a specific geographical area and population; even more significantly, access involves the waiting time between a diagnosis and the relevant procedure. Safety entails the delivery of services without preventable adverse events. Outcomes have to do with the degree of improvement or, on the opposite, deterioration of patients' health status as a consequence of encounters with healthcare. In order to facilitate reasoning and better understanding of the four set of indicators, these were rearranged and commented by category. For example Input satisfaction indicators included in the DSDP lists are as follows:

ESSENTIAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- Number and % of DS units by public and private ownership by
  - integrated
  - partially integrated
  - freestanding

ESSENTIAL SET OF THE DS UNIT LEVEL

- No input indicator

IDEAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- Number and ratio of theatres fully dedicated to DS / total available theatres

IDEAL SET OF THE DS UNIT LEVEL

- Number and % DS beds/total surgery beds (for non freestanding units)

DSDP does not have the illusion of providing a definite answer regarding a set of DS indicators, first because there is no one right answer, secondly because organizations, technologies and procedures continuously change and what is relevant today it will not be in a near future, thirdly because national and local contexts vary enormously. More modestly and realistically, DSDP intends to offer a contribution toward the strengthening and standardization of European DS information systems; in particular, the project represents an opportunity to bring forth the opinion of experts about an ideal and a basic set of DS indicators, which would represent yardsticks for Member States. The project also offered a contribution toward an informed selection of indicators sets within each country, region and even local subsystems.

Limits of DSDP conclusions regarding the essential and ideal sets of indicators derive from the fact that participants in the Delphi exercise were few, i.e. 16 professionals, and most of them were clinicians. Inevitably, and appropriately, clinicians tend to focus on diagnostic and therapeutic processes overlooking resources, their allocation, management and efficient use; even more so clinicians tend to neglect the strategic perspective related to a DS system, i.e. its design, deployment and coordination with other components of health services. This means that results of the Delphi exercise might be biased toward measures with which clinicians are more familiar, such as outputs and safety. A second limit of DSDP indicators sets is that local and national contexts are ignored. Last but not least, a final and substantial limitation derives from the fact that DSDP formal influence on national or regional MSs health authorities is limited, depending on existing informal relations between individuals and institutions. However this is an intrinsic characteristic of most applied research projects.

A significant output produced by DSDP consisted of **Principles for a policy concerning a Day Surgery Information System.** The first part of the document stressed that organizations are systems, heavily influenced by connections among their parts, more than by the isolated performance of its elements, frequently lack system and statistical thinking, and suffer from pathologies, whose main symptoms are high variation and low reliability of processes. DS is also a system, whose aim is to deliver appropriate, accessible, effective, safe, equitable, and socially satisfactory surgical care without night stay to individuals and communities.

The document also highlighted the relevance of statistical thinking and continuous quality improvement to a sound design and a functional working of a health information system. A solid information system can only release its potential when it is implanted in a managerial culture deeply knowledgeable of system and statistical thinking and inspired by the wish to constantly improve responsiveness to users' needs and create a productive work environment about which providers feel proud. The prerequisites of a functional organization are aims, strategies and systems; these are the elements which can ensure organizational relevance and order and avoid waste or even failure and chaos.

The glue which keeps together aims, strategies and systems, allowing outstanding performance, is a credible leadership which fosters a culture turning around responsibility for constant improvement, cooperation among stakeholders and accountability for results. Beyond leadership, excellent performance requires a culture which turns around passion for the medical profession, compassion for the individuals who ask for our help, responsibility for constant improvement, cooperation to reach a common aim among clinicians and managers and accountability for resources' use as well as for processes and outcomes.

An information system, and its policy, are crucial structures, a key element in the whole set necessary to ensure that DS design, implementation and continuous improvement is successful. Therefore DS functioning depends, among other factors, on the availability of reliable and valid data and their transformation into knowledge. Without measures it is impossible to build a picture beyond intuition.

A health information system is an essential source of quantitative analysis. Information systems are composed of data, indicators, information, presentation and interpretation with the aim to support decision-making.
A proficient use of a IS is a complex task, very far-off from a banal reading of tables confirming what we already pretend to know. Information must be transformed into knowledge and sense-making; this means being able to see and interpret reality coherently. Still, recognizing that some aspect of performance is below acceptable levels is different from being proficient in understanding the reasons behind the problems and designing appropriate responses. Furthermore, knowledge is not decision-making; in order to formulate and act upon a congruent set of decisions, authority, responsibility and accountability must be assigned to capable, willing and motivated individuals placed in coordinated, aligned and collaborating units in a organizational context guided by clear goals and strategies.

There is no single magic formula for developing a DS IS. DSDP puts forward a set of principles for IS development and recommendations to implement it, however national and local peculiarities, both opportunities and obstacles, must be taken into thorough account and substantial and intelligent adjustments are necessary.

Central aspects of a **DS IS policy** dealt with by DSDP include:

- **IS goals,**
- **Sources of data,**
- **Dimensions of performance,**
- **Secondary users,**
- **Analysis and presentation of indicators,**
- **Promotion of measures' use.**

Beyond inherent technical difficulties, the resistance to build an IS capable to measure quality of care derive from the assumption that quality is, by and large, good, and the implied disrespect of medical professionals and distress to the public. As Keynes lucidly affirmed some policy makers prefer not to know; behind a fog of uncertainty and ambiguity any decision can be morally, technically, economically and politically justified, and the room for maneuvering becomes almost limitless. Politics as corridors' management is an important barrier to a streamlined HIS as well as a lucid formulation of DS policies. Policy makers should be aware of the importance of measurement and allocate sufficient resources to this component. In a context of limited economic growth, broader needs, demand for accountability and higher expectations concerning services' responsiveness and participation to decisions about one's own health implies accurate and reliable information on performance geared to better quality and better efficiency.

Stakeholders who might benefit from the analysis and tools produced by DSDP include international institutions, such as the EU Commission, OECD and WHO, together with Ministries of Health and local organizations, for instance regional and local health authorities, hospitals and Day Surgery units.

5.1.9 Coordination with other projects or activities at European, National and International level

Because many of the DSDP partners are also members of the International Association for Ambulatory Surgery (IAAS), the DSDP project has always had a very close interaction and coordination with IAAS network and the activities implemented by the Association, this being a unique added value for the project.

The International Association for Ambulatory Surgery (IAAS) is a network of national scientific societies and health care professionals dedicated to the development and growth of high quality ambulatory surgery worldwide.

The overall vision of the IAAS is “Day Surgery: Making it Happen” and this matches the aim of the DSDP project that is to work together and promote day surgery as a high-quality, safe and cost-effective approach to surgical health care.

Therefore, being the DSDP project in line with the objectives of the IAAS, on each meeting of the IAAS members, it was decided to dedicate a session to inform the participants on DSDP project and its advancements. Besides this, on a dedicated part of the website the DSDP project information have been regularly updated. IAAS publishes the “Ambulatory Surgery“, its official clinical journal that ensures scientific communication among its members through the publishing of reviews, original articles, case reports, short communications and letters relating to the practice and management of ambulatory surgery. News on the DSDP project have been reported in the journal. Finally, as part of the 2013 wok plan, IAAS intends to work on a special publication dedicated to the recommendations deriving from the results of the DSDP project.

5.1.10 Strategic relevance, contribution to the Health Programme, EU added value and level of innovation

During the last couple of decades, the practice of surgery has been transformed by a thorough understanding of the physiopathological basis of surgical stress and its management, by technological innovations (e.g. anaesthesiological drugs with less side effects, in particular less vomiting), less invasive surgical procedures (e.g. laparoscopic and arthroscopic surgery) and simpler anaesthesiological techniques (e.g. spinal and epidural anesthesia), which allow fast track surgery, i.e. procedures of shorter duration and of quicker recovery. Today, 80% of elective surgical procedures traditionally performed in a hospital setting with night stay should be appropriately transferred to Day Surgery (DS).

This represents a major departure from current health services organization given that surgical activities represent about 40% of hospitals output. Despite their benefits, DS services are undersupplied and underused in the EU. A recent survey also shows a significant variation in the adoption of DS both among and within different Member States (MSs). At national level, the percentage of appropriate interventions carried out by DS services ranged from less than 10% to around 50% and the percentage of hernia repairs as day cases by MSs varied from between 6 and 73%; the corresponding figure in the US is almost 90%.

There is great potential for further expansion of DS in Europe and its development represents a strategic opportunity for the reorganization of health services. DS can contribute to several key goals pursued by the health sector in Europe: cost control, greater productivity and efficiency, enhanced quality and possibly improved equity.

More specifically, DS allows costs cutting, for example through beds and staff reduction, and increases productivity through standardization of processes, better scheduling and faster throughput of patients. DS fosters allocative efficiency so that resources are apportioned in a way that maximizes the net benefit attained through their use. DS also enhances operational efficiency, i.e. the proper combination of people, process, and technology coming together to enhance the productivity of surgical services. Without compromising effectiveness, DS can improve safety, e.g. reducing hospital infections; expand access, e.g. shortening waiting lists; and enhance patients' satisfaction, e.g. avoiding stress derived from overnight hospitalization. Therefore DS can have a positive impact both on citizens' health status and their satisfaction with services delivery. DS development can also convert into more equitable services both in terms of safety and access.

DS is a system made of multiple processes and embedded in a larger system of surgical services delivery, which is also part of an even bigger health system, i.e. a macrosystem. Socio-technical systems like DS do not function smoothly without purposeful and well informed design and persistent change for the better. Therefore DS, like most organizational enterprises, should be conceived, designed and deployed using the lenses of system thinking, and monitored and enhanced adopting the tools of Continuous Quality Improvement (CQI). One of the most important instruments to monitor and improve DS performance is the information system.

DSDP represents a contribution towards the attainment of the objectives of the Second Health Programme, i.e. first and foremost to generate and disseminate health information and knowledge and, secondly, to promote health, including the reduction of health inequalities.
DSDP constitutes added value for EU not only because of its technical contributions, but also because participating MSs comprised distinct religious and cultural traditions, facing dissimilar economic maturity, levels of prosperity and equity in the distribution of wealth. Countries involved in DSDP have disparate populations and size, are located in every major area of Europe: north (e.g. Sweden), south (Italy), centre (France), east (Hungary) and west (Portugal). Furthermore, their institutional integration in the EU varies because some have recently joined EU some other are funding MSs. The wide representation of countries participating in the Project makes the diffusion of its recommendations among all MSs easier.

DSDP used innovative aspects both in terms of content and process. As far as the first dimension is concerned, the project, for example, systematically classified DS indicators identified in the peer and grey literature using an explicit framework based on system thinking and looked beyond DS information system per se, highlighting the key importance of embedding it in a wider perspective of continuous quality improvement. As far as process is concerned, DSDP involved several professionals with widely different disciplinary backgrounds representing various institutions playing important roles at national, regional and local level. DSDP used diverse applied research methods with the aim to obtain the most from participating professionals and organizations, for example the Delphi method.

5.1.11 Effectiveness of the dissemination

was ensured by the strong commitment of the partners and by the International Association for Ambulatory Surgery – IAAS (collaborating partner of the project) through the following means of communication:

WEBSITES:

Official project website: http://www.dsdp.eu
Official IAAS website: http://www.iaas-med.com/index.php/iaas-initiatives
Main Partner website: http://www2.arssveneto.it/html_pages/index.php

PUBLICATIONS:

Ambulatory Surgery Journal
On July 2010, Ambulatory Surgery Journal, the IAAS Official clinical journal, published a detailed presentation of the DSDP project (http://www.iaas-med.com/images/stories/Journal/March10/DAYSURGPROJ.pdf

IAAS Quaterly newsletter
http://www.iaas-med.com/images/stories/Newsletters/iaasnewsletternov10.pdf

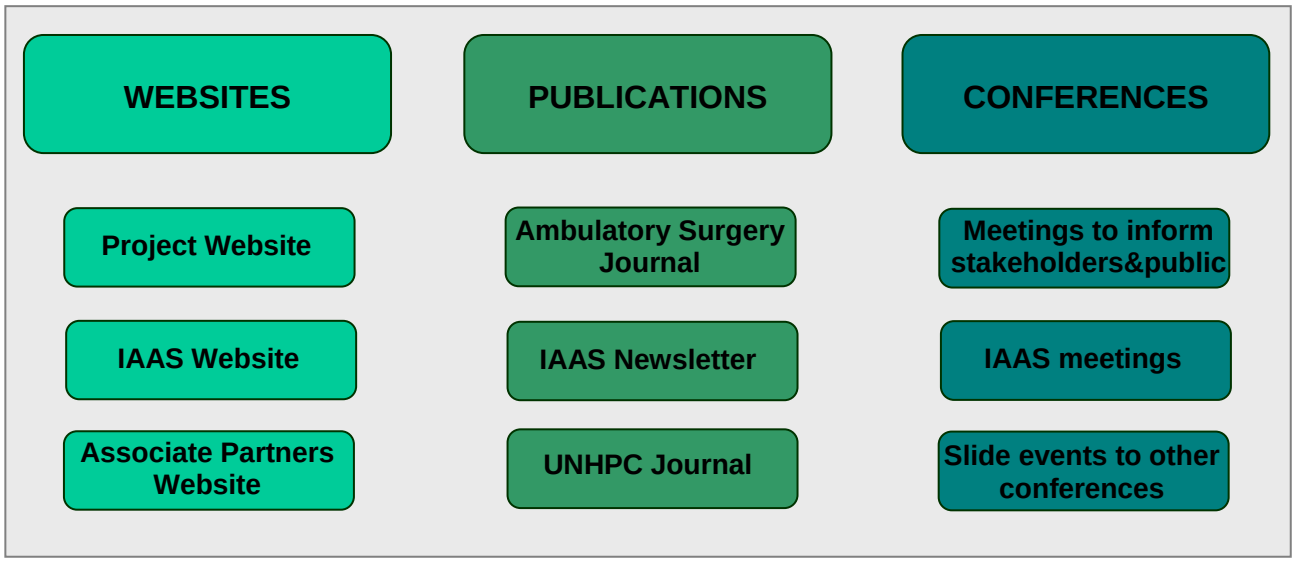
News to be published in the next IAAS Newsletter - November 2012
The following short report will be published:

"DSDP general objective was to identify and validate sets of DS indicators and to develop the Information Systems on DS in Europe. The study of DS data and indicators in participating MSs revealed that a key problem affecting many DS Information Systems lies in the fact that sometimes data are unavailable and as a consequence indicators cannot be calculated; on occasion, even if data are available, indicators are not computed. Another serious constraint derives from vague and/or dissimilar definitions and the adoption of unlike coding criteria by MSs.
An extensive literature review of peer and grey publications, EU projects; and international health databases identified 95 DS indicators, which were classified on the basis of a framework founded on system thinking. Furthermore, several properties of indicators were assessed, e.g. face validity, relevance, bias, comparability, promotion of quality improvement, and availability. DSDP also brought forth the opinion of experts on ideal and basic sets of DS indicators. The project developed a health system framework which places DS into a large context made of the environment, the health system and health services. Finally DSDP offered principles and practical guidance to MSs on how to formulate and implement policies concerning DS information systems.
The bottom line is that improvement of performance implies information on performance. A state-of-the-art DS information system will also improve accountability of clinicians, managers and policy-makers. This aspect fully matches current dominant values and concerns regarding transparency about policies' effects, managers' capability and providers' competence. DSDP represents a contribution towards the attainment of the objectives of the Second Health Programme, i.e. first and foremost to generate and disseminate health information and knowledge and, secondly, to promote health, including the reduction of health inequalities. The project's strategies and results are fully applicable to the European context and congruent with the EU effort in the development of information and knowledge systems. Stakeholders who might benefit from the analysis and tools produced by DSDP include international institutions, such as the EU Commission, OECD and WHO, together with Ministries of Health and local organizations, for instance regional and local health authorities, hospitals and Day Surgery units"

CONFERENCES:

Main activities and intermediate results of the project have been promoted among

- Surgeons and Day Surgery Departments through the channel of the International Association for Ambulatory Surgery – IAAS. In particular the Executive Committee and General Assembly meetings have been the strategic occasion to promote our project;
- Policy makers and National and Local Health Systems have been informed by each project partner in his own country through its National Association for Ambulatory Surgery.



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5.1.12 Conclusions and recommendations, sustainability of the project (after EC co-funding) and lessons learned.

Conclusions

Too often there is a gap between what a healthcare system achieves in terms of quality, safety, efficiency and equity and what it could and should deliver. Gaps and even chasms are invisible to healthcare systems which do not use sound information systems. Here there are no problematic patterns, only fragmented episodes, each one with its explanation and a designated victim to blame and shame at the sharp end, where services are delivered.

Medicine has been rightly called the greatest benefit to humanity; it cannot afford to let down its potential beneficiaries because of mediocre information, lack of knowledge of improvement methods and fear of change. Currently the strength of the movement behind quality measurement and improvement is incontrovertible; even if it is still a teen ager in terms of biological age, quality improvement is taking place at an accelerating pace and countries which have fully embraced such approach have achieved remarkable success. For example, the powerful results of a valid health information system coupled with a national strategy of CQI is revealed by the successes achieved by several thousand US hospitals during the last decade. Health organizations and systems which resist or ignore it are already at the margins of what is mainstream. More importantly, whole societies will pay greatly if they underestimate the significance of health services quality.

System thinking maintains that processes are interrelated and optimizing each one independently can result in an even poorer performance. System thinking also affirms that processes should be studied systematically visualizing them through flowcharts and measuring their important steps. Processes vary as a result of both special or systematic causes, and common or random causes, which should be identified, examined and understood. Statistical analysis is essential in order to turn data into useful knowledge. Statistical Process Control is the modern approach to characterize variability, discriminating between its special and common attributes. Misinterpretation of variation may cause tampering with basically sound systems and processes, which might itself increase variation.

Comparisons are an important source of understanding and benchmarking, however contrasting does not equal ranking. On the opposite, ranking has two major disadvantages: first it is emotionally and politically destructive for many, indifferent for most and only advantageous for the few who, provisionally, appear to lead. Its second serious shortcoming derives from the fact that differences, possibly expressed as percentiles and presented by histograms, have no statistical basis and represent mere subdivision into arbitrary categories.

The astonishing scientific progress of medicine has no effect until it is delivered appropriately, and measuring performance is one of the most powerful tools for promoting evidence based interventions. A health information system constitutes a strategic component of a health system. Its design and management must be based on principles of system and statistical thinking. A IS is a system itself, made

of processes, activities and tasks. Its logic and structure must be in order, different components must be aware of their role as suppliers and customers and how they are supposed to contribute to the overall aim of providing relevant, reliable, complete and timely information to different users.

An information system is a pillar to each phase of DS management, from policy design to implementation, monitoring, improvement and evaluation. Information supporting DS should shed light on its key components, in particular customers, resources, access, processes, outputs, outcomes and productivity. Collecting valid and reliable data, transforming them into relevant indicators and presenting them graphically in ways which help focus attention on fundamental factors are essential activities of a functional information system.

Yet, by itself, building and running a health information system is not enough to ensure its competent and productive utilization. This tool can deliver its potential only if it is embedded in a comprehensive CQI effort bringing together system theory and statistical methods. Otherwise the risk is that data are piled, maybe indicators assembled and graphs displayed, but interpretation remains inadequate, key customers' expectations and clinical processes are not understood and those with the responsibility to improve them exaggerate their reactions to normal variability and ignore special causes. A bureaucratic approach to HIS, detached from the reality of healthcare delivery, not explicitly supporting resources allocation and use, lacking the understanding of the role of and interaction between structures, processes, patterns and results, with no involvement of key stakeholders is destined to turn into a dull instrument incapable to enlighten and prompt transformation.

As everyone knows it is easier to defend the status quo than to change it. Many deeply held assumptions, based on tradition more than evidence and about which we are often oblivious, guide our actions; this is true also for surgical services delivery. The unmistakable ethical obligation to continuously improve the quality and safety of DS care and meet patients' expectations requires physicians to address such topics as systematically and professionally as clinical work. Availability of valid and useful indicators and their quantitative analysis using SPC might contribute to lessen divergence of opinions and also conflict of personalities and power. As the American Quality Society (AMQ) bluntly stated "Without data, everyone is an expert; team discussions tend to produce more heat (anger) than light (insight and learning)."
The bottom line is that improvement of performance implies information on performance and the goal of quality improvement has become an integral component of health care. DSDP strives to play a constructive role in each of the above mentioned aspects, contributing to such high aims. In particular, identifying a common list of indicators, DSDP seeks to facilitate the exchange of comparable information within EU and promote benchmarking both across DS systems and units. This final WP attempts to explicitly link DS information system users, structure and outputs to analysis and continuous improvement of both strategic and operational decision making.

Recommendations

MSs should (if they have not done so yet):

- analyze databases and data composing them, together with their definitions,
- examine current list of indicators and their interpretation and use,
- adopt the definitions of Day Surgery/Ambulatory Surgery, Office based surgery and Short stay surgery agreed by the DSDP panel,
- use the OECD list of basket procedures, after excluding hysterectomy, mastectomy and cholecistectomy (51.2 NON laparoscopic) when reporting DS indicators at international level,
- ensure classifications of procedures used by MSs are comparable through a process of transcoding,
- classify DS indicators on the basis of the following nine categories, i.e. Input, Patients characteristics, Access, Process, Output, Outcome, Safety, Satisfaction/Responsiveness, Cost/Productivity,
- review current sets of DS indicators also on the basis of the above considerations,
- identify and adopt an ideal and a minimum set of DS indicators for each level of care delivery and management,
- outline and standardize the procedures for assembling the indicators,
- promote local, regional and international comparisons,
- openly identify DS information system's goals; namely national and regional institutions should explicitly select some or all among the following goals of a DS information system:
  - Authorization, accreditation and certification,
  - Evaluation of performance,
  - Quality improvement,
  - Accountability and
  - Research;
- clearly focus on high reliability measures whose potential for important improvements of care is firmly established;
- endorse a set of essential, high-value and high-leverage measures built on a broad process of consensus building involving managers, citizens, and providers;
- provide full measure specifications;
- spell out where and how measures are being used;
- align measures to make reporting lean;
- make explicit the link between each measure and its end use;
- ensure a strong and integrated data infrastructure necessary to assemble the indicators;
- define standards (e.g. data fields and not free text) for electronic health records (EHRs) and devise strategies for their diffusion;
- prepare guidelines and train staff on data collection and analysis;
- design a user friendly web-site;
- establish a solid structure responsible for the overall management of the initiative able to monitor and support primary and secondary end users and guarantee validity and reliability of measures;

- be transparent in divulging the scientific evidence base of the measures in order to promote its acceptability among clinicians;
- disclose measures at regular intervals;
- make known improvements of performance following measures' publication and
- build trust in the measurement process,
- set up a national program promoting continuous improvement,
- create a longer list of structure, process and outcome measures adaptable to local use.

Measures developers and endorsers, including scientific associations such as IAAS, foundations and government agencies, should support the use of performance measures.
Among national public institutions, Ministries of Health and National Health Agencies should put pressures on governments and parliaments in order to pass legislation mandating public reporting of a small set of validated structural, process and outcome measures by all public and private hospitals.
Hospitals which are unable or refuse to report should face severe disincentives and be on a list made public
Private hospitals should adopt mission and vision statements which explicitly attach key importance to continuous improvement and accountability and are committed to build a solid information system.

Sustainability

The sustainability of the project depends on how far international, national and regional institutions consider DS a priority and understand that its successful implementation and improvement cannot overlook a solid information system.

Lessons learned

A first lesson learned is that a group whose members already know each other and have collaborated in previous occasions, i.e. before the beginning of an applied research project, facilitates the achievement of objectives because it quickly starts to concentrate on content as a team. This consideration is based on comparisons with previous experiences with EU funded projects where a major difficulty derived from the fact that participants, inevitably, spent a relatively long time to get to know each other and negotiate respective roles instead of focusing on subject matter.
A second lesson learned is that a project success, if its aim is not restricted to a narrow field, depends on bringing together professionals and researchers with different disciplinary backgrounds whose contributions are clearly spelled out from the start.
A third lesson is that system thinking, i.e. the idea that components contributing to a designated aim mutually influence each other and their relationships are more important than their individual functioning, is not only essential to understand the topics confronted by the project, but it is also crucial to the initiative's management.

SECTION VI

HORIZONTAL WORK PACKAGES

Work package title:	**Coordination of the project**
Work package Number:	**1**
Work package Leader:	**ARSS Veneto**
Number of associated partners involved:	**10**
Number of person / days of this work package:	**1154**
Total budget of this work package:	**403.711,95 €**
Starting date. Ending date:	**M1 – M36**

Project Management

Management Plan yes **X** no ❑
(*see Annex WP1_I*)

Sustainability plan available, describing the measures taken to ensure the continuation of the action after the end of the EC funding yes **X** no ❑

The International Association for Ambulatory Surgery - IAAS, Collaborationg partner of our project, is presently negotiating an operational grant granted by the Executive Agency for Health and Consumers. This grant will help finance IAAS operations for 2013. The 2013 workplan is dedicated to the development of Day Surgery in Eastern European countries. Activities of this year include the special publication of policy recommendations related to Day Surgery information systems deriving from the DSDP project.

A new project has recently been submitted within FP7 call. Prof. Alistair McGuire, London School of Economics, is the coordinating partner of the DaySimple project proposal submitted on October 2. If funded, the project intends to move forward with what the International Association for Ambulatory Surgery (IAAS) has already put in motion with DSDP by performing a comparative analysis of Day Surgery models across Europe, designing and testing a benchmarking model of day surgery in Europe, as well as constructing guidelines for implementing an effective and evidence-based model of Day Surgery in Europe.

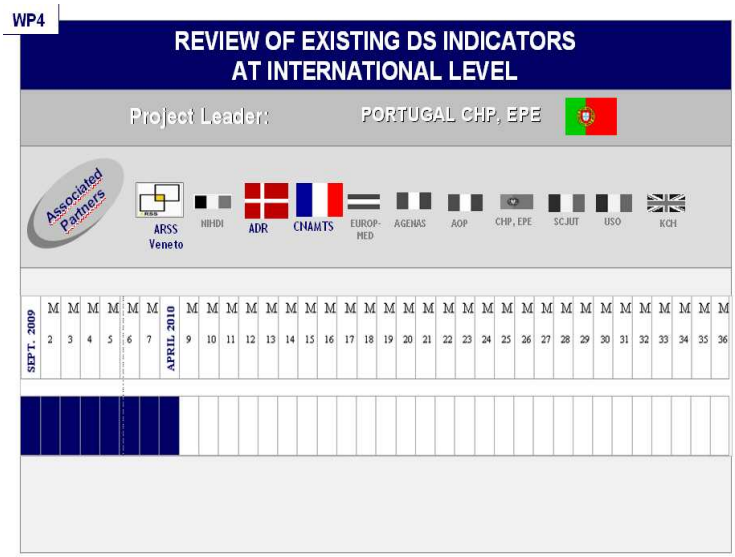
Partnership Internal Agreement yes ❑ no **X**

Most of the partners are part of the International network of the International Association for Ambulatory Surgery (IAAS). It was not considered necessary to draw an internal Agreement.

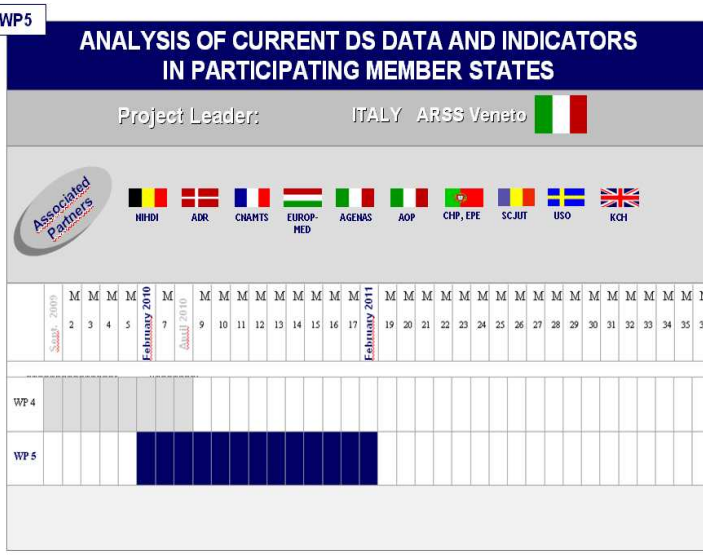
Description of the work package:

Partnership management of tasks and achievements

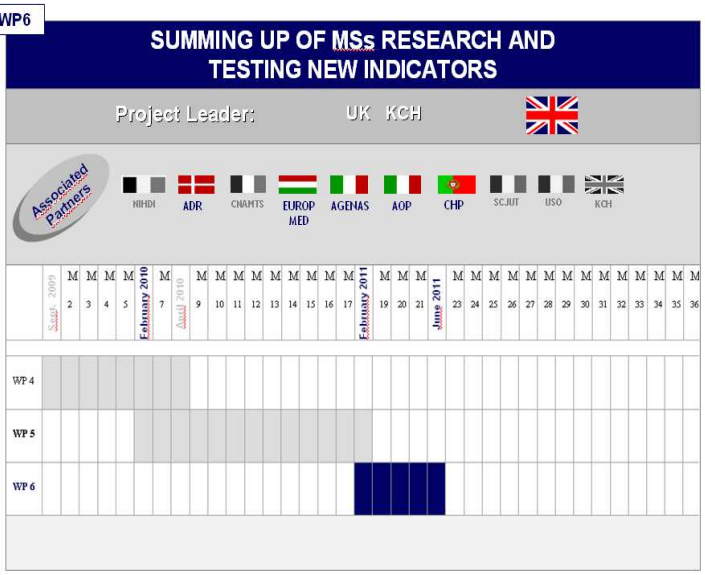
WP4



WP5

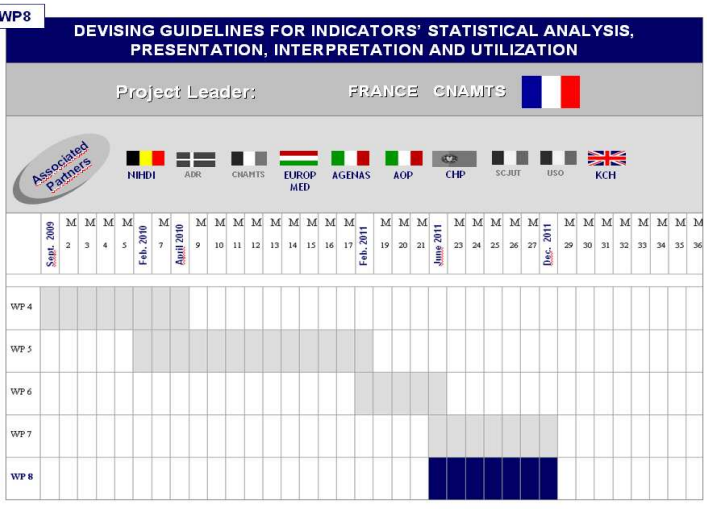


WP6

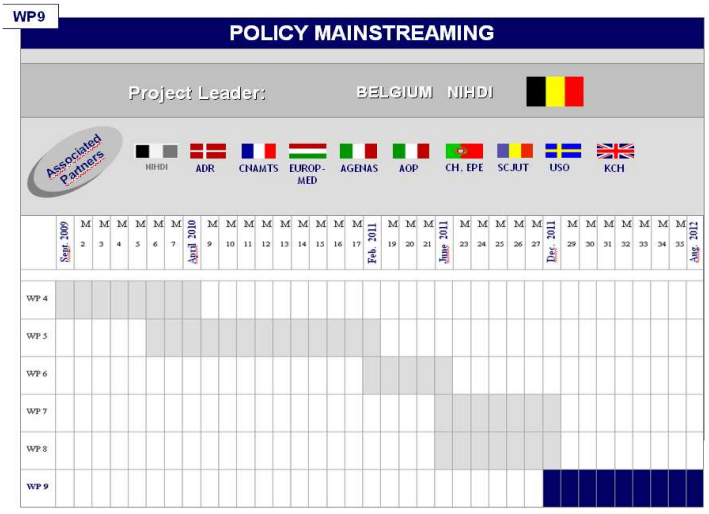


WP7

WP8

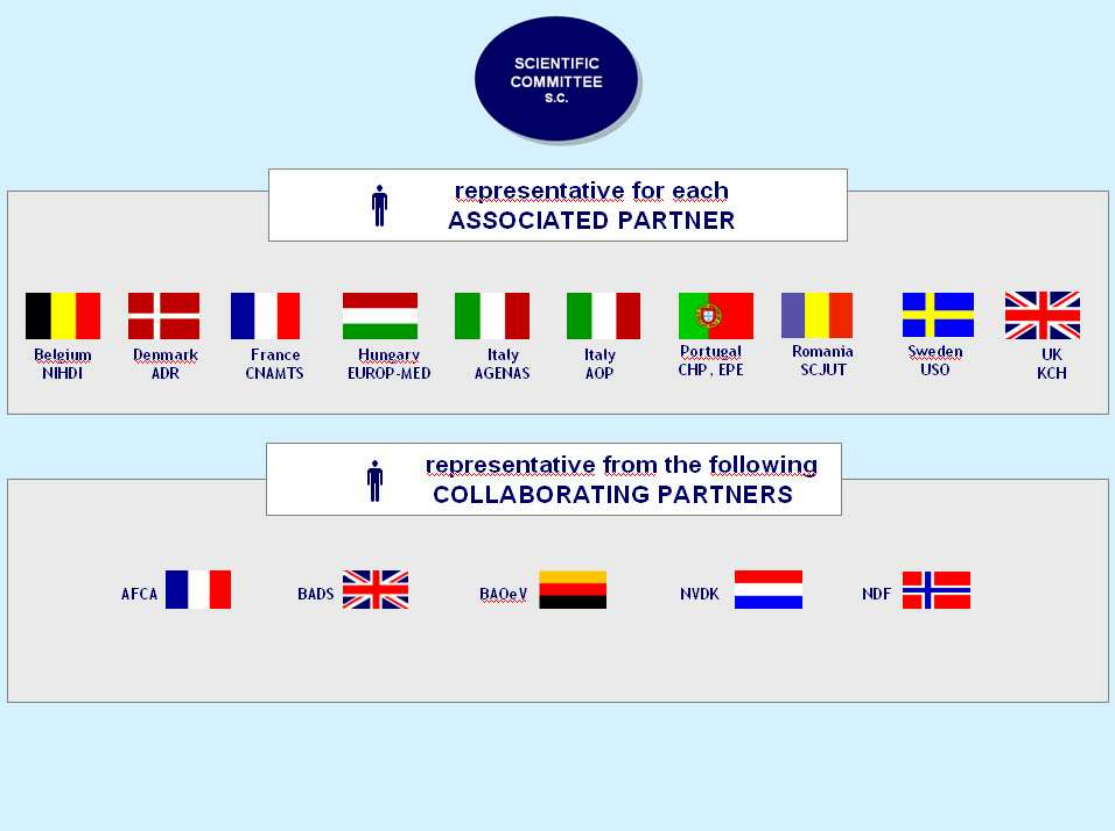


WP9

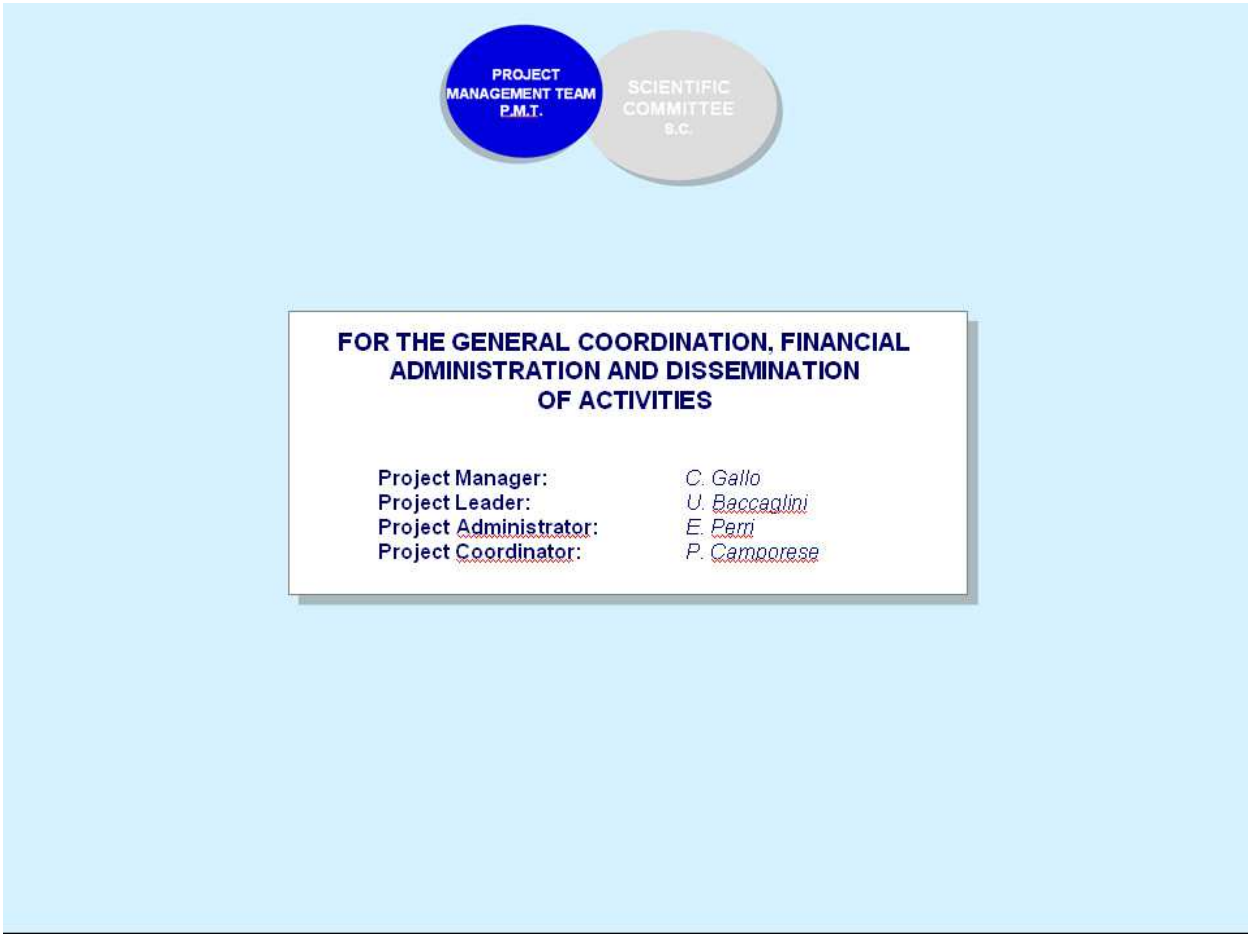


Management structure description

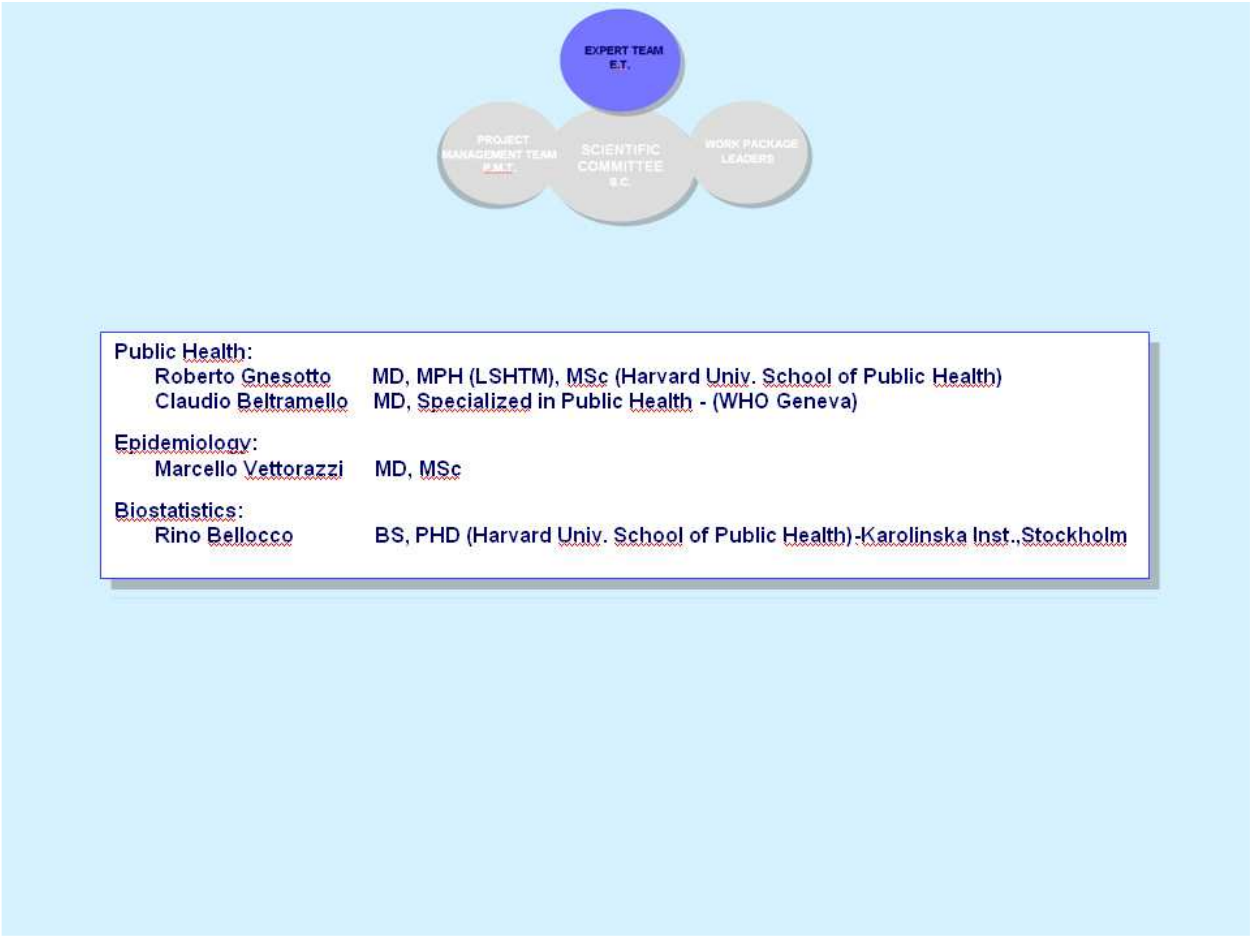
The project was led by a **Scientific Committee (SC)**, consisting of one representative for each associated partner and five representatives from the Colloborating Partners. The SC was responsible for the day-to-day running of the project and for ensuring the smooth implementation and evolution of the project activities. The SC was also the place where potential conflicts and risks were managed and sorted out by the partnership.



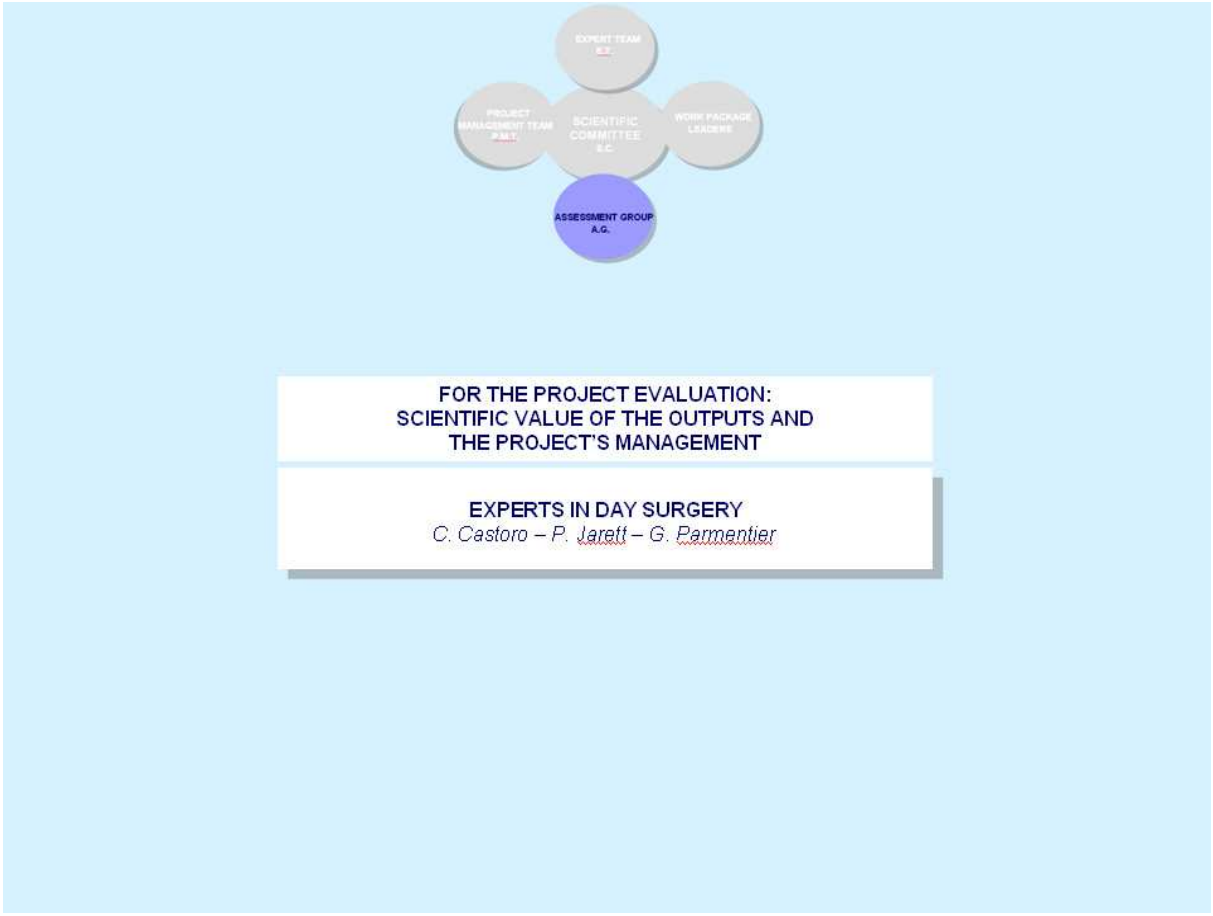
As far as the strategic development of the project, the project management and its dissemination are concerned, the SC was assisted by a **Project Management Team (PMT)**: the project leader, the project manager, the project administrator and the project coordinator. The PMT has ensured the general coordination of the project. It has established an effective interface with the project officer, mechanisms to make decisions affecting the project's outcome, as well as administrative and technical co-ordination of the project.



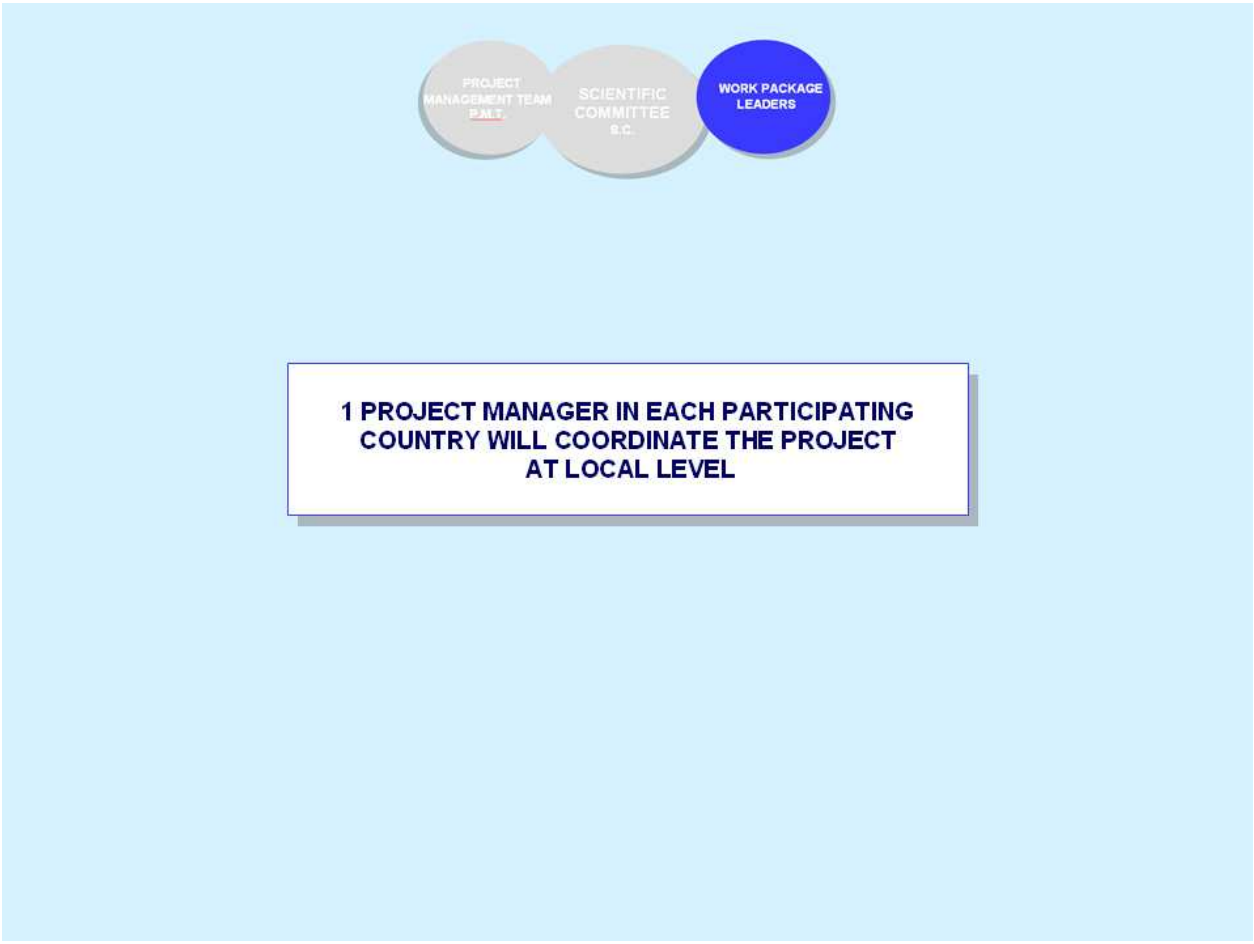
The SC was assisted by an **Expert Team** (ET) consisting of 1 international expert in Public Health, 1 international expert in Epidemiology and 1 international expert in Biostatics.



Regarding the project evaluation, it was performed by the members of the **Assessment Group** (AG), consisting of 3 eminent representatives of the International Association for Ambulatory Surgery, who were not involved in any of the project activities. Their tasks were to assess the scientific value of the outputs and the project's management according to the scheduled delivery time for each output.



1 Project Manager in each participating country coordinated the project at local level.



Description of the internal communication channels

For all meetings a detailed agenda were produced and all the presentations were uploaded onto the project website. In addition to the meetings partners were able to communicate by email, the primary means of communication chosen by partners. Phone calls were also a part of the project.
Efficient communication, however, is not only a question of the right tools or procedures, but is closely linked to issues of mutual trust, personal responsibility and a sense of community.

Monitoring and supervision

The work packages (WPs) bring together members with similar interests, and have been established to enable the deliverables and milestones to be achieved more easily. The WP leaders, together with the coordinator from the PMT, ensured coherence in research direction and management of the work between the different WPs. The WP leaders were responsible for their individual WPs, and have co-ordinated the contributions of each partner involved. They were responsible for identifying risks and for proposing solutions if problems raised in their WPs. WP members regularly reported to their respevctive WP leader, and contributed to the preparation of deliverables and reports.

The project was supported by an external Assessment Group (AG). This team had direct access to the coordinator and WP leaders. Additionally, members of the external Assessment Group attended annual project meetings. The AG was regularly briefed on the project's progress and asked to make recommendations to the PMT.

Problems that have occurred and how they were solved or envisaged solutions

Main problems regarded the financial management of the project. Due to the limited budget allocated to the project, it was not possible to appoint an administrative expert for each project partners. Therefore the project coordinator had to provide an extensive support to all the partners who were not familiar with the financial management of such a project.

As explained below, the collaboration and availability of partners and of our project officer has facilitated the solution of the problems encountered. Frequent phone calls and videoconferences were organised to let people meet "virtually" and try to understand how to deal with the financial issues related to the project. Sometimes, however, virtual meetings were not enough and extra meetings, not scheduled and budgeted in the project, were needed. During these meetings, the project coordinator worked with single partners in order to let them understand the basic financial rules of the project and show them how to fill the necessary administrative paperwork. These meetings were also necessary to discuss further the details of the scientific of the project.

Another problem was connected to the withdrawal of the Swedish partner (USO). The coordinator tried to find a solution, but USO finally decided to withdraw from the partnership, being the tasks required by the project not compatible with all the activities he had to perform at his institution.
A new French beneficiary (HAS) was identified and a formal amendment approved by the EU Commission.

Impact of possible deviations from the planned milestones and deliverables, if any
No important deviations occurred during the project life.

The only deviations occurred were in

- WP6 where the Deliverable expected at M22 was postponed at M25 with minor changes on the objectives. This revision was agreed with the Work Package leader (KCH, UK) and with our Project Officer in Luxembourg. Shortly, it was decided to refocus WP6 on investigating the comparability of DS data and indicators across MSs and on assessing the viability of a potential core set of DS indicators in MSs involved in this WP. Anyway, the revision did not affect the overall workplan and budget of the project.

----- Original Message -----
From: Day Surgery
To: paola.D'ACAPITO@ec.europa.eu
Sent: Wednesday, April 13, 2011 6:34 PM
Subject: DSDP - Agreement n° 2008 1305

Dear Paola,
here I am with a new request....
After we had begun WP6 and while we were completing the WP5 we have realized that we needed to slightly revise the objectives of WP6.
In agreement with the work package leader (KCH, UK) we would like, instead of testing new DS indicators, to refocus WP6 on investigating the comparability of DS data and indicators across MSs and on assessing the viability of a potential core set of DS indicators in MSs involved in this WP. In the document attached, the revision is extensively explained and justified. Therefore I would like to remark that such revision will not affect the overall workplan and budget of the project.
As we have been discussing for a long time over these issues, we need now more time to achieve the WP objectives in a satisfactory way. For this reason, we would also like to request you a extension of the WP duration till M25 instead of M22. Consequently, the final deliverable D6 should be finalized on M25 instead of M22.
I would like to assure you that this postponment will not affect the following WP7 and WP8.
Could you please let me have your feedback so that I can inform the WP leader accordingly.
Thanks and kind regards
Pascale

- WP7 and WP8 where the Deliverables expected at M28 were postponed at M31. Our Project Official in Luxembourg was duly informed:

> ----- Original Message -----
> **From:** Day Surgery
> **To:** paola.D'ACAPITO@ec.europa.eu
> **Sent:** Wednesday, January 04, 2012 9:00 AM
> **Subject:** DSDP - Grant Agreement n° 2008 1305
>
> Dear Paola,
> the deadlines for both WP7 and 8 of DSDP project need to be postponed until March 31st 2012 because the process of setting up and implementing a Delphi method in order to reach a consensus on the essential and ideal list of Day Surgery indicators represents a long-lasting process made of repeated cycles of consultation. Similarly the preparation of guidelines for the statistical manipulation, presentation, interpretation and use of DS indicators is necessarily a multi-disciplinary effort involving several professionals in dispersed countries.
> Consequently, the final deliverables D7 and D8 should be finalized on M31 instead of M28.
> I would like to assure you that this postponment will not affect the following WP9.
> Could you please let me have your feedback so that I can inform the WP leaders accordingly.
> Thanks and kind regards
> Pascale

List of project meetings, dates, venues, annotated agenda, action oriented minutes

Kick-off meeting in Luxembourg

On October 7th 2009, DSDP project was officially presented to EU scientific and financial project officers. All the associated beneficiaries were invited to participate to present themselves and their contribution to DSDP. The project leader and the project coordinator presented to all the partners the structure and the work plan of the project. The agenda, the presentations and minutes of the meeting are available on DSDP project website (*see Annex WP1_II*).

Dissemination meeting in Porto - Portugal

In the light of giving the outmost dissemination of our project results, we organized a dissemination activity, not initially planned and budgeted in Annex II, held in Porto on May 12th, 2012. IAAS members were invited to attend the meeting in order to disseminate our project results to renowned representatives of Day Surgery (*see WP2: Dissemination*).

Final meeting in Padova - Italy

The final DSDP meeting was held in Padova, Italy on August 31th, 2012, on the official ending date of the project. All the results achieved were presented, not only to the project partners but also to a wider assembly of guests. Our Project Officer, Guy Dargent, and Mika Gissler, from the Finnish Institute for Health and Welfare, coordinator of a successful European project on health indicators (ECHIM) kindly agreed to be our guest during the conference. Their presence was an important added value to our final meeting (*see Annex WP1_III*).

It was necessary to organise additional coordination meetings, not scheduled and budgeted in the project:

Coordination meeting in Porto - Portugal

On November 21st 2009 an additional meeting, not budgeted and scheduled in the project, has been organized by the project leader to discuss with all the partners:
- the work plan: what at what time with whom to achieve the project objectives
- the human resource planning: which type of staff will be involved for the tasks that are planned and number of working days.

Coordination meeting in London - UK

On September 1st, 2010 an additional meeting, not budgeted and scheduled in the project, has been organized by the project leader to discuss with KCH (WP6 Project Leader) goals and strategy of WP6.

Coordination meeting in Paris - France

On September 20th, 2010 an additional meeting, not budgeted and scheduled in the project, has been organized by the project leader to discuss with the new partner HAS tasks to be performed.

Coordination meetings in Rome - Italy

On October 28th, 2010 – December 20th, 2011 – April 3rd, 2012 – June 13th, 2012 additional meetings, not budgeted and scheduled in the project, had been organized by the project leader to discuss with AGENAS the work plan and the budgetary issues.

Coordination meeting in Paris - France

On January 19th, 2012 an additional meeting, not budgeted and scheduled in the project, has been organized by the project leader to discuss with the new partner HAS tasks to be performed.

Amendments incurred or requested during the reporting period

Amendment to Grant Agreement 2008 1305

- Replacement of the legal representative authorized to sign
- Termination of beneficiary's participation (Associated Swedish partner: USO)
- Addition of one new beneficiary (Associated French partner: HAS)
- and minor changes in the project workplan and terms.

Changes in the partnership, if any

WITHDRAWAL OF A BENEFICIARY

Partner full name	*End date of participation*
Universitetssjukhuset I Örebro – USÖ – established in Sweden	October 10th 2010

ADDING OF A BENEFICIARY

Partner full name	*Start date of participation*
Haute Autorité de Santé - HAS - established in France	October 10th 2010

Any changes to the legal status of any of the beneficiaries

The partner EUROPMED - Europ-Med Budaörs Medical Centre - established in Hungary, is to be considered a "private" institution with effect from September 1st, 2010. The budget in ANNEX II has been modified accordingly.

Financial management

The PMT was responsible for the general coordination and for the financial administration. In accordance with the official guidelines, each partner was responbible for its own budget and expenses.

At the kick-off meeting, our project officer Mr. Guy Dargent introduced the financial rules to manage the project. Pascale Camporese, project coordinator, then presented the strategy that was to be followed to ensure the correct use of the EC funds (www.dsdp.eu).

Nevertheless, as many partners were unfamiliar with the financial issues, the coordination was asked to provide support via face to face meetings not initially planned.

All the partners were closely monitored and supported and they were then able to provide correct information on their costs related to the DSDP meeting. The coordinator consolidated all the partners' cost statement for the interim and financial reports.

The EC financial officer also provided helpful support to the PMT and this contributed to the smooth coordination of the financial process within the project.

Subcontracting rules applied and description of the process for implementing the public procurement, if applicable

Public entities followed the procurement principles established by their national authorities. ARSS and AOP chose the bid offering best value for money under conditions of transparency and equal treatment.

Conclusions

The project ran smoothly from a management perspective.

The Project Management Team (PMT) has been very active, through regular phone calls and occasional face-to-face meetings. Good strategic control of the project's workplan has been maintained and the PMT has identified possible problems early and has proposed strategies to reflect these problems.

The Interim reports were submitted promptly respecting the deadlines. A number of minor issues were identified by the Commission services, which were rapidly resolved by the co-ordinator and the partnership.

The PMT has no concerns over the partnership's performance. We wish to point out that all DSDP partners are also active members of the International Association for Ambulatory Surgery (IAAS). As such, they had been collaborating together also before the beginning of the project. Therefore their previous knowledge added to their expertise in Day Surgery has avoided any problems in establishing an efficient network. The international expert in Public Health has contributed to maintain cohesive research links and enhanced as a result of the collaborative work required by the project.

Partners have effectively interacted and collaborated, thus contributing to the timing delivery of the outputs of the project.

List of deliverables linked to this work package

Deliverable	Title
D1a	First Interim Report
D2b	Second Interim Report
D3c	Final Report

Milestones reached by this WP

	Milestone title	Month of achievement
1	Kick-off meeting Luxembourg	M2
2	Final meeting Italy	M36
3	First Interim Report	M12+2
4	Second Interim Report	M24+2
5	Final Report	M36+2

Annexes

Annex WP1_I Management Plan
Annex WP1_II Kick-off meeting in Luxembourg
Annex WP1_III Final meeting in Padova, Italy
Annex WP1_IV Deliverables:
D1a First Interim Report
D1b Second Interim Report

Work package title:	**Dissemination of the results**
Work package Number:	**2**
Work package Leader:	**ARSS Veneto**
Number of associated partners involved:	**10**
Number of person / days of this work package:	**31**
Total budget of this work package:	**21.973,47 €**
Starting date. Ending date:	**M1 – M36**

Dissemination plan available	yes ❑ no **X**
Project leaflet/brochure/newsletters submitted to EAHC	yes **X** no ❑
Project website:	www.dsdp.eu
The EU funding disclaim and EU logo are visible in the project website and public presentations	yes **X** no ❑

Description of the work package:

Description of the key messages

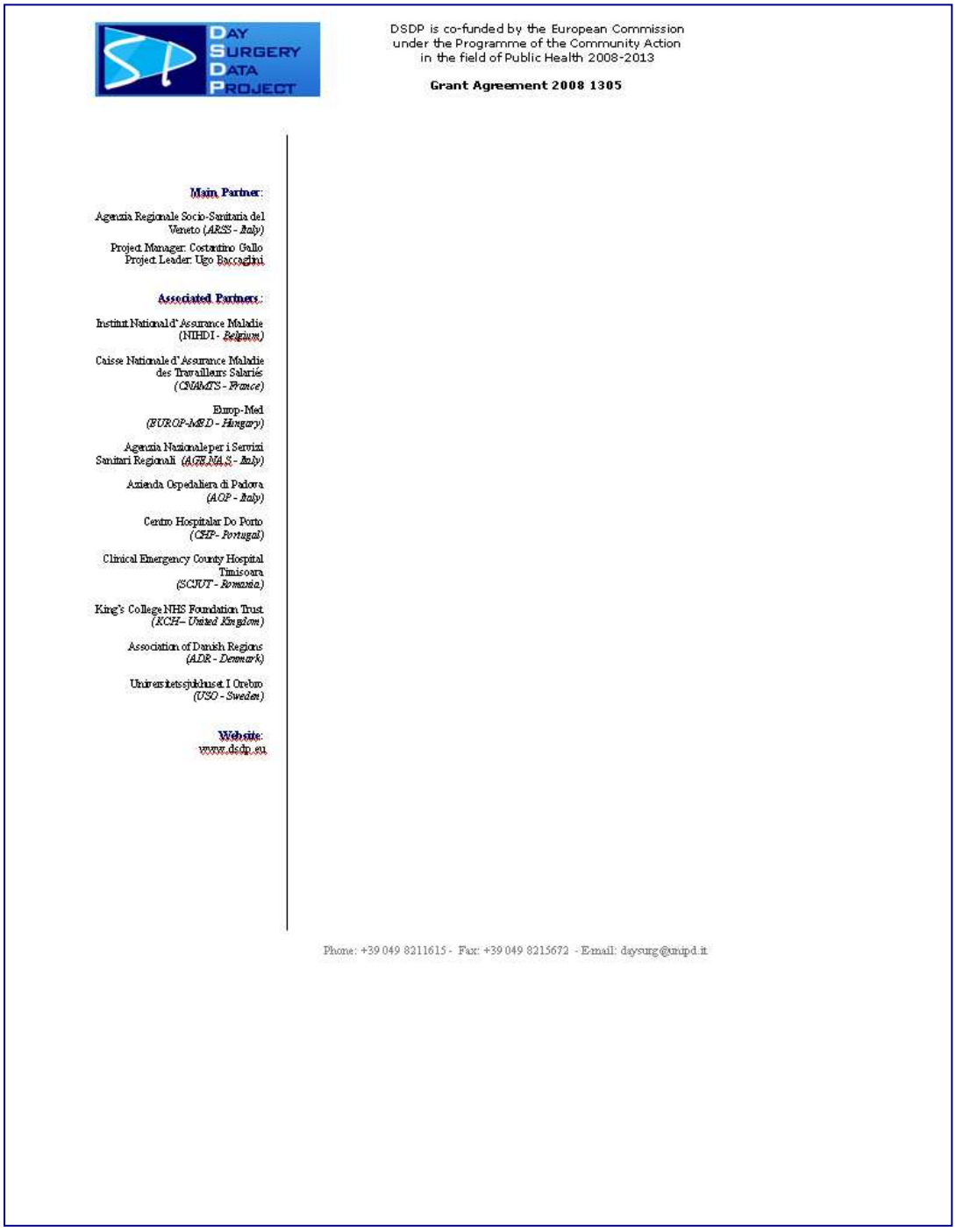
The aim of this Work Package is to inform stakeholders, relevant institutions and persons interested in DS about the project objectives, activities and results (outputs and outcomes).
DSDP made clear that without knowledge, no progress can be made within organizations. Policy makers as well as managers and professionals must have the knowledge and skills to both solve problems and continuously improve processes.
One of the most important instruments to monitor and improve DS performance is its information system. The managerial principle which states that it is impossible to improve performance without measuring it logically leads to the statement that a streamlined DS information system represents one of the most important preconditions for improving whole DS systems and their components. A state-of-the-art DS information system can also improve accountability of clinicians, managers and policy-makers, an aspect which fully matches current dominant values and concerns regarding transparency about policies' effects, managers' capability and providers' competence.

Visual project identity

PROJECT LOGO
A totally new logo was ideated for immediate recognition of the project and to promote identity among partners and with external stakeholders.

HEADED PAPER

Also a dedicated headed paper was developed and it has been used for all official communications among partners and with external stakeholders. In the headed paper is clearly stated that DSDP is co-funded by the European Commission under the Programme of the Community Action in the field of Public Health 208-2013.



DAY SURGERY DATA PROJECT

DSDP is co-funded by the European Commission under the Programme of the Community Action in the field of Public Health 2008-2013

Grant Agreement 2008 1305

Main Partner:

Agenzia Regionale Socio-Sanitaria del Veneto (*ARSS - Italy*)

Project Manager: Costantino Gallo
Project Leader: Ugo Baccaglini

Associated Partners:

Institut National d'Assurance Maladie (NIHDI - *Belgium*)

Caisse Nationale d'Assurance Maladie des Travailleurs Salariés (*CNAMTS - France*)

Europ-Med (*EUROP-MED - Hungary*)

Agenzia Nazionale per i Servizi Sanitari Regionali (*AGENAS - Italy*)

Azienda Ospedaliera di Padova (*AOP - Italy*)

Centro Hospitalar Do Porto (*CHP - Portugal*)

Clinical Emergency County Hospital Timisoara (*SCJUT - Romania*)

King's College NHS Foundation Trust (*KCH – United Kingdom*)

Association of Danish Regions (*ADR - Denmark*)

Universitetssjukhuset I Orebro (*USO - Sweden*)

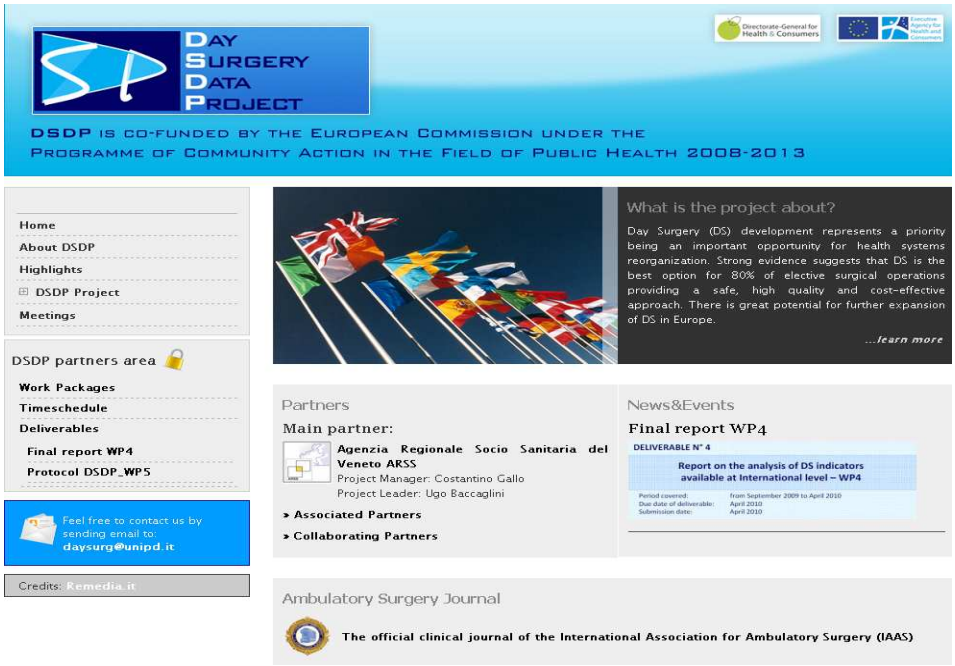
Website:
www.dsdp.eu

Phone: +39 049 8211615 - Fax: +39 049 8215672 - E-mail: daysurg@unipd.it

PROJECT WEBSITE

Within the first three months of the project the official website of the DSDP project was created. All information is available in English.

http://www.dsdp.eu



This website, in particular, included these features:

- A distinctive domain name;
- Project summary, description of project objectives, methodology, activities and expected results;
- Description of all partners, contact details and links to their websites;
- Public news area for dissemination of project progresses;
- Private area for project members;
- Counter for total “hits” (to assess the relevance of the website for dissemination).

A lot of visibility was given to the project development, as well as to the main outputs and outcome.

The website increased the awareness on all aspects of the project and promoted the events organised within the project.

It has indubitably been the most efficient means of communication used for dissemination purposes.

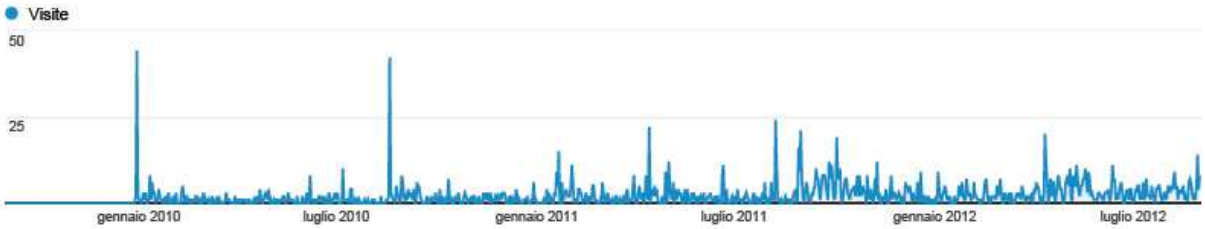
As the project was proceeding and the WPs were finishing, the website was always updated with all reports and deliveries.

The following statistics show the utilization of the website:

Panoramica pubblico 01/set/2009 - 31/ago/2012

% di visite: 100,00%

Panoramica



1.440 persone hanno visitato questo sito

- **Visite: 2.237**
- **Visitatori unici: 1.440**
- **Visualizzazioni di pagina: 8.922**
- **Pagine/visita: 3,99**
- **Durata media visita: 00:02:57**
- **Frequenza di rimbalzo: 48,55%**
- **% nuove visite: 64,37%**

64,37% New Visitor
1.440 Visite

35,63% Returning Visitor
797 Visite

	Lingua	Visite	% Visite
1.	it	1.137	50,83%
2.	en-us	441	19,71%
3.	it-it	145	6,48%
4.	fr	143	6,39%
5.	de	50	2,24%
6.	es	41	1,83%
7.	en-gb	30	1,34%
8.	da	23	1,03%
9.	hu	19	0,85%
10.	es-es	18	0,80%

Activities undertaken to ensure that the results and deliverables have reached the target groups

KICK-OFF MEETING

On October 7th 2009 in Luxembourg, DSDP project was officially presented to EU scientific and financial project Officers. All the associated partners were invited to participate in order to present themselves and their contribution to DSDP. The project leader and the project coordinator presented to all partners the structure and the work plan of the project. The agenda, the presentations and minutes of the meeting were soon after available on DSDP project website.

DISSEMINATION MEETING IN PORTUGAL

In the light of giving the outmost dissemination of our project results, a dissemination meeting was organized (not initially planned and budgeted in Annex II), in Porto on May 12th, 2012.

All IAAS members were invited to attend the meeting in order to disseminate our project results to renowned representatives of Day Surgery.

PROMOTION AT NATIONAL LEVEL BY EACH PROJECT PARTNER

Every project partner was involved in promoting and disseminating the objectives and the results of the project in their Countries. A crucial role for promotion has been the website.

In particular, Policy makers at National and Regional level were directly informed and possibly involved on the project. Many partners presented or mentioned the project in National conferences on surgery and DS. Partners were also involved in clearly reporting on their dissemination activities.

The following is the template sent to all the partners.

Suggested template

Planned/ actual dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible/ involved

In the following pages, two examples on how partners filled it in:

Planned/ actual dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible/ involved
12.04.2012	Part of Day Surgery Presentation	General Assembly in the Association for the Danish REgions	DK	Ca. 500	ADR
12.01.2012	Part of Day Surgery presentation	Representatives from University hospital Aalborg	DK	Ca. 100	ADR
27.04.2012	Information for clinicians	Day Surgery active clinicians	DK	Ca. 300	ADR
14.06.2012	Information for Surgeons	Danish Association for Surgeons	DK	Ca. 200	ADR
21.09.2011	Information for Anaestetists	Swedish Association for Anaestetists	Sweden	Ca. 200	ADR

Planned/ actual dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible/ involved
7-8.10.2011	The 11-th Romanian Congress of Phlebology, Romanian Conference of Ambulatory Surgery	Surgeons, physicians, family doctor, nurses, students	Romania, Republic of Moldavia, Hungary, Serbia	200 persons	Romanian Society of Ambulator Surgery, Romanian Society of Phlebology
23-26.11.2011	The 6-th Romanian Congress of Endoscopic Surgery	Surgeons, physicians, nurses, students	Romania	300 persons	Romanian Association for Endoscopic Surgery
2-4.06.2011	The 9-th Romanian Congress of Angiology and Vascular surgery	Surgeons, physicians, nurses, students	Romania	200 persons	Romanian Society of Angiology and Vascular Surgery

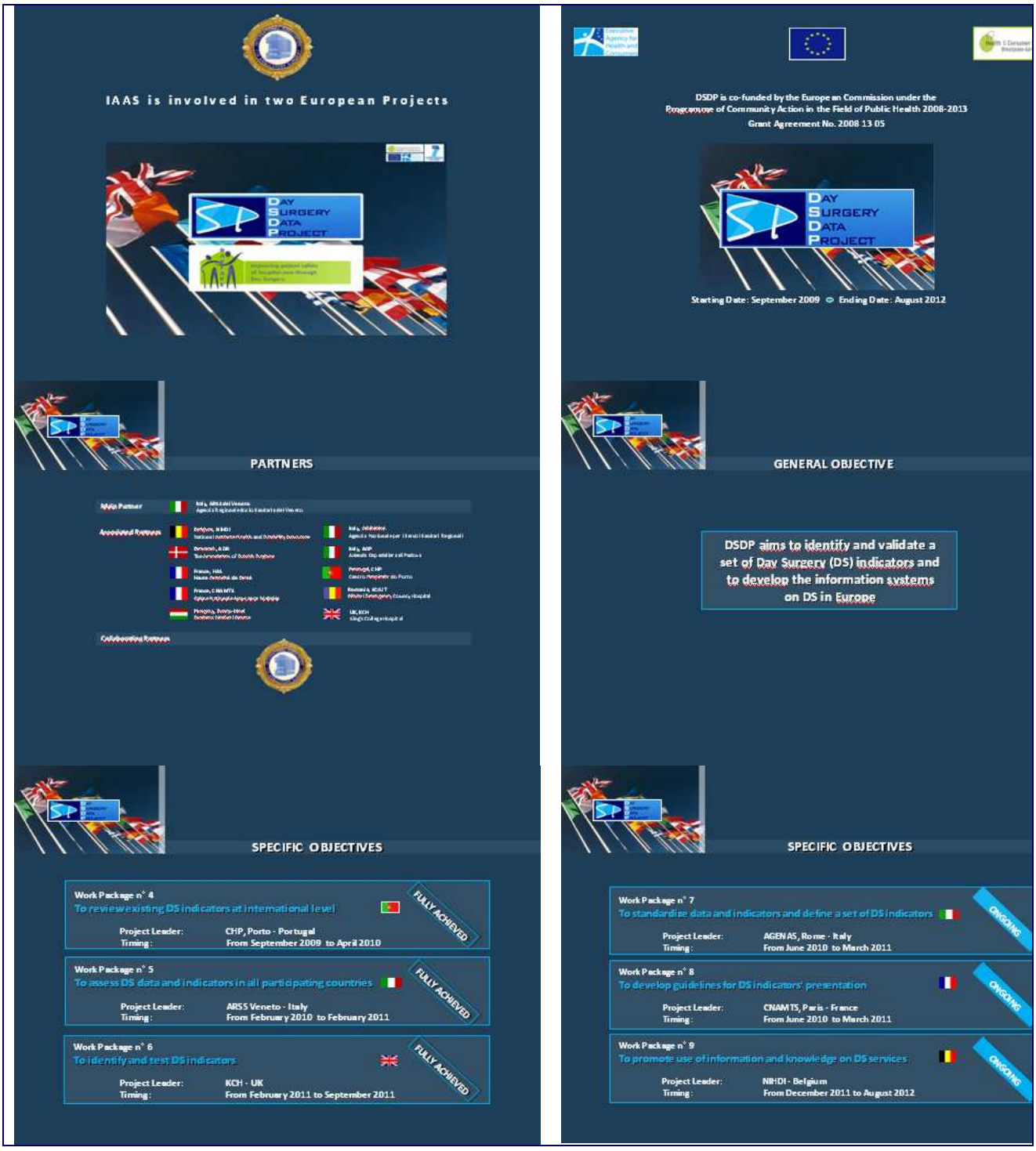
PARTNERSHIP WITH IAAS

The International Association for Ambulatory Surgery - IAAS - (collaborating partner of the project) has given large visibility to the DSDP project, especially during the Executive Committee and General Assembly Meetings. On these occasions the project coordinator presented the WP in details to all members of the Association. IAAS embraced the project among its strategic activities, therefore between IAAS and DSDP a real form of partnership occurred.

Surgeons and Day Surgery Departments through the channels of the International Association for Ambulatory Surgery strongly promote the project. In particular the Executive Committee and General Assembly meetings have been the strategic occasion to keep updated on the project progresses. Moreover, IAAS website and the Ambulatory Surgery Journal have published information about the project (see below).

The members of the IAAS are national scientific societies and health care professionals dedicated to the development and growth of high quality DS worldwide. Therefore the contents of the project were disseminated also in United States and Australia.

A set of slides regarding the project were transmitted to all IAAS partners in order to present in National or International meetings the contents of the project. The slides proposed are hereby showed.


IAAS is involved in two European Projects
DAY SURGERY DATA PROJECT
DSDP is co-funded by the European Commission under the Programme of Community Action in the Field of Public Health 2008-2013
Grant Agreement No. 2008 13 05
DAY SURGERY DATA PROJECT
Starting Date: September 2009 Ending Date: August 2012
PARTNERS
GENERAL OBJECTIVE
DSDP aims to identify and validate a set of Day Surgery (DS) indicators and to develop the information systems on DS in Europe
SPECIFIC OBJECTIVES
Work Package n° 4
To review existing DS indicators at international level
Project Leader: CHP, Porto - Portugal
Timing: From September 2009 to April 2010
FULLY ACHIEVED
Work Package n° 5
To assess DS data and indicators in all participating countries
Project Leader: ARSS Veneto - Italy
Timing: From February 2010 to February 2011
FULLY ACHIEVED
Work Package n° 6
To identify and test DS indicators
Project Leader: KCH - UK
Timing: From February 2011 to September 2011
FULLY ACHIEVED
SPECIFIC OBJECTIVES
Work Package n° 7
To standardize data and indicators and define a set of DS indicators
Project Leader: AGENAS, Rome - Italy
Timing: From June 2010 to March 2011
ONGOING
Work Package n° 8
To develop guidelines for DS indicators' presentation
Project Leader: CNAMTS, Paris - France
Timing: From June 2010 to March 2011
ONGOING
Work Package n° 9
To promote use of information and knowledge on DS services
Project Leader: NIHDI - Belgium
Timing: From December 2011 to August 2012
ONGOING

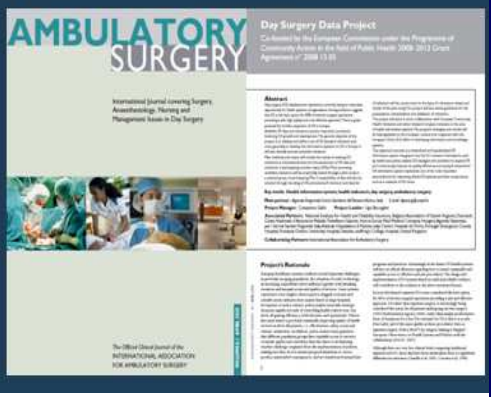
CONCLUSIONS WP4 – WP5 – WP6

- The analysis of DS data and indicators both at international and MSs level revealed a large variability in the availability of data and indicators, their construction, and the dimensions of operations they elucidate. There is a wide disparity even around the definitions of DS and Ambulatory Surgery. Such discrepancies make comparisons of DS performance across MSs very difficult.
- The next steps (WP7-WP8) will involve the selection of an ideal and a core set of DS indicators by a Delphi method and the formulation of guidelines for the manipulation, presentation, interpretation and use of DS data.

DISSEMINATION

DISSEMINATION

DISSEMINATION



DISSEMINATION

For the conclusion of DSDP, it was agreed with IAAS to officially communicate on the project results through their quarterly Newsletter.
The next issue (October 2012) will report the following information.

As you know, the final meeting of our first European project "Day Surgery Data Project" was held in Padova, Italy August 31, 2012, on the official ending date of the project. Our Project Officer from Luxembourg, Guy Dargent, kindly agreed to be our guest during the conference and he expressed his great satisfaction for the results achieved and so strongly linked to the well-established IAAS network. Therefore, I take this opportunity to thank all the DSDP partners and the International Association for Ambulatory Surgery who contributed to what has been a complex and challenging effort.

You will find below a short summary of our project. The final complete report will be published in the project official website www.dsdp.eu.

I think that I can speak for the entire project when I say that it has been a pleasure to meet and work with partners and to express the hope that we may have the opportunity to progress this important work further in the future.

Pascale Camporese, DSDP Project Coordinator

- Summary DSDP -

DSDP general objective was to identify and validate sets of DS indicators and to develop the Information Systems on DS in Europe. The study of DS data and indicators in participating MSs revealed that a key problem affecting many DS Information Systems lies in the fact that sometimes data are unavailable and as a consequence indicators cannot be calculated; on occasion, even if data are available, indicators are not computed. Another serious constraint derives from vague and/or dissimilar definitions and the adoption of unlike coding criteria by MSs.

An extensive literature review of peer and grey publications, EU projects; and international health databases identified 95 DS indicators, which were classified on the basis of a framework founded on system thinking. Furthermore, several properties of indicators were assessed, e.g. face validity, relevance, bias, comparability, promotion of quality improvement, and availability. DSDP also brought forth the opinion of experts on ideal and basic sets of DS indicators. The project developed a health system framework which places DS into a large context made of the environment, the health system and health services. Finally DSDP offered principles and practical guidance to MSs on how to formulate and implement policies concerning DS information systems.

The bottom line is that improvement of performance implies information on performance. A state-of-the-art DS information system will also improve accountability of clinicians, managers and policy-makers. This aspect fully matches current dominant values and concerns regarding transparency about policies' effects, managers' capability and providers' competence. DSDP represents a contribution towards the attainment of the objectives of the Second Health Programme, i.e. first and foremost to generate and disseminate health information and knowledge and, secondly, to promote health, including the reduction of health inequalities. The project's strategies and results are fully applicable to the European context and congruent with the EU effort in the development of information and knowledge systems. Stakeholders who might benefit from the analysis and tools produced by DSDP include international institutions, such as the EU Commission, OECD and WHO, together with Ministries of Health and local organizations, for instance regional and local health authorities, hospitals and Day Surgery units.

WEBSITE OF IAAS

A key issue of the partnership between DSDP and IAAS was the large visibility given to the project through IAAS official website.
http://www.iaas-med.com/joomla/index.php/newsletters

The project is listed under the IAAS initiatives and was even put on the home page of their website.
This gave a lot of diffusion and visibility to DSDP as IAAS website is very popular among health professionals and heal policy makers interested in DS.

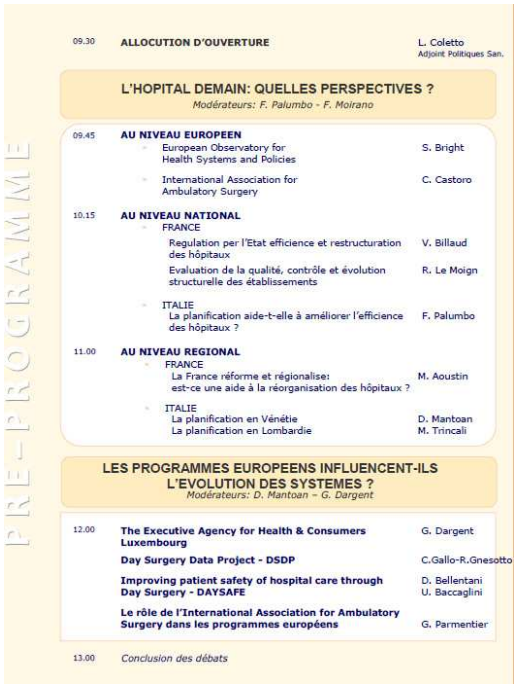
SPEACHES AT INTERNATIONAL CONFERENCES

Main objectives, activities and intermediate results of DSDP were promoted among stakeholders during the following International Congresses:

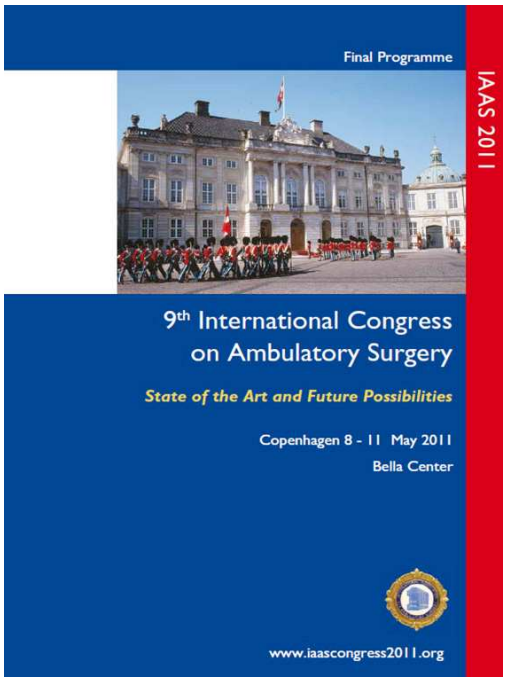
- «**Colloque de Chirurgie Ambulatoire**» - Paris, France on December 16, 2009

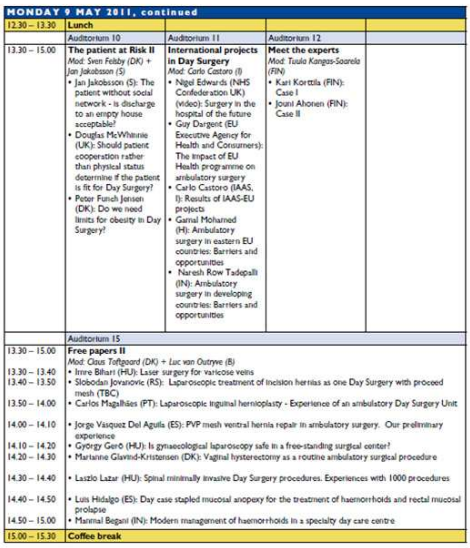
- «**Journées Internationales de la qualité hospitalière et en Santé**» - Paris, France on November 30th, 2010

- «**Hopital demain**» - Venice, Italy, on December 3rd, 2010



- «**9th International Congress on Ambulatory Surgery**» - Copenhagen, Denmark on May 9th, 2011. An entire session titled "International projects in Day Surgery" was organized in order to promote the main activities and intermediate results of the project.



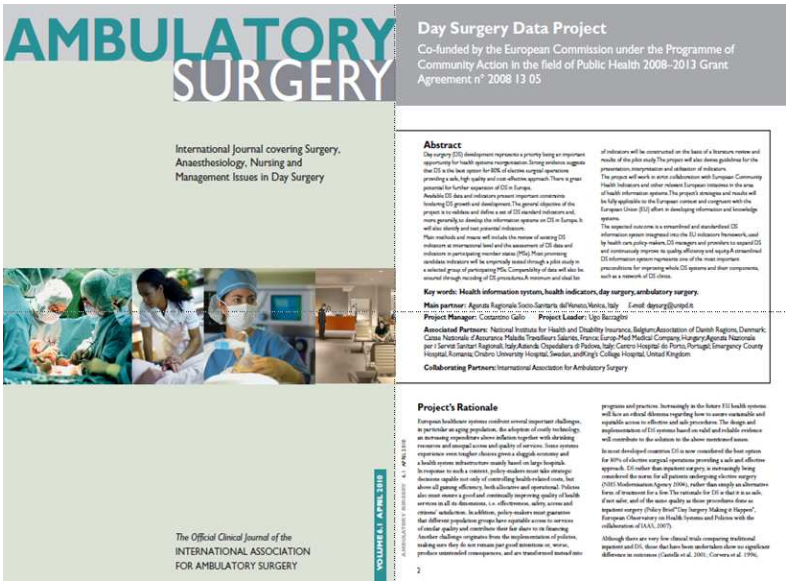


- Another occasion to disseminate DSDP results will be the **next IAAS international Conference in Budapest** (May 2013). See below.

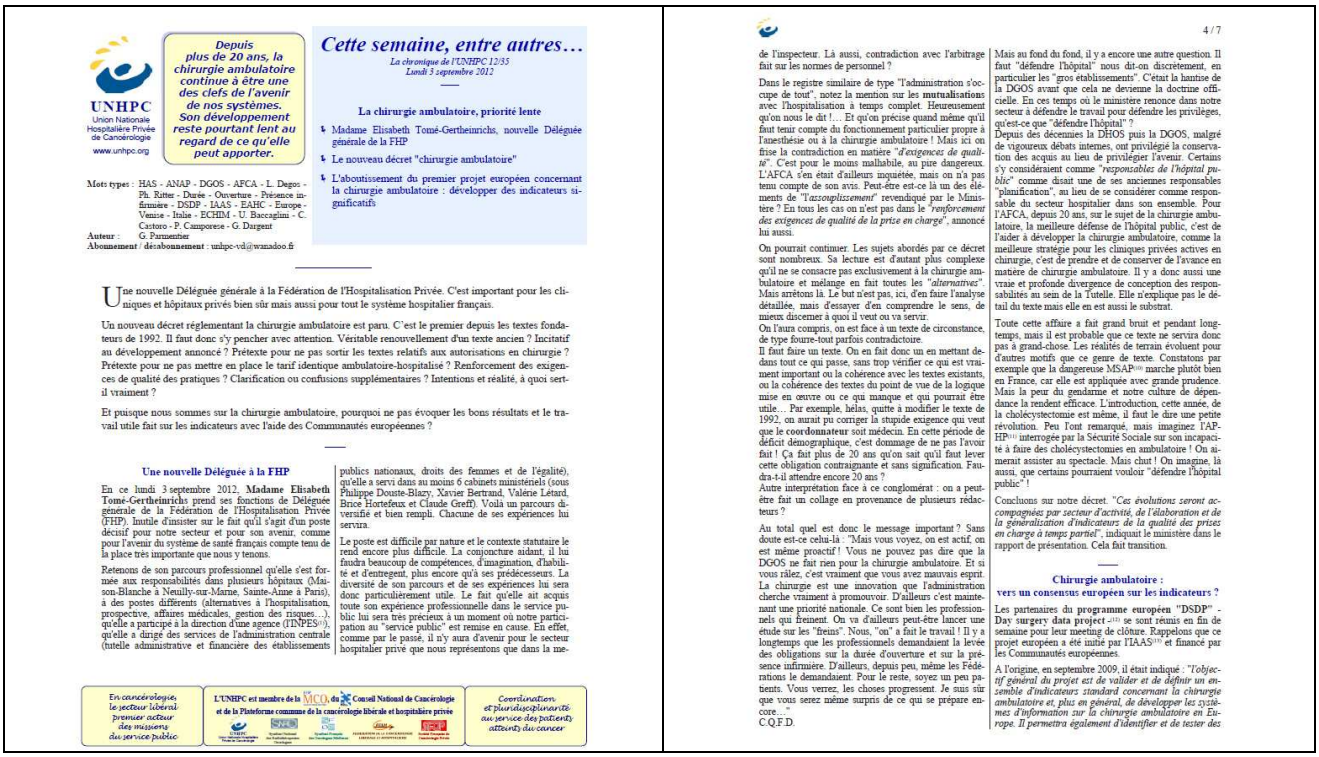
SCIENTIFIC PUBLICATIONS

On July 2010, The *Ambulatory Surgery Journal*, which is the IAAS official clinical journal, published a detailed article of the DSDP project (Full text provided available online at:

http://www.iaas- med.com/joomla/images/stories/Journal/FINAL16.2/ambsurg16.2ALL.pdf



On September 2012, after our final meeting in Padova - Italy, Mr. Gérard Parmentier, member of the Assessment Group published an article in UNHPC (Union Nationale Hospitalière Privée de Cancérologie) on DSDP project "Chirurgie Ambulatoire: vers un consensus européen sur les indicateurs ?"



UNHPC
Union Nationale Hospitalière Privée de Cancérologie
www.unhpc.org

Depuis plus de 20 ans, la chirurgie ambulatoire continue à être une des clefs de l'avenir de nos systèmes. Son développement reste pourtant lent au regard de ce qu'elle peut apporter.

Mots types : HAS - ANAP - DGOS - AFCA - L. Degos - Ph. Ritter - Durée - Ouverture - Présence infirmière - DSDP - IAAS - EAHC - Europe - Venise - Italie - ECHIM - U. Baccaglini - C. Castoro - P. Camporese - G. Durgent
Auteur : G. Parmentier
Abonnement / désabonnement : unhpc-vd@wanadoo.fr

Cette semaine, entre autres…

La chronique de l'UNHPC 12/35
Lundi 3 septembre 2012

La chirurgie ambulatoire, priorité lente

- Madame Elisabeth Tomé-Gertheinrichs, nouvelle Déléguée générale de la FHP
- Le nouveau décret "chirurgie ambulatoire"
- L'aboutissement du premier projet européen concernant la chirurgie ambulatoire : développer des indicateurs significatifs

Une nouvelle Déléguée générale à la Fédération de l'Hospitalisation Privée. C'est important pour les cliniques et hôpitaux privés bien sûr mais aussi pour tout le système hospitalier français.

Un nouveau décret réglementant la chirurgie ambulatoire est paru. C'est le premier depuis les textes fondateurs de 1992. Il faut donc s'y pencher avec attention. Véritable renouvellement d'un texte ancien ? Incitatif au développement annoncé ? Prétexte pour ne pas sortir les textes relatifs aux autorisations en chirurgie ? Prétexte pour ne pas mettre en place le tarif identique ambulatoire-hospitalisé ? Renforcement des exigences de qualité des pratiques ? Clarification ou confusions supplémentaires ? Intentions et réalité, à quoi sert-il vraiment ?

Et puisque nous sommes sur la chirurgie ambulatoire, pourquoi ne pas évoquer les bons résultats et le travail utile fait sur les indicateurs avec l'aide des Communautés européennes ?

Une nouvelle Déléguée à la FHP

En ce lundi 3 septembre 2012, **Madame Elisabeth Tomé-Gertheinrichs** prend ses fonctions de Déléguée générale de la Fédération de l'Hospitalisation Privée (FHP). Inutile d'insister sur le fait qu'il s'agit d'un poste décisif pour notre secteur et pour son avenir, comme pour l'avenir du système de santé français compte tenu de la place très importante que nous y tenons.

Retenons de son parcours professionnel qu'elle s'est formée aux responsabilités dans plusieurs hôpitaux (Maison-Blanche à Neuilly-sur-Marne, Sainte-Anne à Paris), à des postes différents (alternatives à l'hospitalisation, prospective, affaires médicales, gestion des risques…), qu'elle a participé à la direction d'une agence (l'INPES[01]), qu'elle a dirigé des services de l'administration centrale (tutelle administrative et financière des établissements publics nationaux, droits des femmes et de l'égalité), qu'elle a servi dans au moins 6 cabinets ministériels (sous Philippe Douste-Blazy, Xavier Bertrand, Valérie Létard, Brice Hortefeux et Claude Greff). Voilà un parcours diversifié et bien rempli. Chacune de ses expériences lui servira.

Le poste est difficile par nature et le contexte statutaire le rend encore plus difficile. La conjoncture aidant, il lui faudra beaucoup de compétences, d'imagination, d'habileté et d'entregent, plus encore qu'à ses prédécesseurs. La diversité de son parcours et de ses expériences lui sera donc particulièrement utile. Le fait qu'elle ait acquis toute son expérience professionnelle dans le service public lui sera très précieux, à un moment où notre participation au "service public" est remise en cause. En effet, comme par le passé, il n'y aura d'avenir pour le secteur hospitalier privé que nous représentons que dans la me-

En cancérologie, le secteur libéral premier acteur des missions du service public

L'UNHPC est membre de la MCO, du Conseil National de Cancérologie et de la Plateforme commune de la cancérologie libérale et hospitalière privée

Coordination et pluridisciplinarité au service des patients atteints du cancer

de l'inspecteur. Là aussi, contradiction avec l'arbitrage fait sur les normes de personnel ?

Dans le registre similaire de type "l'administration s'occupe de tout", notez la mention sur les **mutualisations** avec l'hospitalisation à temps complet. Heureusement qu'on nous le dit !… Et qu'on précise quand même qu'il faut tenir compte du fonctionnement particulier propre à l'anesthésie ou à la chirurgie ambulatoire ! Mais ici on frise la contradiction en matière "*d'exigences de qualité*". C'est pour le moins malhabile, au pire dangereux. L'AFCA s'en était d'ailleurs inquiétée, mais on n'a pas tenu compte de son avis. Peut-être est-ce là un des éléments de "*l'assouplissement*" revendiqué par le Ministère ? En tous les cas on n'est pas dans le "*renforcement des exigences de qualité de la prise en charge*", annoncé lui aussi.

On pourrait continuer. Les sujets abordés par ce décret sont nombreux. Sa lecture est d'autant plus complexe qu'il ne se consacre pas exclusivement à la chirurgie ambulatoire et mélange en fait toutes les "*alternatives*". Mais arrêtons là. Le but n'est pas, ici, d'en faire l'analyse détaillée, mais d'essayer d'en comprendre le sens, de mieux discerner à quoi il veut ou va servir.
On l'aura compris, on est face à un texte de circonstance, de type fourre-tout parfois contradictoire.
Il faut faire un texte. On en fait donc un en mettant dedans tout ce qui passe, sans trop vérifier ce qui est vraiment important ou la cohérence avec les textes existants, ou la cohérence des textes du point de vue de la logique mise en œuvre ou ce qui manque et qui pourrait être utile… Par exemple, hélas, quitte à modifier le texte de 1992, on aurait pu corriger la stupide exigence qui veut que le **coordonnateur** soit médecin. En cette période de déficit démographique, c'est dommage de ne pas l'avoir fait ! Ça fait plus de 20 ans qu'on sait qu'il faut lever cette obligation contraignante et sans signification. Faudra-t-il attendre encore 20 ans ?
Autre interprétation face à ce conglomérat : on a peut-être fait un collage en provenance de plusieurs rédacteurs ?

Au total quel est donc le message important ? Sans doute est-ce celui-là : "Mais vous voyez, on est actif, on est même proactif ! Vous ne pouvez pas dire que la DGOS ne fait rien pour la chirurgie ambulatoire. Et si vous râlez, c'est vraiment que vous avez mauvais esprit. La chirurgie est une innovation que l'administration cherche vraiment à promouvoir. D'ailleurs c'est maintenant une priorité nationale. Ce sont bien les professionnels qui freinent. On va d'ailleurs peut-être lancer une étude sur les "freins". Nous, "on" a fait le travail ! Il y a longtemps que les professionnels demandaient la levée des obligations sur la durée d'ouverture et sur la présence infirmière. D'ailleurs, depuis peu, même les Fédérations le demandaient. Pour le reste, soyez un peu patients. Vous verrez, les choses progressent. Je suis sûr que vous serez même surpris de ce qui se prépare encore…"
C.Q.F.D.

Mais au fond du fond, il y a encore une autre question. Il faut "défendre l'hôpital" nous dit-on discrètement, en particulier les "gros établissements". C'était la hantise de la DGOS avant que cela ne devienne la doctrine officielle. En ces temps où le ministère renonce dans notre secteur à défendre le travail pour défendre les privilèges, qu'est-ce que "défendre l'hôpital" ?
Depuis des décennies la DHOS puis la DGOS, malgré de vigoureux débats internes, ont privilégié la conservation des acquis au lieu de privilégier l'avenir. Certains s'y considéraient comme "*responsables de l'hôpital public*" comme disait une de ses anciennes responsables "planification", au lieu de se considérer comme responsable du secteur hospitalier dans son ensemble. Pour l'AFCA, depuis 20 ans, sur le sujet de la chirurgie ambulatoire, la meilleure défense de l'hôpital public, c'est de l'aider à développer la chirurgie ambulatoire, comme la meilleure stratégie pour les cliniques privées actives en chirurgie, c'est de prendre et de conserver de l'avance en matière de chirurgie ambulatoire. Il y a donc aussi une vraie et profonde divergence de conception des responsabilités au sein de la Tutelle. Elle s'explique pas le détail du texte mais elle en est aussi le substrat.

Toute cette affaire a fait grand bruit et pendant longtemps, mais il est probable que ce texte ne servira donc pas à grand-chose. Les réalités de terrain évoluent pour d'autres motifs que ce genre de texte. Constatons par exemple que la dangereuse MSAP[09] marche plutôt bien en France, car elle est appliquée avec grande prudence. Mais la peur du gendarme et notre culture de dépendance la rendent efficace. L'introduction, cette année, de la cholécystectomie est même, il faut le dire une petite révolution. Peu l'ont remarqué, mais imaginez l'AP-HP[10] interrogée par la Sécurité Sociale sur son incapacité à faire des cholecystectomies en ambulatoire ! On aimerait assister au spectacle. Mais chut ! On imagine, là aussi, que certains pourraient vouloir "défendre l'hôpital public" !

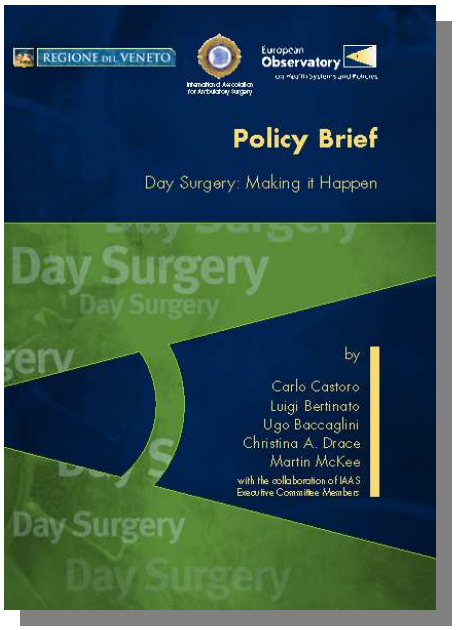
Conclusions sur notre décret. "*Ces évolutions seront accompagnées par secteur d'activité, de l'élaboration et de la généralisation d'indicateurs de la qualité des prises en charge à temps partiel*", indiquait le ministère dans le rapport de présentation. Cela fait transition.

Chirurgie ambulatoire : vers un consensus européen sur les indicateurs ?

Les partenaires du **programme européen** "DSDP" - **Day surgery data project -**[11] se sont réunis en fin de semaine pour leur meeting de clôture. Rappelons que ce projet européen a été initié par l'IAAS[12] et financé par les Communautés européennes.

A l'origine, en septembre 2009, il était indiqué : "*l'objectif général du projet est de valider et de définir un ensemble d'indicateurs standard concernant la chirurgie ambulatoire et, plus en général, de développer les systèmes d'information sur la chirurgie ambulatoire en Europe. Il permettra également d'identifier et de tester des*

DSDP project will publish a document on policy recommendations regarding DS information systems. This output will be financed through the operational grant of IAAS. The outline of the publication will be similar to the Policy Brief "*Day Surgery: Making it Happen" by the European Observatory on Health Systems and Policies with the collaboration of IAAS, 2007*.



Problems encountered/How were problems resolved/limitations

No problems so far

Conclusions and recommendations for the future

Thanks to IAAS network and to the personnel commitment of all DSDP partners, we can assume that all the efforts necessary to properly disseminate the project activities and results were undertaken.

As ultimate proof of our partnership, it is our commitment to include DSDP presentation during the next IAAS International congress which will be held in Budapest on May 2013 that is beyond the official ending of the project.

Overview table showing the distribution and target for all project deliverables

Deliverable	Title	Distribution channel	Target audience
1a	First Interim Report	E-mail - Project Website (DSDP partner area with password)	EAHC – DSDP Partners – Assessment Group
1b	Second Interim Report	E-mail - Project Website (DSDP partner area with password)	EAHC – DSDP Partners – Assessment Group
1c	Final Report	E-mail - Project Website (DSDP partner area with password)	EAHC – DSDP Partners – Assessment Group
2	Website	Project Website - IAAS Website - Main partner website	DSDP Partners – Health Policy Makers – Health Planners – Health Professionals
3	Interim and final evaluation reports	E-mail – Project Website	EAHC - DSDP Partners – Assessment Group
4	Report on the analysis of DS indicators available at international level	E-mail – Project Website	EAHC - DSDP Partners - Assessment Group - Conferences
5	Report on the analysis of DS indicators available at international level	E-mail – Project Website	EAHC - DSDP Partners - Assessment Group – Conferences
6	Report on the viability and comparability of DS data and indicators in MSs involved in this WP	E-mail – Project Website	EAHC - DSDP Partners - Assessment Group – Conferences
7	Minimum and ideal set of DS indicators to be adopted by EU Member States	E-mail – Project Website	EAHC - DSDP Partners - Assessment Group – Conferences
8	Fact sheets of DS indicators	E-mail – Project Website	EAHC - DSDP Partners - Assessment Group – Conferences
9	Guidelines for presentation, interpretation and use of DS indicators	E-mail – Project Website	EAHC - DSDP Partners - Assessment Group – Conferences
10	Recommendations for implementation in ECHI indicators	E-mail – Project Website	EAHC - DSDP Partners - Assessment Group – Conferences

List of deliverables linked to this work package

Deliverable	Title
D2	Website

Milestones reached by this WP

	Milestone title	Month of achievement
1	Implementation of the official project website	M3
2	Publication of an article concerning the project on Ambulatory Surgery Journal (Volume 6.1-April 2010)	M8
3	Participation to the International Congress "Colloque sur la chirurgie ambulatoire: enjeux et perspectives"	M4
4	Presentation of the project in IAAS official website and IAAS Newsletter	M24
5	Participation to the International Congress "Journées Internationales de la Qualité Hospitalière & en Santé », Paris – France	M15
6	Participation to the «Colloque international : Hopital de Demain, Venice – Italy	M16
7	Participation to the « 9th International Congress on Ambulatory Surgery », Copenhagen – Denmark	M21
8	Dissemination meeting Porto – Portugal (May 12, 2012)	M33

Annexes

Annex WP2_I Dissemination meeting in Porto, Portugal
Annex WP2_II IAAS quaterly newsletter
Annex WP2_III Ambulatory Surgery Journal
Annex WP2_IV UNHPC Journal

Work package title:	**Evaluation of the project**
Work package Number:	**3**
Work package Leader:	**ARSS Veneto**
Number of associated partners involved:	**10**
Number of person / days of this work package:	**0**
Total budget of this work package:	**0**
Starting date. Ending date:	**M1 – M36**

Evaluation plan available: yes ❑ no X
External evaluation: yes X no ❑

Description of the work package:

Description of of process and outcome evaluation

The evaluation strategy considered the outcomes, i.e. the value of the outputs, the process, i.e. how the research was carried out, and how the project was managed. From the scientific perspective, AG has evaluated the usefulness, innovation and relevance of the project outputs to DS current context in Europe and the appropriateness of the research methods adopted. From the managerial perspective, AG has assessed the grade of completion and timeliness of tasks.

The responsibility to complete these tasks was assigned to an Assessment Group (AG) composed by three eminent representatives of the International Association for Ambulatory Surgery – IAAS (Collaborating Partner). AG members were not involved in any activity of the project, however were kept constantly informed of the project's progress. The evaluation report will be distributed amongst partners and relevant stakeholders and also be available on the web-site.

Evaluation methodology: evaluation questions, design, method, measurement instruments, task, responsibilities and timing

The questions chosen to assess the Project's level of achievement pertain to three dimensions: effectiveness, efficiency and impact.

Effectiveness:

Evaluation question: to what degree the implemented outputs correspond to the agreed plan?
Method: for each output, a record summarizing its main expected features according to the project's plan, allowed comparison with the actual output.
Indicators were also identified for each specific objective, for example:

- Specific Objective 1: To review existing DS indicators at international level, i.e. collection and analysis of DS indicators available at EU level and other International organizations

  Indicator: analysis of designated international organizations completed.

- Specific Objective 2: To assess DS data and indicators in all participating countries, i.e. analysis of data definition, set of available indicators

  Indicator: percentage of assessed DS information systems in participating MS.

Efficiency

Evaluation question: how sound was the project's use of main resources (time, staff, money) ?

Method:

- for project scheduling, a Gantt diagram to illustrate grade of completion and timing of key tasks
- for the financial aspects, a double budget to compare estimated and final budget.

Impact:

Purpose / Evaluation question: How many participating organizations/institutions have committed themselves and taken substantial steps toward the streamlining of their databases and the adoption of the lists of indicators developed by the project ?

Method:

- Ex Post External evaluation based on the reports of the meetings with the stakeholders and following contacts between the project partnership and the stakeholders.

Monitoring Tools developed for data collection

DSDP adopted the following tools:

- a set of charts comparing, for each deliverable or output, what was planned with the actual products,
- a Gantt diagram illustrating grade of completion and timing of key tasks, budget compared with actual expenditures.

Problems encountered and suggestions for improvement

A professional managing ECHIM was invited at the closing meeting; this, like other similar projects, was only slightly involved.

Empirical analysis re indicators reliability and content validity was carried out only within Veneto Region, because the project did not obtain access to other MSs databases.

A limit of DSDP regards the essential and ideal sets of indicators and derives from the fact that participants in the Delphi exercise were few, i.e. 16 professionals, and most of them were clinicians.

Another limitation of DSDP indicators sets is that local and national contexts are ignored. But this also represents an advantage because the lists are general enough to be adapted to different realities.

A significant weakness derives from the fact that DSDP formal influence on national or regional MSs health authorities is limited, depending on existing informal relations between individuals and institutions. However this is an intrinsic characteristic of most applied research projects, unless national/regional institutions are involved as partners of the project.

Due to the limited budget allocated to the project, it was not possible to recruit an administrative expert for each project partner. This implied that the project coordinator had to provide an extensive support to all partners who were not familiar with EU projects' financial management.

Another difficulty was related to the withdrawal of the Swedish partner (USO). The coordinator tried to find a solution, but USO coordinator finally decided to withdraw from the partnership, being the tasks required by the project not compatible with all the activities he had to perform at his institution. However a prestigious national French institution (HAS) was identified and a formal amendment approved by the EU Commission.

AG did not encountered difficulties in completing the tasks assigned because the available documentation was extensive and well organized. In addition, throughout the project, AG members had direct access to the DSDP scientific team and partners, who clarified possible doubts.

Performance indicators and their definitions:

Given that the project dealt mainly with managerial and conceptual issues related to the functioning and design of DS information systems, the evaluation methodology looked, above all, at the relevance of the topics chosen, at the diligence with which these were investigated and the significance of the results and the recommendations. This implies that the evaluation essentially consists of reflections on the activities and the results of the project, i.e. of making sense, more than quantitative indicators. Obviously this approach does not detract from the meaningfulness of the assessment process, on the opposite it represents the soundest approach to DSDP evaluation.

Plans for data analysis, reporting and use of information:

- Data analysis plans

AG members were kept constantly informed about DSDP evolution. This is so both because all research protocols and outputs were promptly made available by the support team and because evaluators participated to most project meetings.

- Identified needs for complementary evaluation
  No need for complementary evaluation identified

- Plans for communicating and the use of monitored information
  See dissemination plan

Terms of reference of the external evaluation

- Name of the external evaluator, attachment of the CV
  The Assessment Group is made up of three eminent representatives of the International Association for Ambulatory Surgery:
  Carlo Castoro, President of the International Association for Ambulatory Surgery
  Paul Jarrett, founding chairman of the British Association of Day Surgery and Honorary Member of the International Association for Ambulatory Surgery
  Gérard Parmentier, founding member of the Association Française de Chirurgie Ambulatoire and Honorary Member of the International Association for Ambulatory Surgery

- External evaluation plan
  (see above Description of process and outcome evaluation)

Objective 1: To review existing DS indicators at international level			
	Process indicators	**Output indicators**	**Outcome indicators**
1	Protocol for international indicators collection ready	Indicators identified through websites and direct contact with international institutions	Analysis increases awareness of international organization re necessity to strengthen DS information system

Objective 2: To assess DS data and indicators in all participating countries			
	Process indicators	**Output indicators**	**Outcome indicators**
1	Protocol for MSs data and indicators collection ready	Data and indicators collected	Analysis increases awareness of MSs re necessity to strengthen DS information system
2	Dimensions necessary to standardize and validate indicators identified	Sheet for each indicators completed	Indicators sheets help standardization of indicators across MSs

Objective 3: To summarize the MSs research and test indicators			
	Process indicators	**Output indicators**	**Outcome indicators**

1	Development of criteria for classification of DS indicators	Indicators classified	Classification adopted by MSs
2	Research on most widely used health care frames carried out	Conceptual framework re health services devised	Frame used to make sense of knowledge

Objective 4:	**To standardize data and indicators and define a set of DS indicators for integration in EU framework indicators and MSs**		
	Process indicators	**Output indicators**	**Outcome indicators**
1	Criteria for standard data and indicators agreed	Standardization of data and indicators completed	Integration of standard data and indicators in MSs databases
2	Consensus building toward a set of DS indicators	Ideal and essential sets agreed	Adoption of indicators sets by MSs and integration in the EU frame

Objective 5:	**To develop guidelines for DS indicators' presentation, interpretation and use at National, regional and local level**		
	Process indicators	**Output indicators**	**Outcome indicators**
1	Relevant methods collected and put together with a sound logic	Guidelines completed	Adoption of modern methods of analysis of DS indicators by MSs

Objective 6:	**To promote use of information and knowledge on DS services**		
	Process indicators	**Output indicators**	**Outcome indicators**
1	Criteria for strategy design agreed	Strategy for information use's promotion formulated	Better use of indicators and knowledge at strategic and operational level

List of deliverables linked to this work package

Deliverable	Title
D3a	Interim Evaluation Report
D3b	Final Evaluation Report

Annexes

Annex WP3_I Deliverable:
- D3a Interim Evaluation Report
- D3b Final Evaluation Report

Annex WP3_II Gant diagram

Annex WP3_III Curriculum Vitae of the Assessment Group

SECTION VI

TECHNICAL WORK PACKAGES

Work package title:	**Review of existing DS indicators at international level**
Work package Number:	**4**
Work package Leader:	**CHP**
Number of associated partners involved:	**3**
Number of person / days of this work package:	**302**
Total budget of this work package:	**63.764,70 €**
Starting date. Ending date:	**M1 – M8**

Work progress and achievements

WP4 carried out an **analysis of existing DS indicators at international level.** The only international organization explicitly integrating a DS indicator is OECD, albeit only one. International health databases mirror the availability of DS indicators within nations. The study of DS international data, indicators and databases involved understanding data definition, collection and computation methods, and availability of indicators sets of the national sources from which they originate.

The project also completed a **scientific literature search of DS indicators** mentioned in documents published in English, French, Spanish and Portuguese. The literature search was carried out within the following four categories: **peer review articles; grey literature; EU projects; and international health databases.** Peer review articles usually exhibit the perspective of operational level, i.e. where DS is actually delivered, whereas the grey literature mostly reflects the point of view of organizations, institutions, commissions, authorities and ministries of health (e.g. IAAS, Australian council, UK NHS, Joint Commission International, etc.). The **literature search identified 3.010 articles** and a wide **set of about one hundred DS indicators**, useful for monitoring DS systems' key dimensions. The vast majority of the indicators are either used *ad hoc* in scientific publications or considered from a theoretical perspective, however not integrated in structured health information systems, and are not used routinely in monitoring and evaluation of DS services.

Special attention was also dedicated to identify DS indicators adopted by EU health projects (i.e. ECHIM, PATH, HDP and ISARE, etc.) because it was deemed crucial to integrate the DSDP recommendations within broader initiatives aiming at strengthening the European health information system. A key conclusion is that DS indicators are rarely considered as only a few institutions have formulated DS policies and developed corresponding information systems. Lack of standardized definitions of indicators represents a further problem, also because coding systems differ.

Most relevant indicators have been grouped on the basis of **a logical frame based on system thinking, which identified the following categories: Input, Patients characteristics, Access,**

Process, Output, Outcome, Safety, Satisfaction/Responsiveness, Cost/Productivity. Such step represented a prerequisite of the identification of a set of indicators capable to illuminate every dimension of DS performance.

Several critical points were identified:

- process and outcome indicators are mentioned much more frequently than input and output indicators as the emphasis is on monitoring organizational functioning and technical results instead of resources (input) and activities carried out (output). Safety, timeliness and patient satisfaction are investigated much more frequently than efficiency, equity and effectiveness;

- most identified documents and articles do not distinguish between "day surgery indicators" and "surgery indicators". In fact several DS indicators are expected to be identical to conventional setting surgery, whereas others are specific. Such distinction becomes crucial in the design of a functional health information system;

- significant differences among peer review articles, grey literature, EU projects and international databases were identified in DS indicators definitions and terminology. Also, DS terminology differs among health institutions and care settings rendering comparisons among indicators impractical;

- the ideal set of DS indicators necessarily varies, as the information needs are different, according to care and management level, i.e. DS unit, surgical department, hospital, regional/provincial level and national level. In general, there is no explicit differentiation among these levels when proposing or using a set of DS indicators;

- for each indicator it is rarely mentioned whether it has just face validity or whether it has been scientifically validated. In other words, it is not clear how far the proposed indicators are really able to reflect the dimensions they purport to monitor;

- there is no definition of Day Surgery common to all MSs;

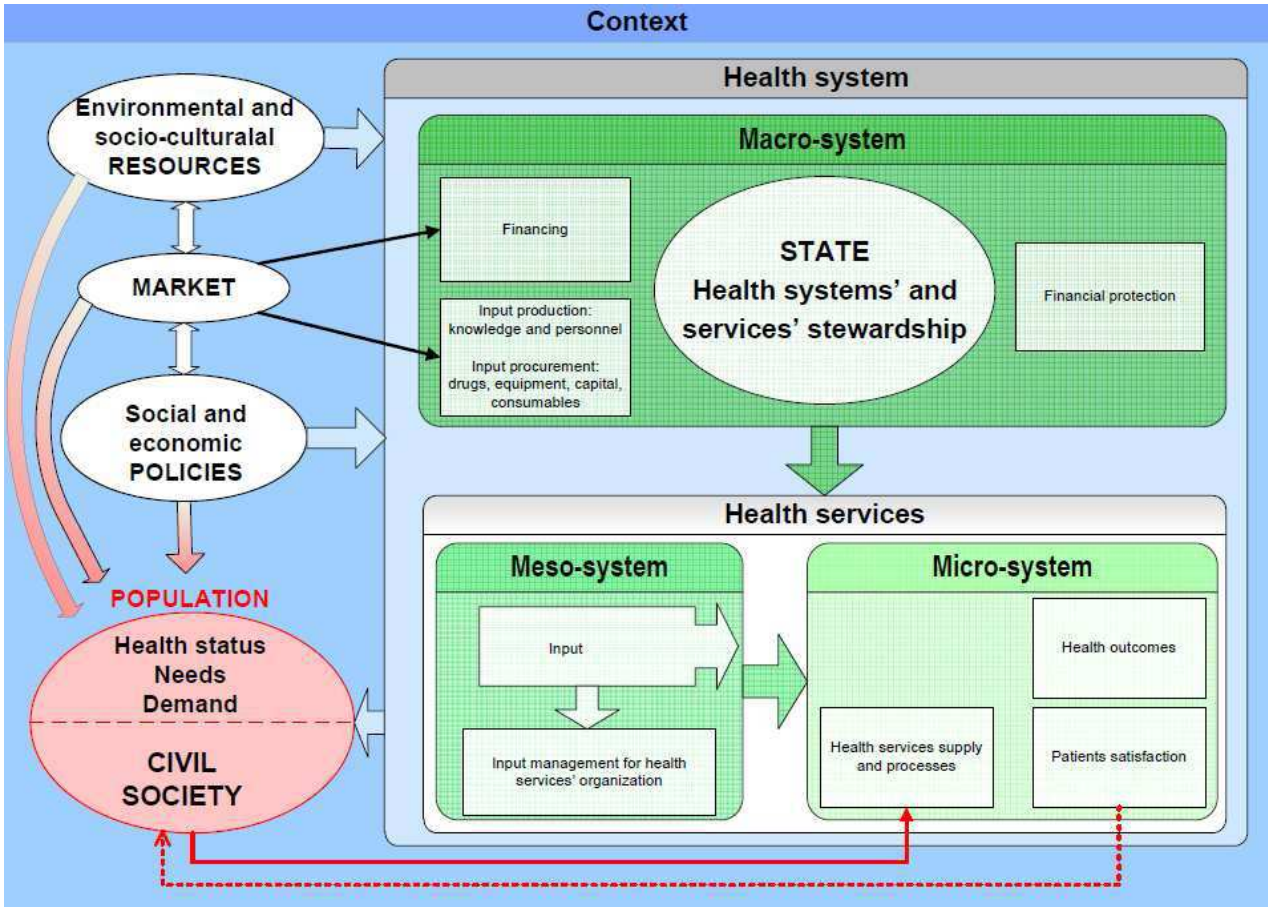
- MSs have different coding systems for computerization of procedures, and transcoding is not always feasible;

- data collection, including definition of variables, is not standardized;

- the design of Databases does not allow adaptation to definitions different from those already established. In other words, the design of current Databases does not allow the extraction of data according to specific definitions, different from those already established within MSs. Therefore it is not sufficient to establish standard definitions for the variables of interest and an additional effort is needed to make different information systems compatible. Other

European Projects – ECHI, PATH – found difficulties similar to DSDP and were not able to get significant results in the collection of standard data. This problem represents a clear focus for future efforts. In conclusion several problems and weaknesses were observed which preclude a sensible use of DS indicators, especially for policies' formulation but also for managerial purposes.

DSDP also developed **a health system framework** which places DS into a large context made of an environment, the health system and health services. Planning, management and evaluation of a system presuppose a clear idea regarding its purposes, its constituent parts and the relations between the latter and the whole system with the surrounding environment. A scheme or conceptual model is a useful tool to describe, simplifying it, the complexity of a system. A model, while remaining an approximate representation of reality, improves its intelligibility on the part of decision-makers and professionals, facilitating identification and management of essential dimensions. A specific conceptual scheme is always an attempt to achieve a balance between excessive complexity and irrelevant banality, limits that both prevent a more rational understanding. The decisions to include or omit certain aspects, to define a certain dimension as a detail or as a key part of the system, always represent in part arbitrary distinctions. These decisions often involve trade-off, that is simultaneous advantages and disadvantages that are incompatible, implying therefore a choice. In the process of designing a model, the attempt is to select essential characteristics in order to offer an image as sharp as possible of the complexity of a system avoiding too many details which blur its depiction.



The model presented above is inspired by several schemes, including those produced by OECD, AHRQ, WHO and Donabedian, and adopts a general approach, i.e. not specific for surgery or DS. The conceptual scheme proposed here is mainly directed to decision-makers at national and regional level, but it can be useful also for local health authorities and individual units that manage or provide health services. The basic element from which the scheme originates is the systems theory. This theory says that each system, in order to achieve its objectives, needs resources, for example staff, equipment and procedures, that transforms in goods and/or services through processes. Processes are sequences of activities carried out in order to contribute to the purposes of a system. An essential contribution of systems theory is that it allows to grasp the essence of a reality, instead of dwelling on separate fragments, highlighting some and ignoring others. The systems theory facilitates not only understanding but also governance of situations characterised by complexity and uncertainty looking at them as a set of codependent parts that interact according to an overall and organized order.

A central idea to systems theory is that the whole is more than the sum of the parts and therefore an intervention on a component reverberates on the entire system. The malfunction of one element affects the performance of the whole system. Moreover, this implies that it is not

possible to understand and manage a segment without considering its interaction with other parts. Another feature of systems is their dynamism, i.e. the ability to evolve continuously. A further dimension which characterises systems is their inclusion in an environment, made up of the elements that surround the system, affecting it.

Conceptual models may contribute to the development of health information system in two ways: 1) through the classification of the indicators currently in use according to the components of the same scheme and 2) the identification of current information system components that must be further developed in order to deepen every aspect of performance highlighted by the model. The goal here is to offer a contribution toward the standardization of the terminology and essential concepts and to the design of an inclusive and coherent system to assess DS performance at European, national and regional level. Standardized and shared frame and terminology also constitute a prerequisite for communication between different institutional players and professionals about performance, comparison between different realities, identification of benchmarks, namely aspects particularly positive of an organisation or a geographical area compared to others, formulation of improvement strategies and monitoring of results obtained by means of the adopted actions. The sharing of a logic and the standardisation of terminology may also foster communication through European, national and regional authorities' reports about DS performance.

The model highlights three areas: context, health care system and health services. The context includes social, economic and environmental policies, market and the natural and cultural resources that characterize a given territory. All these elements strongly influence health care system. Within the context there are populations, on which health determinants operate and from which needs emerge in part expressed as demands. The context contains the health system that, in turn, includes the health services. The health system comprises resources, organizations and activities whose main aim is to promote and maintain a good health status of its citizens and to ensure they recover from illness; health services are composed by a macro-, a meso-and a micro-system.

The macro-system includes the state institutions that provide strategic guidance about the sources of financing, production and/or procurement of crucial resources such as staff, knowledge and equipment, budget size, system organisation and criteria for access to services. In countries which have chosen a national health service, a rather limited proportion of health system financing derives from the market, while great part of production factors, from drugs to equipment, from consumables to infrastructure building, are produced under market conditions. Knowledge derived from basic bio-medical research result from both public and private investments, while training of European professionals is mainly responsibility of public universities. A key achievement of health systems providing universal coverage to their populations is the financial protection from catastrophic pathological conditions that entail exorbitant costs together with loss of income. Health policies, research, development, production and marketing of medicines and

equipment and voluntary service in the hospital are examples of health system outputs that become inputs for health services.

The meso-system comprises the structures and processes necessary to the management of resources allocated to health services in order to turn them into services delivery. This includes the administrative and health directorates-general, their strategic deliberations, for example regarding the design and strengthening of management systems, together with daily operations.

The micro-system corresponds to the units which provide preventive, diagnostic-therapeutic, including DS, rehabilitative and palliative services to individuals and communities and the results obtained in terms of health status and users satisfaction. Services are delivered in different settings from DS units to intensive neonatal care or stroke units, from internal medicine wards to hospices and private homes. Diagnosis and surgical therapy of inguinal hernias, diagnosis and treatment of pneumonia, asthma management and pain control in a terminal patient are all examples of health services delivery. The health services meet, in the first place, the needs expressed by the citizens but also operate proactively promoting a state of optimal health.

Jointly, the meso- and micro-system constitute the health services. Communities contribute to health services delivery offering compassionate and tangible support and care of the sick and, at the same time, express different levels of satisfaction with the services. The proposed frame shows, through a graphic representation, the fundamental dimensions of the three areas. This image represents the key concepts through ellipses and rectangles connected by arrows. The arrows symbolize cause-effect relationships highlighting the main direction of influence. The arrows also highlight the passage of resources from a system to another, for example, the community provides resources to health services reducing the gap in the continuity of care. Another way to express this idea is that the outputs of a system constitute inputs for another system. For example, crude resources made available by the health system to the health services represent inputs for management.

The dimensions highlighted by the scheme are all similarly important and have great relevance for the performance of health systems and health services. The analysis of the health system that this model entails involves the use of various disciplines, namely coherent sets of principles and methods allowing the investigation of dimensions of the system and context identified as priorities. The disciplines that the model requires include public health, epidemiology, biostatistics, clinical medicine, theory of organisations, sociology, economics and political sciences. In particular, Public Health allows the analysis of health needs, physiopathologic, behavioural and socioeconomic determinants to which whole communities or sub-groups are exposed and to design appropriate and effective responses.

Statement on the use of resources

WP4 Activities	Tasks description	Staff involved	Timing
Analysis of Health Services' conceptual frameworks	1.1 **Principles and utilization of Health Services' conceptual frameworks**	AOP Expert in Public Health Paulo Lemos for comments	*From Sept. 2009 to February 2010*
Collection of documents on DS indicators at international level	2.1 **Peer review**	AOP Expert in Public Health CHP Epidemiologist (*Goncalves*) Paulo Lemos	*From Sept. 2009 to 31 December 2009*
	2.2 **Grey literature** 2.3 **EU Health indicators projects**	AOP Expert in Public Health CHP Epidemiologist (*Goncalves*) Paulo Lemos CNAMTS Statistician (*Duchene*)	*From Sept. 2009 to 15 January 2010*
	2.4 **International Health databases**	ARSS-Veneto Statistician (*Gennaro*) CHP Statistician (*Goncalves*) Paulo Lemos CNAMTS Statistician (*Duchene*)	*From Sept. 2009 to 31 December 2009*
Technical analysis and classification of DS indicators	3.1 **Technical analysis** 3.2 **Classification of the identified DS indicators**	AOP Expert in Public Health CHP Epidemiologist (*Goncalves*) CHP Statistician (*Goncalves*) Paulo Lemos ARSS-Veneto Statistician (*Gennaro*) CNAMTS Statistician (*Duchene*)	*From 15 January 2010 to 15 February 2010*
Gaps analysis of DS indicators at international level	4.1 **Gaps in availability** 4.2 **Gaps in standardization**	AOP Expert in Public Health ARSS-Veneto Statistician (*Gennaro*) CHP Epidemiologist (*Goncalves*) CHP Statistician (*Goncalves*) Paulo Lemos	*From 15 February 2010 to 15 March 2010*
Final report by April 2010	**Report on the analysis of DS indicators available at international level**	ARSS-Veneto Expert in Public Health Paulo Lemos Scientific Committee	*From 15 March 2010 to 30 April 2010*

Specific objectives of this WP

	Title
1	To review existing DS indicators at international level, i.e. collection and analysis of DS indicators available at EU level and other international organizations

List of deliverables linked to this work package

Deliverable	Title	Month of achievement
D4	Report on the analysis of DS indicators available at international level	M8

Milestones reached by this WP

	Milestone title
1	Review of relevant literature on DS indicators
2	List and critical analysis of DS indicators available from international organizations
3	Gaps in current data and indicators identified

Annexes

Annex WP4_I Deliverable:
D4 Report on the analysis of DS indicators available at International level

Work package title:	**Analysis of current DS data and indicators in participating member states**
Work package Number:	**5**
Work package Leader:	**ARSS Veneto**
Number of associated partners involved:	**10**
Number of person / days of this work package:	**1.458**
Total budget of this work package:	**470.955,45 €**
Starting date. Ending date:	**M6 – M18**

Work progress and achievements

The **assessment of DS data and indicators in participating MSs** looked at the following dimensions: **face validity, relevance, bias, comparability, promotion of quality improvement, and availability**. The participants in the Project were asked to assess the indicators through expert opinion in their own countries. Availability and face validity was assessed for all 95 indicators. Then a short list of 22 indicators was defined on the basis of high availability and face validity: this group of indicators was assessed, again through expert opinion, on their **importance, bias, robustness, manipulation, applicability and adjustment**.

In order to investigate the above mentioned key criteria, a protocol, composed of the following modules, was designed:
Module 1: availability and face validity of all identified indicators,
Module 2: relevance, applicability, bias, robustness to possible manipulation, comparability, promotion of quality improvement and risk adjustment of a more restricted set of 22 indicators.

More specifically, DSDP planned and carried out the following activities:

1. Design of the study protocol titled "Assessment of Day Surgery indicators", which included the following steps:
   - 1.1 Search and analysis of the scientific literature concerning indicators assessment, in particular the studies completed by AHRQ, the US Federal Agency on Health Services Research and Quality, within the project "Quality Indicators",
   - 1.2 Study protocol design,

2. Study protocol implementation,
   - 2.1 Module 1 - Assessment of indicators availability and face validity,
     - 2.1.1 Design of forms for data collection,
     - 2.1.2 Distribution of forms to project's partners,
     - 2.1.3 Forms filled in by DSDP partners,
     - 2.1.4 Selection of a smaller set of indicators for an in-depth analysis,
   - 2.2 Module 2 - Assessment of relevance, applicability, bias, risk adjustment and robustness,
     - 2.2.1 Filling out of one form for each of the 22 selected indicators,

2.2.2 Design of questionnaire for indicators in-depth assessment,
2.2.3 Distribution of questionnaire and forms to project's partners,
2.2.4 Questionnaire filled in by DSDP partners,
2.2.5 Compilation of Module 2 Report,

The scientific literature, both peer and grey, produced a large number of indicators useful for monitoring DS systems' key dimensions. What is generally missing are data necessary to build the indicators and the integration of several indicators into the design of DS health information systems. In other words sometimes data are unavailable and as a consequence indicators cannot be calculated; some other time available data are not transformed into indicators. Lack of standardized definitions of indicators represents a further problem, also because coding systems differ.
With the exception of FTE and % of patients who have received a pre-anaesthesia assessment before DS, the 22 indicators selected for in depth analysis are deemed very relevant by respondents. The most important difficulty concerning the chosen indicators was robustness to manipulations. In fact, most respondents express scepticism about this
dimension. As expected, risk adjustment constitutes a problem only for outcome and safety indicators.
The 22 indicators can be categorized into two groups:
Those receiving an excellent assessment, i.e.

- Average waiting time for basket procedures in DS units
- % of elective surgery performed as DS
- % of patients satisfied

Those receiving a poor assessment, i.e.

- FTE surgeons dedicated to DS
- % of patients who have received a pre-anaesthesia assessment before DS
- Mean operating time

The empirical analysis confirmed the superior quality of the indicator "% of elective surgery performed as DS", because it detects signals not attributable to chance and therefore is a valid representation of DS output. Wide differences were found in the utilization of these indicators by participating MSs.

Statement on the use of resources

WP5 Activities	Tasks description	Staff involved	Timing
Research protocol to assess DS data and indicators in the participating countries	1.1 **A research protocol has been elaborated to ensure a common approach to the analysis of each participating countries**	Expert Team ARSS Expert in ICT ADR Expert in ICT AOP Expert in ICT CNAMTS Expert in ICT SCJUT Epidemiologist HAS Epidemiologist EUROPMED Epidemiologist SCJUT Medical Doctor EUROPMED Medical Doctor ARSS Medical Doctor NIHDI Medical Doctor AGENAS Medical Doctor AOP Medical Doctor CHP Medical Doctor KCH Medical Doctor ADR Medical Doctor HAS Medical Doctor CNAMTS Medical Doctor AOP Statistician ARSS Statistician	*From February 2010 to April 2010*
Modules to ass ess DS data and indicators in each participating countries	2.1 **Module 1 on assessment of indicators availability and face validity**	SCJUT Expert in ICT NIHDI Expert in ICT AGENAS Expert in ICT CHP Expert in ICT CNAMTS Expert in ICT AOP Expert in ICT HAS Expert in ICT KCH Expert in ICT EUROPMED Expert in ICT AGENAS Economists ARSS Medical Doctor NIHDI Medical Doctor	*From May to September 2010*
	2.2 **Module 2 on assessment of relevance, applicability, bias, risk adjustment and robustness**		*From Sept. 2010 to October 2010*
	2.3 **Module 3 on empirical assessment of indicators**	AOP Medical Doctor CHP Medical Doctor KCH Medical Doctor ADR Medical Doctor HAS Medical Doctor CNAMTS Medical Doctor AGENAS Medical Doctor EUROPMED Medical Doctor SCJUT Statistician AGENAS Statistician NIHDI Statistician ARSS Statistician CNAMTS Statistician AOP Statistician ADR Statistician HAS Statistician KCH Statistician EUROPMED Statistician CHP Statistician	*From October 2010 to December 2010*
Final report by February 2011	**Report on the analysis of current DS data and indicators in participating Member States**	Scientific Committee Members	*From January 2010 to February 2011*

Specific objectives of this WP

	Title
1	To assess DS data and indicators in all participating countries, i.e. analysis of data definition, set of available indicators, database content and report produced by different MSs

List of deliverables linked to this work package

Deliverable	Title	Month of achievement
D5	Report on the analysis of DS available data and indicators at MSs level	M18

Milestones reached by this WP

	Milestone title
1	Analysis of availability, reliability, validity, comparability, relevance, presentation, interpretation and utilization of DS data and indicators available to MSs and regions
2	Investigation of databases structure and coding systems of DS procedures

Annexes

Annex WP5_I Deliverable:
D5 Report on the analysis of DS available data and indicators at MSs level

Work package title:	**Summing up of member states research and testing DS indicators**
Work package Number:	**6**
Work package Leader:	**KCH**
Number of associated partners involved:	**6**
Number of person / days of this work package:	**746**
Total budget of this work package:	**250.051,62 €**
Starting date. Ending date:	**M18 – M25**

Work progress and achievements

WP6 made sense of all the information collected at an international and national level and completed the diagnostic phase of the Project. One of the conclusions was that a key problem affecting many DS Information Systems in MSs lies in the collection of data necessary to build the indicators. What is generally missing are data necessary to build the indicators and the integration of several indicators into the design of DS health information systems. In other words, sometimes data are unavailable and as a consequence indicators cannot be calculated; on occasion, even if data are available, indicators are not calculated.

In summary DS Information Systems do not allow assessment of DS units in all MSs and comparisons within and between countries. Discrepancies in terms of availability and reliability of data preclude comparisons of performance across and also within countries, prevent identification of benchmarks and consequently hinder learning. The limitations of DS information systems appear manifest also in the international organizations reports where acknowledgment of DS strategic importance contrasts with the paucity of available data. The International Association for Ambulatory Surgery (IAAS) has recommended a set of useful DS indicators but it has not distinguished between managerial and clinical levels nor has it classified the indicators around an explicit framework such as system theory.

The original objective of testing new DS indicators was abandoned, instead WP6 investigated the comparability of DS data and indicators across MSs and assessed the viability of a potential core set of DS indicators in MSs. These objectives implied an empirical analysis, as comprehensive as possible, of MSs actual data.

In order to accomplish the redefined objectives and deliverables, DSDP carried out the following activities:

- Selection of indicators with the intent of evaluating their viability and comparability,
- Design of protocol for data collection,
- Selection of background data to be collected by each participating country,
- Definition of numerator and denominator of each indicator,
- Definition of data sources (DS unit, hospital, region, country) relevant for each indicator,

- Creation of a digital form for data collection,
- Data collection from five MSs: United Kingdom, Denmark, Hungary, Italy and Portugal,
- Data analysis: viability/feasibility of data collection, availability of data, crude and specific DS utilization rates for each country, empirical analysis where possible.

Indicators for this study were chosen on the basis of the following criteria:

- assessment of face validity by experts from all participating countries (WP5),
- availability of the relevant data at country level,
- focus on the following main categories (Input, Access, Process, Output, Satisfaction/Responsiveness, Cost/Productivity),
- outcome and safety indicators were excluded.

As the objective of the study was to verify viability and comparability of indicators and not to evaluate the DS of each country, opportunistic sampling was selected. In the preceding WP5 we had asked MSs to give their definitions of DS and whether dentistry and endoscopy were considered part of their DS by their health information system. The fact that the analysis revealed a significant difference in DS rate between countries suggests that the process of data extraction from individual data systems was unable to discriminate among different type of services.

The following indicators were selected:

<u>Input</u>

1 - Available written protocols and procedures concerning patients post-operative recovery and discharge,
2 - Available computerized waiting list for DS patients,

<u>Access</u>

3 - Median waiting time for basket procedures in DS units,

<u>Process</u>

4 - % of patients who have received a pre-anaesthesia assessment before DS,

<u>Output</u>

5 - % of DS discharges of all Surgery discharges,
6 - % of DS discharges on basket procedures,

<u>Satisfaction/Responsiveness</u>

7 - % patients who consider they have received good pre-operative information.

A limited set of procedures was selected for indicators n° 3 and n° 6.

1 - Cataract surgery
2 - Tonsillectomy with or without adenoidectomy
3 - Ligation/stripping of varicose veins
4 - Laparoscopic cholecystectomy
5 - Inguinal and femoral hernia (adult)
6 - Prostatectomy (transurethral)
7 - Local excision of breast
8 - Mastectomy
8 - Knee arthroscopy
10 - Arthroscopic meniscus
11 - Carpal tunnel release

Two more indicators' dimensions, i.e. **precision and construct validity**, were studied through an empirical approach, i.e. through application of statistical methods, in particular analysis of variance, factor analysis and analysis of correlation, to datasets produced by participating MSs. A Module was designed to study such dimensions in a local context, i.e. Veneto Region.

Module 3 - Empirical assessment of indicators

3.1 Identification of the following three indicators:

- % of elective surgery performed as DS in the structure
- % of day surgery discharges on basket procedures
- Mortality rate within 30 days of discharge

3.2 Request access to hospital discharge and death registration data-bases of Veneto Region,

3.3 Statistical analysis, i.e.

- ANOVA (analysis of variance)
- Indicators' correlation matrix

3.4 Compilation of Module 3 Report.

The empirical analysis was possible and appropriate only when the following two conditions were satisfied: data to build the specific indicator were available and such data were comparable among the different statistical units. In light of the above there were only a few indicators that satisfied those conditions:

1. % of DS discharges of all Surgery discharges,
2. % of DS discharges on local excision of breast,
3. % of DS discharges on carpal tunnel release,
4. % of DS discharges on Tonsillectomy with or without adenoidectomy,

5. % of DS discharges on Laparoscopic cholecystectomy,
6. % of DS discharges on Inguinal and femoral hernia (adult).

An essential feature of a good indicator is to give signals beyond randomness. Therefore, an indicator should have little variability due to chance and a strong signal. In essence, DSDP objective was to examine the reliability of empirical indicators by analysing whether the studied measures are able to bring to light real differences between hospitals or areas or if the differences are only attributable to chance, i.e. to distinguish between indicators' natural variability and valid signals. To this end, DSDP applied the following methods:

1. **Analysis of variance (ANOVA)**: this technique uses a statistical test, F, enabling to check whether there is variability between hospitals or territories not due to chance. A significant result ($p<0.01$) leads to believe that the value of the indicator is not only due to chance.

2. **R-Squared Index**: this index reveals the amount of total variability explained by hospitals or areas.

3. **Funnel plot**: this graphic technique constitutes a useful way to represent the natural variability of a phenomenon.

ANOVA analysis showed that the indicator "% of DS discharges of all Surgery discharges" is statistically significant and seems to produce non-random signals (Test F). This means that the variability due to the hospital is more relevant than that due to chance. R-squared analysis revealed that the procedures "local excision of breast" and "tonsillectomy with or without adenoidectomy" were those most influenced by real signal caused by hospitals, whereas the other procedures were more influenced by chance. Funnel plots revealed that the indicator "% of DS discharges for inguinal and femoral hernia in adults" shows real differences (not due to chance) and therefore it has the ability to discriminate. In addition, there is a certain consistency among the observations, which corroborates the repeatability of the indicator.

Clearly, in order to confirm and generalize the conclusions, the same empirical analysis should have been carried out using data-sets of European nations, but this was not feasible because, understandably, national institutions declined to supply their data.

Statement on the use of resources

WP6 Activities	Tasks description	Staff involved	Timing
Analysis of deliverables produced in WP4 and WPS **Selection of DS for assessment of viability and comparability** **Design of protocol for the collection of data** **Collection of data**	With the aim of evaluating the possibility of collecting information on DS in Europe and to establish its comparability, we have identified a set of indicators that are a gauge of the actual situation amongst European information systems relative to DS. Selection of background data of each participating country Definition of numerator and denominator for each country Definition of source of data (DS unit, hospital, region, country) relevant for each indicator Creation of a digital form for data collection Collection of data from 5 MSs: United Kingdom, Denmark, Hungary, Italy and Portugal Each MS created a multidisciplinary working group which collected the data.	Expert team AOP Expert in ICT KCH Expert in ICT KCH Epidemiologist ADR Epidemiologist AGENAS Epidemiologist EUROPMED Epidemiologist KCH Medical Doctor ADR Medical Doctor CHP Medical Doctor EUROPMED Medical Doctor ARSS Statistician AOP Statistician KCH Statistician	*From November 2010 to June 2011*
Data analysis	Viability/feasibility of data collection, availability of data, crude and specific rates of DS for each country, empirical analysis where possible	KCH Epidemiologist KCH Medical Doctor ADR Medical Doctor AOP Statistician ARSS Statistician ARSS Epidemiologist ARSS Biostatistician KCH Statistician	*From June 2011 to August 2011*
Final report by September 2011		Scientific Committee Members	*September 2011*

Specific objectives of this WP

	Title
1	To investigate the viability and comparability of DS data and indicators in MSs involved in this WP

List of deliverables linked to this work package

Deliverable	Title	Month of achievement
D6	Report on the summing up of member states research and testing DS indicators	M25

Milestones reached by this WP

	Milestone title
1	Selection of indicators with the intent of evaluating their viability and comparability
2	Design of protocol for data collection
3	Selection of background data to be collected by each participating country
4	Definition of numerator and denominator of each indicator
5	Definition of data sources relevant for each indicator
6	Creation of a digital form for data collection
7	Data collection from MSs involved in this WP
8	Data analysis

Annexes

Annex WP6_I Deliverable:

D6 Report on the summing up of member states research and testing DS indicators

Work package title:	**Defining a minimum and an ideal set of DS indicators**
Work package Number:	**7**
Work package Leader:	**AGE.NA.S**
Number of associated partners involved:	**10**
Number of person / days of this work package:	**350**
Total budget of this work package:	**232.081,62 €**
Starting date. Ending date:	**M22 – M31**

Work progress and achievements

An important DSDP objective was to explicitly identify sets of DS indicators which can be adopted by MSs with two purposes: first, to permit comparisons of performance across countries and, second, to improve their current DS information system. Through this WP, the project offered a contribution toward the strengthening and standardization of European DS information systems, bringing forth the opinion of experts on an ideal and a basic set of DS indicators, which hopefully will represent yardsticks for Member States. Given the opportunities offered by and the constraints imposed on DSDP, the research group was convinced that the most appropriate method to reach such objectives was the **Delphi technique**. This consists of a multi-staged survey which aims at reaching consensus among a group of experts on a topic of interest. A basic premise of the Delphi method is that the opinion of several interacting experts is more valid than that of a small group of disconnected professionals. Experts participating in the Delphi method are informed individuals, in our case health care experts. Although DSDP involved a limited number of countries and professionals who are mainly clinicians, i.e. surgeons and anaesthetists, their knowledge and hands-on experience with DS is very deep and extensive. In addition, respondents included professionals with a background in health service management.

This method allowed DSDP to reach a consensus rather rapidly and cheaply. The reasons why the Delphi method was selected include: logistical reasons made it impractical to meet face to face, the decision on the sets of DS indicators was not urgent, and the research team was proficient in both quantitative and qualitative analysis, interpersonal, communication and managerial skills. Other pragmatic aspects which rendered Delphi a relevant approach for DSDP included a prompt access to the organizations and experts involved in DSDP, budgetary constraints, which impeded the involvement of external panellists, and the fact that the topic of interest was rather narrow and therefore could be dealt with by a small group of professionals. Consensus does not mean complete agreement, which is never within reach, instead a shared position most experts can live with, i.e. a consistent judgment among panellists. Participants to the Delphi investigation included highly qualified and experienced DS policy-makers, managers and providers from prominent public administration and academic institutions and clinical centres.

DSDP used **three Delphi successive rounds with controlled feedback**, aggregating the information provided by each participant with the aim of converging on a consensus of opinion. The feedbacks

allowed each expert to consider their own responses in the light of those of the whole panel. The quasi anonymity of the survey, where experts knew each other but ignored who was behind a specific opinion, allowed more openness among participants preventing biases from negative group dynamics, such as authority gradients and groupthink, i.e. strong pressures to conform. In addition researchers coordinating the survey were not able to link an answer with a respondent because the content was separated from the source. Researchers and respondents were both blind to the answers' sources, which represents a basic principle of scientific investigations.

DSDP objective was to reach a consensus among experts involved in DSDP concerning the most useful DS indicator set for the level at which policies are formulated and evaluated and resources allocated, i.e. nations/regions, and the level where services are delivered, i.e. DS units. The investigation did not start just asking participants about relevant DS indicators; instead it commenced from the lists of DS indicators identified in the course of the gray and peer review literature. In other words, experts were invited to select the indicators they deem most important from "cleaned" lists based on those already put together by the project.

Specifically, experts were asked to consider the following four lists:

A - the first one was used to construct the **ideal set for the national/regional level** and contained 30 indicators, substantially reduced from the long inventory of over 100 DS indicators generated by WP5;
B - the second one was used to produce the **ideal set for the DS unit level** and contained 70 indicators, condensed from the long inventory from WP5;
C - the third one was used to select the **essential set for the national/regional level** and included 20 indicators;
D - the fourth one was used to select the **essential set for the DS unit level** and included 25 indicators.

Given that most respondents to the survey had a clinical background, it was deemed useful to explicitly state some important principles regarding health information system purpose, design and management. While answering the questionnaire, respondents were asked to take into consideration the following points:

1. An ideal set of indicators does not mean the largest possible number of indicators. It is much better to obtain a small set of reliable indicators than a large set of inconsistent indicators; in fact the quality of information tends to be compromised when too many data are collected. Some indicators are strictly correlated to others and therefore do not add to the data already gathered, and the value of collected information is likely to diminish above a certain threshold. Moreover, there are substantial administrative costs in managing an information system, more information does not necessarily lead to better understanding and decisions and, last but not least, providers' main role is to deliver quality and safe services not filling out data collection forms.

2. Information systems should take a shape similar to that of a cone. This means that detailed data originated from the bottom, where services are provided, get sieved through to the top because it does not make sense to overwhelm central level institutions with too much information. Using a metaphor from optics, DS units should look at their performance through a simple microscope, whereas a Ministry of Health should use fish-eye lenses. The rationale behind the reduction of the list regarding the national/regional level submitted to DSDP experts, compared to the comprehensive one originated by WP5, is that institutions responsible for policies have to manage the whole health system and cannot disperse their attention on minute elements such as mean operating and recovery room time, the proportion of patients accompanied by escort for home discharge or the proportion of patients discharged with a written summary of treatment received. All of the former are examples of information about processes occurring where services are delivered and information about them have no relevance at top managerial levels. However DSDP experts had access to the comprehensive list and were free to add any indicator they considered important and which had been left out of the lists.

3. Periodic surveys on representative samples of patients, of records or of care processes can and should supplement routine data. For example telephone interviews with patients already submitted to procedures, investigations of clinical and administrative records, and observation of care processes. Periodicity can vary widely, for example from once or twice per year up to every other year or more, depending on the DS unit's degree of maturity and awareness of an existing problem which needs to be defined more clearly. Routine data collected at DS units level is not the only, probably not even the most useful source of statistics; therefore it should not be expected to provide all potentially valuable information.

4. From a clinical perspective, some information is essential for managing individual patients. In other words, some clinical data must always be collected and recorded for every patient submitted to procedures, without exception. For example, the Assessment of Post-Discharge Score System (PDSS) (e.g. Stable vital signs, Oriented, Minimal nausea and vomiting, Controllable pain, No significant bleeding, Ability to take and retain oral fluids, Ability to void) is a simple and essential checklist allowing systematic clinical assessment of individual patients before discharge. Another example of essential clinical information is the timely treatment with prophylactic antibiotics consistent with current guidelines. It might be informative to transform some clinical data into indicators on a routine or periodic basis. For example, it would be useful to know every six months on a small sample of patients the % of those who received prophylactic antibiotics on time and consistent with current guidelines. Above and beyond illuminating the performance relative to clinical aspects, a routine information system should also provide data useful to manage a DS unit, i.e. an organization, or a whole system, i.e. a DS system at national or regional level. For example, the median waiting time for specific basket procedures, the % of

unplanned admissions and the % of cancelled surgical procedures without notification by the patient. All the above indicators are examples of information that help to assess DS units performance and therefore might suggest the need for local corrective actions or even a strategic revision.

5. Standard operating procedures (SOP) are an essential component of organizations characterized, like DS units, by standardized clients and processes, by high productivity and safety. Examples of SOP for a DS unit are: written information for patients concerning the therapeutic plan and phone numbers to contact for advice, emergencies or complaints and the therapeutic plan, what to expect from the clinical progress, patients reminded and assessed the day before the procedure, given individual appointment and called after discharge. SOP should be an important component of DS policy formulation. If there is anecdotic evidence that there are problems regarding standard processes in a single unit or in a system of units, the most useful method to investigate SOP is a periodic survey looking at their availability, functionality and degree of compliance by professionals.

Therefore from a managerial perspective, existing SOP should be examined from the following viewpoints:

a) do they exist and cover key clinical and administrative processes ?
b) are they up to date, clear and well integrated in the main tasks, contributing to a smooth flow of clinical and administrative services ?
c) how far are health providers and administrators compliant with SOP ?
d) if there is a gap between SOP and practices, why is this so ?

Trying to answer the above questions through routine data collection would be inappropriate and a waste of time.

Given the above mentioned considerations, the Delphi technique was in all probability the most appropriate method to elicit the opinion of DSDP experts concerning sets of DS indicators. This method has revealed points of agreement and disagreement, allowing a better understanding by participants and a progressive revision of their opinions. After such a consensus building process, experts will presumably play a supportive role in the diffusion of DSDP recommendations within their own countries and beyond.

The first round questionnaire tackled pertinent issues using a set of closed and semi-closed questions and assertions. The logic and sequence of issues considered by the questionnaire is explained in the following lines. Two preconditions to make DS indicators comparable across countries are the adoption of a shared definition of Day Surgery and of a standard set of basket procedures. Therefore these were the first two issues presented to the panellists. Next, the questionnaire asked experts to state their opinion in relation to a series of assertions. The first statement investigated how far panellists are convinced that the system theory, which looks at DS

as composed of different elements tightly linked and influencing each other: input, i.e. resources; processes, i.e. transformation of inputs into services; outputs, i.e. volume of delivered services, and outcomes; i.e. results in terms of changes in health status of patients, is the most useful approach for indicator classification. The second step asked about the relevance of a more detailed framework which includes: Input, Access, Process, Output, Outcome, Safety, Satisfaction/Responsiveness, Cost/Productivity. Replies to assertions and questions employed 5-point traditional Likert scales. Furthermore, the investigation focused on the areas of performance the indicator set should shed light on and the main topic, i.e. the relevance of individual indicators pre-selected from WP4 and WP5 to the essential and ideal lists for the DS unit and national/regional levels. Finally the questionnaire asked the number of essential and ideal set of indicators for each level.

The lists submitted for the second round contained a number of indicators to be reassessed superior to the average total number the group thought should be included in each list. This made sense because, at that point, the process had to be kept open avoiding an early closure. The second round of the questionnaire had the same structure as the first one, but used only a subset of assertions and questions from the first version. The assertions indicating divergence of opinion were submitted again, whereas the statements around which consensus had already been reached were presented separately. The indicators around which a low consensus was reached were eliminated. In the new version of the questionnaire, participants received information regarding their own opinions vs. the view of the whole group. Such an approach allowed respondents to reconsider their own reasoning given the group opinion and hopefully induced experts to converge further on a consensual position.

The criteria used to trim down the lists of indicators included in the third round were the following:

- the lists submitted for the last round contained a number of indicators to be reassessed equal to the average total number the group thought should be included in each list. For example, the ideal set of DS indicators at national/regional level included 15 indicators because this was the number considered appropriate by the group;
- in general the lists contained at least one indicator for each category, e.g. input, access, process;
- the indicators around which a lower consensus was attained, defined as the percentage of strongly agree + tend to agree /total positions, were eliminated;
- as far as the Ideal list of DS indicators at National/Regional level was concerned, there was only one exception to the above mentioned rule, i.e. we kept the safety indicator "% DS admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure or wrong implant" with an overall group consensus of 67%, and dropped "% of DS admissions with selected surgical and anesthesiological adverse events" with an overall group consensus of 73%,

because the former presumably presents better reliability and validity. In other words, the former indicator was easier to measure because it was a subset of the second one and provided information about a key and specific aspect of DS performance; adverse events represents a vast category which does not distinguish between preventable and non-preventable adverse events; in fact it embraces the whole concept of patient safety;

- as far as the Ideal list of DS indicators at DS unit level is concerned, DSDP kept the access indicator "Median waiting time for each basket procedure in DS unit" (consensus 67%) because it was the only indicator left belonging to this category. The two following safety indicators were also retained: "% of DS unit admissions experiencing a fall within the confines of the DS unit" (consensus 67%) and "% of DS unit admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant" (consensus 80%). Falls and wrong sites/side/patients are well known and serious safety issues in hospital care; the tight schedule with high volume of procedures which characterize DS presumably make these adverse events potential threats that need to be monitored,

- as far as the Essential list of DS indicators at National/Regional level was concerned, again we kept the only access indicator in the list "Median waiting time for overall list of basket procedures and for each basket procedure" notwithstanding its relatively low consensus of 63% and the input indicator "Number and % of DS units by public and private ownership by freestanding units" (consensus 73%) because freestanding structures are unanimously deemed the best way to organize DS. According to the group consensus the process indicators are not a priority for national/regional level, and so we dropped the only measure belonging to this category, i.e. "% of patients who have received a pre-anaesthesia assessment before DS";

- as far as the Essential list of DS indicators at DS unit level, we kept 11 indicators, which was one more than the number considered adequate by the group. We also retained the only access indicator "Median waiting time for overall list of basket procedures and for each basket procedure" as in the previous sets. Furthermore, we ensured a significant presence of outcome and safety indicators. The above mentioned modifications of the lists were an attempt to reach an equilibrium between the opinions expressed by the group of respondents and the importance of achieving a balance in the categories of indicators considered. Given that most respondents were clinicians, their answers tended to emphasize clinical aspects compared to managerial dimensions such as access to DS services.

The third step represented a final check before the conclusion of the Delphi investigation. The third and last round of the investigation aimed at reaching a final and stronger consensus with regard to both the statements and the four lists of indicators. As far as the assertions were concerned, only those which reflected disagreement were maintained to be submitted a last time. Concurrently the statements around which consensus had already been reached were dropped from the questionnaire, but still presented separately so that all participants were aware of the results.

The following paragraphs focus on the results of the Delphi exercise, i.e. first, the degree of accord around a few key assertions regarding DS and its information system and, second, the level of agreement concerning the individual indicators. Finally comments on the meaning and relevance of the results are offered. The first of the two tables illustrate statements where agreement was attained (actual scores are shown in the third column). These include the **definitions of Day Surgery/Ambulatory Surgery, Office based surgery and Short stay surgery and the list of basket procedures** that should be considered when reporting at international level. Furthermore, the statements involve the logic behind DS indicators' classification and the need to differentiate the set of indicators necessary to manage a DS system at national level versus a single DS unit.

Assertion 1	Day surgery/Ambulatory surgery is a procedure without night stay that requires full operating theatre facility	**93%**
Assertion 1	Office based surgery is a procedure carried out without night stay and without full operating theatre facility	**93%**
Assertion 1	Short stay surgery is a procedure that requires full operating theatre facility with a hospital stay of up to 72h	**86%**
Assertion 2	The basket procedures identified in the following OECD table should, after excluding hysterectomy, mastectomy and cholecistectomy (51.2 NON laparoscopic), be adopted by all Member States when reporting DS indicators at international level	**86%**
Assertion 3	The most useful starting point to classify DS indicators is the system approach, i.e. inputs, processes, outputs and outcomes	**88%**
Assertion 4	DS indicators should be classified through a more detailed system approach including the following nine categories, i.e. Input, Patients characteristics, Access, Process, Output, Outcome, Safety, Satisfaction/Responsiveness, Cost/Productivity	**94%**
Assertion 5	The set of basic indicators for the national/regional level should be different from that selected for the DS unit because the information needs at these two levels are substantially different	**75%**

DSDP also identified **a set of procedures** (in the following table) considered appropriate, by the expert panel, **for DS activities monitoring**. The only exceptions are hysterectomy and mastectomy, that should therefore be excluded from the list.

Basket of DS Procedures *(from OECD Surgical Procedures)*

- Cataract surgery (13.1-13.7)
- Tonsillectomy with or without adenoidectomy (28.2-28.3)
- Ligation/stripping of varicose veins (38.5)

- Cholecystectomy (51.2)
- Laparoscopic cholecystectomy (51.23)
- Inguinal and femoral hernia (53.0-53.1)
- Prostatectomy (transurethral) (60.2)
- Hysterectomy (vaginal only) (68.51)
- Breast conserving surgery (85.21)
- Mastectomy (85.4)
- Knee arthroscopy (80.26)

It is important that respondents agree on key definitions, a list of basket procedures, a classification of indicators based on system theory and a more thorough taxonomy pertinent to healthcare. It is also crucial to understand that information needs vary with the level of responsibility within the health system. All previous points are basic common ground on which to build something solid and more detailed.

Assertion 6	The basic set of DS indicators at the national/regional level should focus on the following categories: Input, Output, Outcome, Safety, Satisfaction/Responsiveness and Cost/Productivity	**50%**
Assertion 7	The basic set of DS indicators at the DS unit level should focus on the following categories: Access, Processes, (proxy of) Outcomes, Safety and Patients' Satisfaction/Responsiveness	**71%**

However consensus was not reached around two more assertions related to categories which should be highlighted at national vs. DS unit levels. Lack of agreement especially concerned the set of DS indicators at national level. There was a certain discrepancy between the answers offered by participants and some inconsistency between answers about the two statements and the selection of indicators. Hence it is tricky to comment on these responses and we prefer to abstain.

The **sets of DS indicators** which met the consensus of respondents are presented in the following four tables. The first two regard the essential sets for the National/Regional and DS unit level, respectively. The last two refer to the ideal lists for the National/Regional and DS unit setting, in that order. The second column reveals the degree of consensus measured as a percentage of answers "most/quite important" over the total. For example, 100% means that all respondents agree that the indicator is either most or quite important. The highest scores concern output and outcome indicators. The orange line at the end of each table displays the number of indicators that respondents, on average, think should compose each set. This varies between 7 and 10 for the essential lists and 14 and 27 for the ideal sets.

ESSENTIAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL.	OVERALL GROUP POSITION % of most important and quite important over total
INPUT	
Number and % of DS units by public and private ownership by	
integrated	**86%**
partially integrated	**86%**
freestanding	**86%**
ACCESS	
Median waiting time for overall list of basket procedures and for each basket procedure	**86%**
OUTPUT	
% of elective surgery performed as DS for the overall list of elective basket procedures and each elective basket procedure	**100%**
OUTCOME	
Case fatality ratio within 30 days for patients undergoing any of elective basket procedure	**100%**
% DS unplanned overnight admission	**100%**
% of DS admissions returned to the OR within one week	**100%**
SAFETY	
% of DS admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure or wrong implant	**71%**
COST AND PRODUCTIVITY	
Expenditure on DS care as absolute value and % of total health expenditure	**93%**

How many DS indicators should the essential set for National/Regional level include?	**8,42**

ESSENTIAL SET FOR THE DS UNIT LEVEL	% of most important and quite important over total
ACCESS	
Median waiting time for overall list of basket procedures and for each basket procedure	**86%**
PROCESS	
% of patients who have received a pre-anaesthesia assessment before DS	**93%**
OUTPUT	
Number (and % for non free standing units) of elective surgery performed as DS for the overall list of elective basket procedures and each elective basket procedure	**100%**
OUTCOME	
Case fatality ratio within 30 days for patients undergoing any of elective basket procedure	**100%**
% DS unplanned overnight admission	**100%**
% unplanned re-admission to a hospital or an acute care facility within one week	**100%**
SAFETY	
% of DS admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure or wrong implant	**100%**
% DS surgical wound infection	**100%**
SATISFACTION/RESPONSIVENESS	
% patients of patients overall satisfied	**93%**
COST AND PRODUCTIVITY	
% cancellations of surgical procedures without notification by the patient ("failed to arrive" or "did not attend")	**93%**
% cancellations of the booked procedure after arrival at the day surgery centre/unit	**93%**

OVERALL GROUP POSITION	
How many DS indicators should the essential set for the DS unit level include?	**9,67**

IDEAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL.	OVERALL GROUP POSITION new % of most important and quite important over total
INPUT	
Number and ratio of theatres fully dedicated to DS / total available theatres	**79%**
ACCESS	
Median waiting time for overall list of basket procedures and for each basket procedure	**93%**
PROCESS	
% of patients who have received a pre-anaesthesia assessment before DS	**86%**
OUTPUT	
% of elective surgery performed as DS by overall list of basket procedures and each basket procedure	**100%**
OUTCOME	
Case fatality ratio within 30 days for patients undergoing any of elective basket procedure	**93%**
% unplanned overnight admission by cause	
Surgical	**100%**
Anaesthetic/medical	**100%**
Social/administrative	**100%**
% unplanned returns to the OR within 24 hours	**100%**
% unplanned re-admission to a hospital within one week	**100%**
SAFETY	
% of DS admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure or wrong implant	**79%**
% of DS admissions with surgical wound infection	**93%**
% of DS admissions with post-operative sepsis	**93%**
PATIENTS' SATISFACTION AND RESPONSIVENESS	
% patients overall satisfied with DS	**86%**
COST AND PRODUCTIVITY	
Expenditure on Day Surgery care as absolute value and % of total health expenditure	**79%**

How many DS indicators should the ideal set for the national/regional level include?	**13,73**

IDEAL SET OF DS INDICATORS AT DS UNIT LEVEL.	OVERALL GROUP POSITION % of most important and quite important over total
INPUT	
Number and % DS beds/total surgery beds (for non freestanding units)	**100%**
ACCESS	
Median waiting time for each basket procedure in DS unit	**86%**
PROCESS	
% of patients with standardized preoperative evaluation and tests	**93%**
% of patients who have received a pre-anaesthesia assessment before DS	**93%**
OUTPUT	
Number of interventions per each basket procedure and overall basket procedures per year	**100%**
% of elective surgery performed as DS by each basket procedure and overall basket procedures (for non freestanding units)	**100%**
OUTCOME	
Case fatality ratio within 30 days for patients undergoing any of elective basket procedure	**100%**
% unplanned overnight admission by cause	
surgical	**100%**
anaesthetic/medical	**100%**
social/administrative	**100%**
% unplanned returns to the OR	
within 24 hours	**100%**
% unplanned re-admission to hospital or acute care facility	
within 24 hours	**100%**
within 7 days	**100%**
SAFETY	
Surgical and anesthesiological adverse events in percentages:	
postoperative bleeding requiring treatment within 2h and 24h	**93%**
unplanned transfusion	**93%**
cardiopulmonary arrest	**93%**
nausea not controlled within 2h and 24h	**93%**
pain not controlled within 2h and 24h	**93%**

% of DS unit admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant	**86%**
% of DS unit admissions experiencing a fall within the confines of the DS unit	**79%**
% surgical wound infection	**100%**
% of post-operative sepsis	**100%**
% medication errors	**100%**
PATIENTS' SATISFACTION AND RESPONSIVENESS	
% discharges with written complaints by cause (clinical, Providers' manners, Organizational)	**93%**
COST AND PRODUCTIVITY	
% cancellations of surgical procedures without notification by the patient ("failed to arrive" or "did not attend")	**93%**
% cancellations of the booked procedure after arrival at DS unit	
Pre-existing medical condition	**93%**
Organisational reasons	**93%**
% utilized theatre sessions over weekly planned theatre sessions	**100%**
% procedures with late starts, i.e. with delays > 30' from time appointed for surgical procedure up to actual beginning	**93%**
Median operating time by each basket procedure	
Surgical procedure	**100%**

How many DS indicators should the ideal set for the DS unit level include?	**27,27**

As previously mentioned, DSDP approach to the selection of DS indicators is based, first and foremost, on system theory. Such theory suggests that DS should be analyzed through an approach discerning between customers, inputs, processes, outputs and the relationship between inputs and outputs. Customers are both DS beneficiaries, i.e. patients whose needs are identified and alleviated, and professionals and operators, whose knowledge, skills, motivation and coordination ensure the delivery of appropriate, quality and safe services. Inputs refer to the resources necessary to deliver the services, e.g. staff, Euros, consumables, infrastructures, technologies and policies. Processes are means which transform inputs into outputs which satisfy users' needs and demands. Outputs are products or services and represent the end result of processes. Finally it is important to clarify the cost of inputs as a whole and average cost per procedure, and the relationship between outputs and inputs, i.e. productivity and efficiency.

Further, being DS a surgical service, it is important to gain insight on aspects peculiar to healthcare, i.e. access, safety and outcomes. Access concerns the availability of DS units in a specific geographical area and population; even more significantly, access involves the waiting time between a diagnosis and the relevant procedure. Safety entails the delivery of services without preventable adverse events, i.e. a key element of healthcare since the assertion "first, do no harm" of the Hippocratic oath two and a half millennia ago. Outcomes have to do with the degree of improvement or, on the opposite, deterioration of patients' health status as a consequence of encounters with healthcare. In order to facilitate reasoning and better understanding of the four set of indicators, these were rearranged and commented by category in the following pages.

INPUT INDICATORS

Input satisfaction indicators included in the DSDP lists are as follows:

ESSENTIAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- Nur
  - integrated
  - partially integrated
  - freestanding

ESSENTIAL SET OF THE DS UNIT LEVEL

- No input indicator

IDEAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- Number and ratio of theatres fully dedicated to DS / total available theatres

IDEAL SET OF THE DS UNIT LEVEL

- Number and % DS beds/total surgery beds (for non freestanding units)

Availability of resources is a precondition of services provision. For the national level, simple measures of resources allocation to DS are figures concerning the number and proportion of DS units, differentiating between integrated and freestanding, and number of theatres fully dedicated to DS. Such measures clearly indicate if an effective policy of DS promotion was successfully designed and implemented or, on the contrary, surgery delivery remains business as usual ignoring DS's substantial advantages in terms of safety, patients' satisfaction and efficiency.

ACCESS INDICATORS

Access indicators included in the DSDP lists are as follows:

ESSENTIAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- Median waiting time for overall list of basket procedures and for each basket procedure

ESSENTIAL SET OF THE DS UNIT LEVEL

- Median waiting time for overall list of basket procedures and for each basket procedure

IDEAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- Median waiting time for overall list of basket procedures and for each basket procedure

IDEAL SET OF THE DS UNIT LEVEL

- Median waiting time for each basket procedure in DS unit

Access concerns the availability of DS units in a specific geographical area and population; more significantly, access involves the waiting time between a diagnosis and the relevant procedure. The access indicator “Median waiting time for overall and each basket procedure” measures how long, on average, it takes between a request for a procedure and its actual provision. In a context of expanding needs for surgical services due to a growing elderly population and shrinking public finances, waiting times is an inescapable issue. Its relevance derives also from its politically sensitiveness; some national health services grant the right to access services within maximum waiting times. Degree of respect for such right must be monitored.

PROCESS INDICATORS

ESSENTIAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- No process indicator

ESSENTIAL SET OF THE DS UNIT LEVEL

- % of patients who have received a pre-anaesthesia assessment before DS

IDEAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- % of patients who have received a pre-anaesthesia assessment before DS

IDEAL SET OF THE DS UNIT LEVEL

- % of patients with standardized preoperative evaluation and tests

Processes are health care activities carried out by providers to patients and for patients, e.g. a diagnostic tests or a surgical procedure. Measures of clinical processes are recorded and analyzed where services are provided and information about them have limited relevance to top managerial levels. "% of patients who have received a pre-anaesthesia assessment before DS" is an indicator which signals if services are well organized and aware of the ever present potential of harming patients. Pre-anaesthesia assessment prevents both cancellations and complications in patients whose medical contraindications are discovered only just before or even during or after a procedure. % of patients with standardized preoperative evaluation and tests has a similar meaning.

OUTPUT INDICATORS

Output indicators included in the DSDP lists are as follows:

ESSENTIAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- % of elective surgery performed as DS for the overall list of elective basket procedures and each elective basket procedure

ESSENTIAL SET OF THE DS UNIT LEVEL

- Number (and % for non free standing units) of elective surgery performed as DS for the overall list of elective basket procedures and each elective basket procedure

IDEAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- % of elective surgery performed as DS by overall list of basket procedures and each basket procedure

IDEAL SET OF THE DS UNIT LEVEL

- Number of interventions per each basket procedure and overall basket procedures per year
- % of elective surgery performed as DS by each basket procedure and overall basket procedures (for non freestanding units)

Output indicators reveal the absolute volume of activities performed by a system or a unit. They also measure the proportion of procedures carried out in a DS setting out of those which should be completed through this approach. Thus "% of elective surgery performed as DS for the overall list of elective basket procedures and each elective basket procedure" is also an indicator of appropriateness of care. This means that it determines the extent to which DS performance achieves the goal to provide services for about 80% of surgical needs.

OUTCOME INDICATORS

Outcome indicators included in the DSDP lists are as follows:

ESSENTIAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- Case fatality ratio within 30 days for patients undergoing any of elective basket procedure
- % DS unplanned overnight admission
- % of DS admissions returned to the OR within one week

ESSENTIAL SET OF THE DS UNIT LEVEL

- Case fatality ratio within 30 days for patients undergoing any of elective basket procedure
- % DS unplanned overnight admission
- % unplanned re-admission to a hospital or an acute care facility within one week

IDEAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- Case fatality ratio within 30 days for patients undergoing any of elective basket procedure
- % Do
  - Surgical
  - Aneasthetic/medical
- % unplanned returns to the OR within 24 hours
-

IDEAL SET OF THE DS UNIT LEVEL

- Case fatality ratio within 30 days for patients undergoing any of elective basket procedure
- % Do
  - Surgical
  - Aneasthetic/medical
- % unplanned returns to the OR within 24 hours
- % uo within 24 hours
  - within one week

Outcomes have to do with the degree of improvement or, on the opposite, deterioration of patients' health status as a consequence of encounters with healthcare. In other words, an outcome is a result in terms of positive or negative, short or long term changes in health status of patients, e.g. death within one week of procedure or health problem, e.g. inguinal hernia, still cured five years after the procedure.

The indicator "Case fatality ratio within 30 days for patients undergoing any of elective basket procedure" should be collated by both national and individual units. It should be stratified by

specialty and also by procedure because the risk of death for cataract removal is very different from that inherent in knee replacement procedures.

The other outcome measures in the lists are proxy indicators. This means they use indirect measures, which are easier to collect and interpret, for example proportion of unplanned admissions or proportion of patients returned to the operating room (OP) within one week, but still reflect the dimension of outcome (and safety). Unplanned hospitalizations, admissions to a hospital or a return to an OP within 24 hours or a week after a DS procedure are clear signs that clinical or administrative processes are problematic. Proxy indicators' usefulness derives also from the fact that the events measured by them are much more common than patients' deaths. Unplanned admissions or returns to hospital should be thought and managed as a warning sign of dysfunctional processes not to be ignored. Similar episodes should prompt managers and providers to study DS services delivery in depth and consider the necessity to redesign structures, processes and procedures and possibly retrain staff.

PATIENTS' SAFETY INDICATORS

Patients' safety indicators included in the DSDP lists are as follows:

ESSENTIAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- % of DS admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure or wrong implant

ESSENTIAL SET OF THE DS UNIT LEVEL

- % of DS admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure or wrong implant
- % DS admissions with surgical wound infection

IDEAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- % of DS admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure or wrong implant
- % of DS admissions with surgical wound infection
- % of DS admissions with post-operative sepsis

IDEAL SET OF THE DS UNIT LEVEL

- % of DS unit admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant
- % of DS unit admissions experiencing a fall within the confines of the DS unit
- % admissions with surgical wound infection
- % admissions with of post-operative sepsis
- % admissions with medication errors
- Sur
    - postoperative bleeding requiring treatment within 2h and 24h
    - unplanned transfusion
    - cardiopulmonary arrest
    - nausea not controlled within 2h and 24h

Safety involves the delivery of services in absence of preventable adverse events; it has been recognized a key element of healthcare since the Hippocratic oath. Starting with the publication in 1999 of the Institute of Medicine study "To err is human", patients' safety has become a topic which cannot be ignored by modern systems of healthcare. Numerous studies have brought to light the reality that medical errors and adverse events in healthcare delivery are much more

common than previously thought and many of them, around half, are avoidable. Beyond the damage to patients, these potentially avoidable outcomes frequently increase the length and cost of stay adding significantly to the economic difficulties of health organizations and whole systems including DS. Errors also compromise credibility of individual professionals as well as teams, nits and whole institutions. A vicious cycle of errors, re-work and financial restraint, followed by further financial difficulty due to the costs of dealing with errors and their consequences, such as repeated procedures and prolonged hospitalizations, become the norm in hospitals and ambulatories which are unable or unwilling to systematically confront patients' safety. This is not so especially within organizations able to design reliable services where preoccupation with possible failures represents a constant presence. In summary, medical errors and adverse events must be monitored.

Falls and wrong sites/side/patients are well documented and dangerous safety problems in hospital care; the tight schedule with high volume of procedures which characterize DS, presumably make these adverse events potential threats to be monitored. Hence "% DS admissions who experienced a wrong site, wrong side, wrong patient, wrong procedure or wrong implant" should be included in each of the four lists and "% of DS unit admissions experiencing a fall within the confines of the DS unit" in the ideal set for DS units. With the exception of the essential list for the national level, indicators measuring frequency of wound infections should be computed.

COST/PRODUCTIVITY INDICATORS

Cost/productivity indicators included in the DSDP lists are as follows:

ESSENTIAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- Expenditure on DS care as absolute value and % of total health expenditure

ESSENTIAL SET OF THE DS UNIT LEVEL

- % cancellations of surgical procedures without notification by the patient ("failed to arrive" or "did not attend")
- % cancellations of the booked procedure after arrival at the day surgery centre/unit

IDEAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- Expenditure on Day Surgery care as absolute value and % of total health expenditure

IDEAL SET OF THE DS UNIT LEVEL

- % cancellations of surgical procedures without notification by the patient ("failed to arrive" or "did not attend")
- % c o Pre-existing medical condition
- % utilized theatre sessions over weekly planned theatre sessions
- % procedures with late starts, i.e. with delays > 30' from time appointed for surgical procedure up to actual beginning
- Median operating time by each basket procedure

Cost indicators concern actual expenditure for DS, as absolute amount or relative to total healthcare outlay. A productive and efficient service does not suffer from chronic and substantial waste. Examples of measures of waste are “% cancellations of surgical procedures without notification by the patient ("failed to arrive" or "did not attend")” and “% cancellations of the booked procedure after arrival at DS unit”. “Recurring delays of surgical procedures” and “% utilized theatre sessions over weekly planned theatre sessions” are other cases in point. A key goal for managers is to use resources in such a way to maximize their yield. This is the economists’ perspective, i.e. always trying to do better given specified available resources.

PATIENTS' SATISFACTION INDICATORS

Patients' satisfaction indicators included in the DSDP lists are as follows:

ESSENTIAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- No patients' satisfaction indicator

ESSENTIAL SET OF THE DS UNIT LEVEL

- % patients of patients overall satisfied

IDEAL SET OF DS INDICATORS at NATIONAL/REGIONAL LEVEL

- % patients overall satisfied with DS

IDEAL SET OF THE DS UNIT LEVEL

- % discharges with written complaints by cause (clinical, Providers' manners, Organizational)

Healthcare systems and the individual organization delivering services exist to solve citizens' health problems. The core of Continuous Quality Improvement is orientation of the organization to satisfying its customers' needs and expectations. Some citizens and professionals do not like the use of the word "customers" but the use of a name is less significant than the tenet about users being the central focus of services delivery.

Donald Berwick, a leader in quality of healthcare, defines customers as "people who depend on you." Essential to the creation and maintenance of quality care is the thorough understanding of customers and their needs. Establishing a customer-oriented organization entails a genuine ongoing commitment to measuring, understanding and meeting customer expectation. As with any re-orientation of an organization, adapting to a customer-oriented focus implies changes to its culture, the shared understanding of its reason of being and the processes used to carry out the work. A paternalistic and bureaucratic organization remains insensitive to customers and still might adopt instruments to measure patients' satisfaction in order to pay lip service to a politically correct issue.

Comprehension of customers' expectations represents also a prerequisite for being both responsive and accountable. Being responsive involves the capacity and willingness to act positively and proactively in response to patients' reasonable and valid wishes. Being accountable entails answering for the use of resources entrusted to somebody in position of authority, the fundamental choices adopted and the results achieved. Expectations cannot be guessed; even

professionals who spend their entire career in contact with patients might have a different view from that held by patients. For example, DS patients might deem especially important understandability of the communication concerning their progress from the diagnostic process carried out by their general practitioner (GP) through the procedure and finally the recovery at home, including clear instructions about whom to call in case of complications or complains. Another expectation might concern courtesy of providers and staff and protection of privacy from the first phone contact for booking an appointment with a surgeon to the visit at home by a nurse. Further DS users might attach special importance to prompt attention by providers when needs and questions arise. On the contrary, these aspects might appear trivial to professionals.

The transition of an organization to a customer satisfaction focus implies both communication and an interactive process of shared decision making with the people served and also between the professionals at the sharp end and management. Internal customers, e.g. surgeons, might value in particular an effective coordination with GPs and nurses working in the community, the turnaround time of the operating room and a collaborative management. Listening and responding to internal customers means to empower staff and maximize its potential. This implies a significant change in the day-to-day working relationships within the organization, where the role of the manager moves from controlling and directing professionals to facilitating, educating, coordinating, nurturing, recognizing and awarding. Listening to the customers, both external and internal, can be achieved through surveys, individual interviews and focus groups.

DSDP set of essential indicators at national level does not include any patient's satisfaction indicator and this makes sense because variability among units and areas is wide and an average measure would hide this discrepancy. The essential list for a DS unit includes a generic measure of overall satisfaction with the services. The same indicator is recommended for the ideal set at national level, whereas relative frequency of discharges with written complaints by clinical, providers' manners and organizational cause is deemed useful for the units.

Obviously a survey of patients' satisfaction should be standardized across systems and units and also include more specific measures to be analyzed within a particular situation. For example, another useful indicator might be the percentage of patients who would recommend the same services to friends. An alternative, more expensive and invasive approach to the investigation of responsiveness of DS services is the mystery patient, i.e. an individual unknown to staff who act as a patient and observe, at least in part, interactions with professionals.

As DSDP stated in the document introducing the Delphi method to participants, "the project does not have the illusion of providing a definite answer regarding a set of DS indicators, first because there is no one right answer, secondly because organizations, technologies and procedures continuously change and what is relevant today it will not be in a near future, thirdly because national and local contexts vary enormously. More modestly and realistically, DSDP intends to offer a contribution toward the strengthening and standardization of European DS information systems; in particular, the project represents an opportunity to bring forth the opinion of experts

about an ideal and a basic set of DS indicators, which would represent yardsticks for Member States." The project also offered a contribution toward an informed selection of indicators sets within each country, region and even local subsystems.

Limits of DSDP conclusions regarding the essential and ideal sets of indicators derive from the fact that participants in the Delphi exercise were few, i.e. 16 professionals, and most of them were clinicians. Inevitably, and appropriately, clinicians tend to focus on diagnostic and therapeutic processes overlooking resources, their allocation, management and efficient use; even more so clinicians tend to neglect the strategic perspective related to a DS system, i.e. its design, deployment and coordination with other components of health services. This means that results of the Delphi exercise might be biased toward measures with which clinicians are more familiar, such as outputs and safety.
A second limit of DSDP indicators sets is that local and national contexts are ignored. Countries and populations can vary widely in terms of epidemiological needs, demographic composition, political and administrative structures, economy, culture and priorities. But such constraint is at the same time a good thing because DSDP perspective is European and such lists represent a useful step toward standardization of DS indicators. DSDP sets do not impose limitations to MSs in terms of choice of indicators, more simply strives to confront the important issue of comparability of DS performance across our continent. Last but not least, a final and substantial limitation derives from the fact that DSDP formal influence on national or regional MSs health authorities is limited, depending on existing informal relations between individuals and institutions. However this is an intrinsic characteristic of most applied research projects.

Statement on the use of resources

WP7 Activities	Tasks description	Staff involved	Timing
Design of Research protocol	To identify ideal and essential sets of DS indicators through the Delphi Method	CNAMTS Epidemiologist AGENAS Epidemiologist HAS Epidemiologist ARSS Medical Doctor NIHDI Medical Doctor CNAMTS Medical Doctor EUROPMED Medical Doctor AGENAS Medical Doctor AOP Medical Doctor CHP Medical Doctor SCJUT Medical Doctor KCH Medical Doctor ADR Medical Doctor HAS Medical Doctor AGENAS Statistician CNAMTS Economist AGENAS Economist	*From June 2011 to March 2012*
First Round Questionnaire	▪ To construct the ideal set for the national/regional level containing 30 indicators, substantially reduced from the long inventory of over 100 DS generated by WP5 ▪ To produce the ideal set for the DS unit level containing 70 indicators condensed from the long inventory from WP5 ▪ To select the essential set for the national/regional level including 20 indicators ▪ To select the essential set for the DS unit level including 25 indicators		
Second and Third Round Questionnaires	The second and third round questionnaires will only include issues where consensus was not reached, dropping items where consensus was accomplished. The list of essential/ideal set of indicators for each level will be ranked from the most to the least important by category, eliminating those which were considered not important by over 70% of experts		
Fact sheets of each essential and ideal DS indicator			
Final report by March 2012		Scientific Committee Members	*March 2012*

Specific objectives of this WP

	Title
1	To standardize data and indicators and define a set of DS indicators for integration in EU framework indicators and MSs

List of deliverables linked to this work package

Deliverable	Title	Month of achievement
D7	Minimum and ideal set of DS indicators to be adopted by EU Member States	M31
D8	Fact sheets of DS indicators	M31

Milestones reached by this WP

	Milestone title
1	Two lists of DS indicators: minimum and ideal
2	Fact sheet of each DS indicator
3	Procedures to ensure coding equivalence between different coding systems and ICD versions in use
4	Shortlist of DS procedures to be monitored

Annexes

Annex WP7_I Deliverable:

D7 Minimum and ideal set of DS indicators to be adopted by EU Member States

D8 Fact sheets of DS indicators

Work package title:	**Devising guidelines for indicators' statistical analysis, presentation, interpretation and utilization**
Work package Number:	**8**
Work package Leader:	**CNAMTS**
Number of associated partners involved:	**7**
Number of person / days of this work package:	**479**
Total budget of this work package:	**136.602,80 €**
Starting date. Ending date:	**M22 – M31**

Work progress and achievements

The approach to presentation of data for improvement should be that of a dashboard, like in a cockpit where pilots check the instruments which give them clear signals or at least clues about what is going on, what will probably happen next and which decisions are required to achieve a safe flight.

Indicators are useful, though partial, measures of a segment of reality; their interpretation is greatly facilitated by graphical presentations. Prior to presentation, a simple and very effective technique to organize data and indicators is stratification, which separates data gathered from groups that are deemed different so that patterns can emerge instead of being buried in averages.

Common tools to present and then analyze indicators include:

- Histograms: the most frequently used graph for showing frequency distributions, i.e. how often each different value in a set of data occurs,
- Scatter diagram graphs plotting pairs of numerical data, one variable on each axis, to look for correlations,
- Box and whisker plot: a tool used to display multiple measures of variation, such as median and quartiles, on a single graph.

From a CQI perspective, where understanding of variation is a foundation of improvement, and beyond the traditional graphical presentations mentioned above, the most important graphs are control charts, which study how a process changes over time and space. Adding the time dimension to analysis, i.e. obtaining time series and not just single points in time, is invaluable to improvement efforts. Comparing current data to historical statistical limits leads to conclusions about whether the process variation is consistent, i.e. statistically in control, or is unpredictable, i.e. statistically out of control, affected by special causes of variation.

Reports on performance either with the aim to improve or to judge should avoid a league table approach where organizations are compared and supposedly ranked in order of achievement. Ranking charts or ladders show units or whole systems arranging them from the "top" to the "bottom" of performance. Such use of information, especially by actors not directly involved in a process, sets in motion emotional responses; delight of the few coming out at the top and indifference, disappointment or cynicism, even fierce opposition, by most. Ranking can, as a result, more easily cause manipulation of data collection, collation, manipulation, presentation and interpretation. Moreover, standings are habitually not based on statistical methods, which implies that many differences are not worth mentioning. Statistical Process Control (SPC) not only overcomes the scientific problem concerning chance and enhancing accuracy but also represents a constructive and useful approach both to systems improvement and judgment, skillfully surmounting the difficulties about ranking. Transcripts are for students judged by teachers not for peers trying to learn from their own and others' performance and to continuously improve services.

Control charts are therefore the main graph tool used to understand variability and interpret indicators when our aim is to improve systems and processes. There are several types of control charts, depending on the nature of the outcome in study. Main categories include: 1) Attribute control charts used for discrete data and 2) Variable control chart used for continue data. Regarding discrete data, NP and P chart are based on the binomial distribution, whereas C and U chart are found on the Poisson distribution. G and H chart are used to count the number of events among rarely-occurring errors, for example foreign object left in the abdomen. Furthermore, CUSUM (CUMulative SUM) chart is an efficient addition to the above tools and is widely used in healthcare settings to monitor outcomes in real time where services are delivered. Most of CUSUM charts used in the context of healthcare are Poisson-based CUSUM charts for count data. Another method of using risk-adjusted data to monitor the ongoing performance of a single unit is the VLAD (Variable Life Adjusted Display) chart. Finally, funnel plots are used as a graphical aid for institutional comparisons, where an estimate of underlying quantity is plotted against an interpretable measure of its precision. Funnel charts are used for the comparisons of mortality risk of patients admitted in different hospitals or followed by specific physicians.

A health information system supporting DS should shed light on each of its key components. However the project also highlighted that building and running a health information system is not enough to ensure a competent and productive utilization. Its potential can only be attained when information interpretation and use are performed from a perspective of services' improvement. In other words, not only a health information system should fit in an overall continuous quality improvement's strategy but also building a new information system for DS or strengthening an existing one should be based on the same principles. Therefore the project devised a coherent sets of principles and strategies around this idea.

Statement on the use of resources

WP8 Activities	Tasks description	Staff involved	Timing
Design of Guidelines for presentation, interpretation and use of DS indicators	Day Surgery as a system Continuous Quality Improvement for Day Surgery Day Surgery Information System as a tool for learning Statistical process control applied to Day Surgery indicators	CNAMTS Epidemiologist AGENAS Epidemiologist KCH Epidemiologist HAS Epidemiologist ARSS Statistician CNAMTS Statistician KCH Statistician CNAMTS Medical Doctor EUROPMED Medical Doctor AOP Medical Doctor CHP Medical Doctor KCH Medical Doctor HAS Medical Doctor CNAMTS Economist	*From June 2011 to March 2012*
Final report by March 2012		Scientific Committee Members	*March 2012*
		TOTAL	

Specific objectives of this WP

	Title
1	To develop guidelines for DS indicators' presentation, interpretation and use at national, regional and local level

List of deliverables linked to this work package

Deliverable	Title	Month of achievement
D9	Guidelines for presentation, interpretation and use of DS indicators	M32

Milestones reached by this WP

	Milestone title
1	Principles and techniques to be used in the statistical analysis, presentation, understanding and utilization of individual indicators at various level
2	Explication of methods useful for the transformation of the whole set of indicators into knowledge
3	Recommendations to enhance use of DS information at EU and MSs level
4	Development of Decision Making tools
5	Definition of DS standard Annual Country Report

Annexes

Annex WP8_I Deliverable:
D9 Guidelines for presentation, interpretation and use of DS indicators

Work package title:	**Policy Mainstreaming**
Work package Number:	**9**
Work package Leader:	**NIHDI**
Number of associated partners involved:	**10**
Number of person / days of this work package:	**228**
Total budget of this work package:	**91.994,31 €**
Starting date. Ending date:	**M28 – M36**

Work progress and achievements

A potentially important output produced by DSDP consisted of **Principles for a policy concerning a Day Surgery Information System.** The first part of the document stressed that organizations are systems, heavily influenced by connections among their parts, more than by the isolated performance of its elements, frequently lack system and statistical thinking, and suffer from pathologies, whose main symptoms are high variation and low reliability of processes. DS is also a system, whose aim is to deliver appropriate, accessible, effective, safe, equitable, and socially satisfactory surgical care without night stay to individuals and communities.

The document also highlighted the relevance of statistical thinking and continuous quality improvement to a sound design and a functional working of a health information system. A solid information system can only release its potential when it is implanted in a managerial culture deeply knowledgeable of system and statistical thinking and inspired by the wish to constantly improve responsiveness to users' needs and create a productive work environment about which providers feel proud. The prerequisites of a functional organization are aims, strategies and systems; these are the elements which can ensure organizational relevance and order and avoid waste or even failure and chaos. Aims define what an organization intends to achieve. Strategies outline how the aims will be accomplished, i.e. with what instruments. Strategies include structures such as policies, regulations, roles, boards, physical space, equipment, resources, and patterns, such as practices, behaviors, power relationships, decision making and learning styles and culture.

Systems are logically arranged sets of processes, i.e. sequences of activities which reliably lead to predefined results contributing to the overall aim. The main organizational systems include the production system, the human resources system, the financial resources system, and the information system. Organizational aims, strategies and systems must be purposefully designed, which means that they should be thoughtfully considered so as to achieve a coherence made of mutually reinforcing components.

Without clear and shared aims, an organization goes astray, individuals and units pursue whatever they find suitable, i.e. different tracks lacking a compass and possibly paralyzed by power struggles. If an organization's building blocks have conflicting aims, its overall performance will

suffer. To attain a smooth functioning, the first step is to find common goals to build on. Aims need not be identical for every organizational actor, but there must be some higher and shared goals and collaboration among players.

Without strategies every unit and individual tries its best to achieve the agreed goals. Partially articulated plans, unclear mandates, improvised protocols, and permanently conflicting relationships are signs of useless strategies. Without systems every sequence of steps is undependable and personnel is unable to consistently describe the processes. Low reliability implies that individuals and teams act on the basis of traditionalism, where the rationale behind the rules is simply "this is how we have always done things here". No standardization leads to defects, waste and confusion. Significant progress requires integrated changes in structures, patterns and systems.

The glue which keeps together aims, strategies and systems, allowing outstanding performance, is a credible leadership which fosters a culture turning around responsibility for constant improvement, cooperation among stakeholders and accountability for results. Without an alert, bold and fair leadership capable to steer the whole and manage its interdependencies, a system' performance becomes jammed, progressively drifting toward irrelevance and failure. Hence management must play a critical role in ensuring that

- organizational aims and strategies are clear, communicated, understood and accepted by all stakeholders,
- essential activities and tasks congruent with aims and strategies are broken down and assigned to units, teams and individuals and,
- the whole is brought back together through integration mechanisms, such as vision, leadership, systems, structures, practices, procedures, and culture.

In high-performing complex systems, leaders run professionals, units and whole organizations by example, keenly asking for inputs from frontline workers, and creating a culture in which continuous improvement becomes a widely accepted norm. Without a determined and knowledgeable leadership, human systems will not put into practice effective routines by themselves. If system members have divergent aims, someone must take responsibility for identifying common goals and build consensus around them. If organizational learning and improvement are deficient, someone must take charge of setting up the tools, creating the proper habit, and determining whether progress follows.

Like any other organization, healthcare requires aims, strategies and systems. The most important aim is to respond to the health needs, preferences and expectations of patients, their families and whole communities through the delivery of appropriate, effective, safe, efficient and fairly distributed and funded services. Health strategies define how the delivery of high quality, efficient and equitable services is attained through the deployment of a mix of human, financial and

technological resources. In healthcare, the main systems include the clinical decision making system, the delivery system, the human resources system, the technology and logistical system, and the information system. Key processes of the clinical decision making and the delivery systems include: guidelines, procedures, protocols and pathways, which govern flows of information, staff, supplies, patients, and can be captured on a flow diagram. Without a functional health information system, every policy maker, manager or professional can state whatever is convenient, perhaps indulging in empty self celebrations and pretending there is accountability.

Within healthcare, excellent performance requires a culture which turns around passion for the medical profession, compassion for the individuals who ask for our help, responsibility for constant improvement, cooperation to reach a common aim among clinicians and managers and accountability for resources' use as well as for processes and outcomes. Yet again, healthcare organizations need a skilled and courageous leadership capable to show the way by example. Since in health systems, physicians make many of the vital decisions, their leadership is an indispensable component of a health care system.

Organizations with ambiguous aims, dull strategies, weak systems and destructive cultures are sick; similarly to patients whose prognosis becomes clear only after a diagnosis is made, organizations' troubles should be detected and treated. Signs of problematic performance in healthcare organizations are high variation of clinical processes, more specifically underuse of effective care, like in patients with high blood pressure left untreated; overuse of supply-sensitive care, like use of traditional surgery when DS is appropriate or surgical procedures in patients with back-pain, and misuse, i.e. failures to execute procedures properly. The latter problem, when measured over time, is defined as low reliability of clinical processes. Important root causes of these drawbacks are both conceptual, i.e. lack of system and statistical thinking, and strategic, i.e. lack of methods of quality measurement and improvement.

A far-reaching transformation, such as DS, requires a radical change of structures, processes, and patterns away from traditional surgical services. Structures include policies, regulations, roles for organizations, boards, teams and individuals, physical space, and equipment, and patterns consist of practices, behaviors, power relationships, learning and decision making styles. Systems and processes are sequences of activities which reliably lead to predefined results contributing to the overall aim. A key concept is integration of purposefully designed structures, processes, and patterns, in order to achieve an overall coherence made of mutually reinforcing components. A common fault when promoting a strategic change is a piecemeal approach, which consider structural, process and pattern changes disjointedly. For example, process changes imply structural supports and both require congruent patterns of behavior, practices and organizational values.

An information system, and its policy, are crucial structures, a key element in the whole set necessary to ensure that DS design, implementation and continuous improvement is successful. Therefore DS functioning depends, among other factors, on the availability of reliable and valid

data and their transformation into knowledge. Tim Ferris, co-chair of US based National Quality Forum's Consensus Standards Approval Committee, asserted that "Measures are the only way we can really know if care is safe, efficient, effective, and patient-centered. Performance measures also help us improve faster. We can make corrections earlier in providing care." Accordingly measures maintain everyone's focus on what matters most to patients. The aim of an information system is not only to learn how an organization is performing, but, above all, to set a foundation for a better performance. Just observing is not enough; splitting the responsibility for analysis from the authority to act is an example of bad management.
Without measures it is impossible to build a picture beyond intuition. Heuristics, i.e. intuition based on experience, is critical in guiding our understanding of reality, but quantitative analysis sharpens our insights reducing the risk of biased interpretations. Health services performance is too important to be left to intuition alone. Understanding of surgical services' and DS' delivery performance by different organizational actors, i.e. policy-makers, managers and providers, aided by quantitative analysis represents a precondition of design, management and improvement. The alternative to analysis based also on quantitative and qualitative knowledge is to decide on the basis of impressions and hunches, or worse to decide on the basis of politicking, i.e. exchanging favors for personal and group gains.

A health information system is an essential source of quantitative analysis. Information systems are composed of data, indicators, information, presentation and interpretation with the aim to support decision-making. Data are basic elements which cannot be interpreted without being transformed and applied to a specific context. Vast quantities of data are relatively easy to access; however, rather than simply using the currently available data and letting those shape the questions which can be asked, it is important first to set priorities identifying the most important healthcare objectives and strategies and then find answers to the two following vital questions: who needs the information and for what purpose ?

Information is data processed and analyzed in a formal and intelligent way. An indicator is a type of information, i.e. a measurement tool that is used as a guide to monitor and evaluate one dimension of healthcare, for example quality, safety or efficiency. A measure should be accurate, i.e. able to reflect what purports to measure and capture its key dimensions; reliable, i.e. objective not subject to dispute; comprehensible, i.e. easily communicated by analysts and understood by users; reasonably cheap; and timely, i.e. not too remote form when events have happened.

Each indicator should be linked not only to a healthcare element but also to a standard so that it will be easy to determine whether an organization's performance is satisfactory; still organizations successful in achieving established standards should continuously search for improvement opportunities. Besides standards are an impediment to great performance when are based on ordinary accomplishments, such as a system's average. Therefore standards should be based on benchmarks, i.e. real superior performance, which contributes to creating a positive tension between current reality and possible results. The emphasis of improvement efforts should be on processes, not outcomes, because reliable processes are linked to results by science.

Indicators also allow comparisons to be made between healthcare facilities across local, regional and national boundaries when they meet the essential statistical tests of validity and reliability. Indicators are neutral, their sole purpose being to provide information. Indicators must be able to measure what they are intended to, i.e. be valid. Indicators should also provide the same answer if measured by different people in similar circumstances, i.e. be reliable.

Furthermore, they should be capable to measure change, i.e. have enough sensitivity, and should reflect changes only in the situation under analysis. Validity and reliability of data can sometimes be demolished by manipulation; where this happens the managerial and professional performance is so impaired that attempts at improvement only represent the facade of a propaganda operation. In reality, even valid and reliable indicators sensitive to change are indirect and partial measures of a single aspect of a complex situation continuously evolving. For that reason a more detailed data collection and analysis by the team of users is essential to determine what the indicator means.

A proficient use of a IS is a complex task, very far-off from a banal reading of tables confirming what we already pretend to know. Information must be transformed into knowledge and sense-making; this means being able to see and interpret reality coherently. Still, recognizing that some aspect of performance is below acceptable levels is different from being proficient in understanding the reasons behind the problems and designing appropriate responses. Furthermore, knowledge is not decision-making; in order to formulate and act upon a congruent set of decisions, authority, responsibility and accountability must be assigned to capable, willing and motivated individuals placed in coordinated, aligned and collaborating units in a organizational context guided by clear goals and strategies.
IS purposes, primary and secondary users, sources and quality of information, and availability of expertise to support data collection, analysis and interpretation differ very much across MSs. Consequently there is no single magic formula for developing a DS IS. DSDP puts forward a set of principles for IS development and recommendations to implement it, however national and local peculiarities, both opportunities and obstacles, must be taken into thorough account and substantial and intelligent adjustments are necessary.

Central aspects of a DS IS policy include:

- **IS goals,**
- **Sources of data,**
- **Dimensions of performance,**
- **Secondary users,**
- **Promotion of measures' use.**

DSDP approached such topics as follows.

IS Goals

The starting point for designing and improving a health care information system should focus on the decisions the system will support and the ways the system's results will be used. In general, a health information system should serve multiple purposes, i.e. to design a healthcare system, support its implementation, and improve and account for its performance, i.e. quality, efficiency and equity. More precisely, national and regional institutions should explicitly choose among the following goals of a DS information system:

- Authorization, accreditation and certification,
- Evaluation of performance,
- Quality improvement,
- Accountability and
- Research.

Achievement of basic standards through authorization, accreditation and certification is an important goal, but it is not enough to guarantee successful efforts to quality improvement. Therefore, beyond accreditation, it is crucial to adopt methods that support a learning environment promoting accumulation of pertinent knowledge and skills with the aim to improve performance. Such approaches are at the heart of CQI efforts.

The primary aim of management and its tools, including the health information system, is improvement, and, once achieved, its institutionalization, i.e. ensuring improved systems and processes are statistically stable. These steps correspond to what Juran called breakthroughs and preservation of stable processes. Another valuable goal of an IS is evaluation, i.e. the systematic assessment of a system performance, in order to establish the degree of accomplishment of its aims and decide useful adjustments, wider transformation or even its termination. Too often health managers tend to emphasize cost more heavily than quality. Without the latter type of information, managers ignore the reason of being of healthcare and therefore elude one of their core responsibilities.

Other important aims of health information systems are research and accountability. Yet a combination of measurement for accountability or research with measurement for improvement can sometimes be counterproductive and such valuable purposes interfere with one another. Measurement for research is typically too slow, too expensive and too elaborate to be useful for improving healthcare processes.

Knowledge of performance is critical for accountability and transparency toward patients and their families, the whole society, its representatives, i.e. politicians, and also the managers and the professionals. In fact, accountability and consumer involvement are major drivers of change.

Without valid and understandable information, accountability becomes at best impossible, at worst an exercise in manipulation of reality. The measures selected for accountability are generally measures that matter to external parties, in particular outcome data such as risk of death and also use of resources, such as costs of care. Since outcome data are difficult to measure, also because some of them deal with rare events, proxy measures such as returns to operating room within 24 hours and hospital re-admission or surrogate measures such as patient satisfaction with the service or treatment, are often used. Data for accountability do not usually provide information about how the outcomes were achieved or how processes might be changed to improve them. Accountability measurements are usually presented in evaluation reports and distributed to a wide audience, because they are meant to be accessible and non-confidential and be used for judgment, not for improvement.

Further goals of health information systems include:

- Ensuring patients are better informed so that they can choose providers on the basis of performance,
- defining payment arrangements and establish incentives promoting care's improvements e.g. pay for performance (P4P), pay for reporting (P4R), and performance-based contracting,
- helping clinicians to make diagnostic and treatment decisions, i.e. ensuring the most appropriate sequence of tasks, promptly adapting the clinical path to unexpected departures from clinical progress, e.g. a complication or an adverse event, following-up patients, but also avoiding waste from repeated exams or duplication of drugs. A functional information system is required not only for performance measurement, but also to support the modern practice of medicine. Several recent efforts to measure performance have recognized its feasibility and contribution to the modernization of clinical practice.

<u>Sources of data</u>

Main sources of data about DS performance include:

- Administrative,
- Enrollment,
- Medical records,
- Surveys,
- Audits,
- PDSA cycles.

Most organizations employ several sources of information for multiple purposes. Given their easy access and prompt availability in electronic format, administrative data are the most frequently used data source to build measures, followed by patient surveys, and medical records. Many computerized systems are intended to serve administrative objectives and, as a consequence, some performance measurements based on those are approximate. Healthcare delivery rely mostly on paper medical records and the only means to collect process data is by a burdensome

and expensive manual review of medical records. However data on care processes are extremely valuable because they represent one of the main precondition of improvement. Surveys allow us to investigate important topics through the inquiry of a representative sample, drawing inferences on the whole population of interest with a known degree of uncertainty. Audits and PDSA cycles are sources of information rather limited in scope compared to other categories, but represent in depth inquiries and indispensable prerequisites of improvement efforts.

Secondary end users need to understand which questions can be answered by each data source, its limitations and how new information and merging of multiple sources can facilitate decision making. Integration of information should occur at two levels, i.e. combination of different sources of information, e.g. ad hoc surveys and administrative data; and integration of diverse elements of performance in an overall framework capable to clarify the relationships among them.

A critical concern in planning, building, and maintaining an information system is whether the information it contains is accurate enough to be used in a decision making process. Another critical characteristic of a routine information system is timeliness. In many occasions it is unable to provide the right data fast enough, i.e. producing information for decision makers in real time, within the time frame required by the decision making process. What is needed is a prompt, even if temporary, data collection able to provide answers to important and urgent questions. Managers responsible for planning health care information systems should define timeliness standards with which data are made available to different users. Standards should be reviewed and possibly revised over time on the basis of their adequacy and the evolving needs of the system's users. The following table shows key data quality features for each source of data, i.e. completeness, correctness, timeliness, complexity and cost.

Source / Feature	Completeness	Correctness	Timeliness	Complexity	Cost
Administrative	+	+	+	-	-
Enrollment	++	++	+	-	-
Medical records	+++	++	+++	--	---
Survey	++	++	++	---	---
Audit	+	+++	+	--	--
PDSA	+++	+++	+++	--	--

Predictably, there are trade-offs among attributes. At one extreme, analysis of administrative and enrollment data is relatively simple, quick and inexpensive, but presents limits of completeness, correctness and timeliness. At the other extreme, survey data tend to have satisfactory completeness, correctness and timeliness, but are difficult to design and carry out and expensive. Data collection from clinical records has compelling advantages in terms of completeness, and timeliness, but it is slow and expensive. Survey data collection and analysis has clear-cut pluses in terms of completeness, correctness and timeliness, but it is rather slow and expensive and requires expertise not easily found among clinicians nor managers. PDSA combines advantages in

terms of high completeness, correctness and timeliness with relatively limited cost and technical complexity once the nuts and bolts of this approach are learned.

The available sources of healthcare data are usually too incomplete and/or of insufficient quality to meet diverse information needs. A familiar limitation of data is a lack of distinctive identifiers for patients and facilities, rendering it impossible to track the course of patients' care over time and to compare patients and providers across systems. Another shortcoming of data originate from variation in the quality of the same type of data over time and space, limiting the capacity to draw reliable inferences.

Dimensions of performance

System thinking suggests that DS should be analyzed through an approach distinguishing between customers, inputs, processes, outputs and the relationship between inputs and outputs. Customers are both DS beneficiaries, i.e. patients whose needs are identified and alleviated, and professionals and operators whose knowledge, skills, motivation and coordination ensure that appropriate, quality and safe services are delivered. Inputs refer to the resources necessary to deliver the services, e.g. staff, Euros, consumables, infrastructures, technologies and policies. Processes are means which transform inputs into outputs, which satisfy users' needs and demands. Outputs are products or services and represent the end result of processes. Finally it is important to clarify the average cost of inputs as a whole and per procedure, and the relationship between outputs and inputs, i.e. productivity and efficiency.
Further, being DS a surgical service, it is important to gain insight on aspects peculiar to healthcare, specifically access, safety and outcomes. Access concerns the availability of DS units in a specific geographical area and population; more significantly, access involves the waiting time between a diagnosis and the relevant procedure. Safety involves the delivery of services without preventable adverse events, i.e. a key element of healthcare since the assertion "first, do no harm" of the Hippocratic oath. Outcomes have to do with the degree of improvement or, on the opposite, deterioration of patients' health status as a consequence of encounters with healthcare.

Such frame guided DSDP approach to the selection of sets of essential and ideal DS indicators. DSDP also built a consensus process around sets of indicators, by means of a Delphi study, engaging a group of policy makers, managers and clinicians; nevertheless it did not involve patients and their families. Having a single core measurement set for a MS is the only way to identify regional differences, set national benchmarks, compare local health authorities, and public and private hospitals. For comparison purposes, each health organization should report a single essential indicators set. This would also considerably diminish the burden on health organizations and the confusion among policy-makers, managers, clinicians, and citizens.

A health information system supporting DS should elucidate each of these components. In general, current assessment and improvement efforts put greater accent on the broad spectrum

of health services and continuity of care. Ideally, a DS information system should also devise measures able to capture performance of GPs and home nurses, coordination of care, longitudinal change in outcomes, and costs of episode-of-care.

The most important measures for DS improvement goals are, first of all, process, and, secondly, outcome indicators. Health outcomes measures suffer from several drawbacks: probability factor, rarity, delay, weak control, confounding and comprehensibility. All these features together represent an important limit of these measures, which primary and secondary end users should be aware of. The probability factor means that most health outcomes are (sometimes highly) probabilistic. Good outcomes can happen when delivered services were inappropriate or of low quality. The opposite can also occur, i.e. bad outcomes can come about when every appropriate process was conscientiously and skillfully carried out in the right sequence for the right patient at the right time. The rarity factor points at the fact that some events, like death, are rare for most conditions and procedures. Still more so in a service such as DS which selects patients on the basis of good general health status and relatively simple procedures. The most relevant implications of the probability and the rarity factors is that these measures require large number of observations.

A third limitation of outcome indicators is that the time elapsing between procedures and result can hide their relationship. A fourth weak point is uncertain control over outcomes, i.e. how far results are attributable to health services opposed to other factors. Another shortcoming of outcome measures are confounding factors which have to be adjusted by way of multivariate models. A final weakness is that outcome indicators, such as a risk adjusted mortality ratio, are not easily understood by professionals and even less so by lay people; this obviously represents an obstacle towards the acceptance of measures.

If the health outcomes for a disease are infrequent, delayed, weakly controllable, and/or heavily confounded, corresponding indicators will produce inaccurate results, which, in the context of clinical and managerial decisions and patients' choices, are not just an academic puzzle, but a distorted representation of reality. This either sends secondary end users off track or make them conclude that the best alternative is to ignore irrelevant and doubtful information. Overstated reliance on statistical adjustments may produce measures that are misleading also for patients and their families who need to make routine choices about facilities and physicians.

Given that outcome indicators present several weak spots and improvements essentially derive from sound changes to processes, the proper approach is to use more process measures. Evidence based processes tend to tell the truth in a more straightforward way compared to outcome indicators: we either cleaned our hands before touching a patient or not and there is no confounding which blur my degree of compliance or that of my colleagues. Most processes are common, their effects close to their delivery and controllable, and rarely confounded by other factors. An example is the administration of an antibiotic one hour before surgical incision. The percentage of surgical patients receiving such prophylactic drug in time and the percentage of the same group of patients who discontinued the antibiotic within 24 hours after completion of the

surgical procedure are easily comprehensible by all stakeholders and, more importantly, can in a straightforward way, indicate who needs to do what. This is so for all other evidence based processes.

In order to shed light on the above stated dimensions, IS designers should select a set of essential indicators. Thus a principle informing information systems is parsimony, i.e. collection of a limited group of highly valuable indicators. The heavy responsibility of proof should be on measurers proposing new indicators to conduct a formal assessment and document that the measure they want to add is evidence based, and cost-effective. Indicators should be selected on the basis of the following prioritization criteria:

- importance of conditions or procedures (e.g. prevalence/incidence of conditions, frequency of hospital admissions),
- importance of adverse events associated with conditions or procedures (e.g. severity, disability, reduced productivity, direct costs),
- scientifically acceptable measure properties, i.e. when computed produce reliable and valid results,
- usable, i.e. comprehensible and relevant to anticipated secondary end users,
- feasible to collect with data retrievable within reasonable burden,
- assumed variability of processes, outcomes and risk of adverse events,
- potential improvement of quality and safety of care.

The weight assigned to a measure should signal the degree of importance of a related condition or procedure. Consistently, administrators should ensure their commitment to the improvement of data collection, collation, manipulation, analysis, interpretation and use. If the assessment of a certain dimension of performance is crucial, it follows that appropriate conditions must be produced so that measures are credible and consistent.

An information system should also avoid too many measurers, where health organizations are overwhelmed by multiple requests made by different and inadequately coordinated institutions. Sometimes measures for accreditation purposes contain slight differences in definitions, time periods, or sampling methods, to measures requested for accountability reasons. Such situation imposes a heavy, useless and frustrating burden on health organizations, jeopardizing the credibility of requesting institutions and damaging the collaboration between them.

The following table shows which sources of data help exploring which dimensions of performance. For example, administrative data allow us to examine features of resources, outputs and access, whereas medical records provide insights on quality and safety.

Dimension Source	Resour	Output/ Access	Quality (processes/ outcomes)	Safety (failures)	Satisfact/ Respons	Cost/ Efficiency
Administrative	**Y**	**Y**				**Y**
Enrollment		**Y**				**Y**
Medical records			**Y**	**Y**		
Survey	**Y**	**Y**	**Y**	**Y**	**Y**	
Audit	**Y**		**Y**	**Y**		**Y**
PDSA		**Y**	**Y**	**Y**	**Y**	**Y**

Secondary users

The primary end user is any organization that is directly engaged in assembling healthcare performance measures and make them available to secondary end users with the anticipation that these organizations and individuals, provided with the responsibility and authority to manage organizations and systems at various level, act consequently. The primary end users play one or more of the following roles:

- gathering data;
- using data to construct measures;
- computing performance scores of providers.

Secondary end users will use the performance measures to guide strategic and operational decisions and also to answer research questions. They include clinicians, DS unit managers, DS Regional/National managers, policy-makers, citizens and researchers.
Secondary end users also comprise purchasers of health plans, e.g. insurance companies, and international actors such as the European Commission and the OECD. The latter ones only need a few comparable measures.

Each actor has different perspectives and need information for different reasons. Distinct users may have a common interest in a general issue but intend to ask very diverse questions about it; the ways in which those questions differ will have important implications for the data required. Clinicians need to monitor their team and organizational performance, constantly improve quality, safety and patients' satisfaction and be accountable to their managers and colleagues. In addition to similar uses employed by clinicians, DS unit managers should also ensure the conditions which make authorization/accreditation/certification possible, improve flow of patients, information, supplies and clinical decisions, as well as enhance efficiency and responsiveness and be

accountable to their supervisors at local and Regional level. Regional and National DS managers have also to design and manage the authorization/accreditation/certification system, evaluate the system of DS services delivery ensuring its appropriate use, easy access and high coverage and propose significant and articulated changes in policies, strategies and systems. Policy-makers must identify the values, aims and principles of the authorization/accreditation/certification and evaluation systems, revise them so that their relevance in a constantly evolving context is maintained, make allocation decisions, and be accountable to citizens and their representatives by means of appropriate channels. Citizens need to choose facilities, units and health professionals able to meet their health needs and to respond to their expectations. Finally, researchers should contribute to the evaluation of DS systems by more sophisticated analysis, as well as conceive and carry out both original investigations on several aspects of DS performance and improvement effort. These perspectives are substantially different spanning from an insider looking at detailed steps behind achievements and failures, to an outsider looking at the overall performance of a subsystem like DS.

The use of different types of measures depends by the end user, the setting of care, the mandate, and the legislative and cultural context in which measures are being applied. The following table summarizes health information systems' main goals and most important secondary end users, identifying on which goals each one tends to focus its attention. For example, clinicians are mostly interested in quality improvement and research. They are also very receptive to accountability data when published. Policy makers, being rather distant from care delivery and having responsibility for the overall performance of healthcare systems, pay special attention to authorization/accreditation/certification, evaluation and accountability goals

Goals	Accred/ Certif	Eval	Improvem	Accountab	Research
Users					
Clinicians			**Y**	**Y**	**Y**
DS Units managers	**Y**		**Y**	**Y**	
Reg/Nat managers	**Y**	**Y**	**Y**	**Y**	
Policy-makers	**Y**	**Y**		**Y**	
Citizens		**Y**		**Y**	
Researchers		**Y**			**Y**

The next matrix intersects IS goals with dimensions of performance. At one extreme, accreditation and certification goal essentially looks at structures, whereas accountability deals with every component. DS quality improvement should mainly emphasize process indicators, also because deaths are extremely rare. This fortunate fact is, from a statistical viewpoint, an example of the tyranny of small numbers. When appropriate, measures should explicitly link processes using the "all or none" rule. This means that when bundles of care are tied by very strong evidence and by time and space, measurements should be of the kind "all or nothing". For

example, if one activity is not carried out of five composing a bundle of care, the corresponding measure will be as if no task has been completed.

Dimension Goals	Struct	Output/ Access	Quality (processes/ outcomes)	Safety (failures)	Satisfact/ Respons	Cost/ Efficiency
Accredit/Certific	**Y**					
Evaluation	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
Quality improvem			**Y**	**Y**	**Y**	**Y**
Accountability	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
Research	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**

Dennis O'Leary, former president of the Joint Commission on Accreditation of Healthcare Organizations, was well aware of the dilemma arising from the essential role that quantitative analysis plays in healthcare improvement and the perils deriving from a superficial approach, when he stated that "the problem with measurement is that it can be a loaded gun, dangerous if misused and at least threatening if pointed in the wrong direction." By training, physicians are quite familiar with information resulting from biomedical and clinical research; conversely they are less accustomed to data for improvement and even less so to statistics for accountability. If purposes of information are confused or mixed up, results can be detrimental. Different purposes and recipients of communication require distinct data, analytical methods, graphical presentations and channels. In other words there must be clarity not only about aims and audiences, but also coherence with analytical and communication tools. Confusion about such issue can cause counterproductive effects such as resentment, resistance and strained collaboration, for example between secondary end users and providers.

When the aim is accreditation or certification, structural measures are the most frequently used. As we already emphasized, processes are the main focus of every improvement effort. Only better systems and processes can deliver better results. Coherently, today process measures are the most frequently used by modern health systems. When the goal is improvement, information is assembled with the intent to better comprehend the extent and nature of the problematic process from the viewpoints of patients and providers, identifying current roles, tasks, sources of variation, waste and frustration. Information is also put together in order to motivate change by showing the scope of the challenge and to allow comparisons with measurements repeated after changes are introduced and institutionalized. Data must be kept confidential. Public access is not only a waste of time, but a bad mistake because it probably creates distress from reciprocal accusations in search of somebody to blame, diverting attention and energy away from the real objective, i.e. a structured process improvement, such as PDSA cycles. Measures are limited in number, mostly process indicators, simple to collect through repeated small samples, not highly

reliable, with no risk adjustment, and specific to a unit or a team. Improvement initiatives are completed within short periods of time by heavily involved owners of the process.

When the goal is accountability, data are presented with the intention to transparently compare performance of different hospitals, units and providers, reassure primarily the public and policy makers, and next managers and clinicians, prompt necessary change and substantiate decisions concerning the organization of health services. In this case, public disclosure is essential, samples are wide and might even involve whole populations, data are collected retrospectively and their elaboration requires external expertise; involvement of providers is limited or absent. Accountability measures are few, both process and outcome indicators characterized by high validity and reliability, together with patient-satisfaction and cost. Contrary to improvement efforts where reliability is not so important, this dimension, alongside validity, become essential for accountability. In a recent article in the NEJM, Chassin et al. have identified the following strict four criteria for accountability measures that address processes of care:

1. A strong evidence base showing that the care process leads to improved outcomes,
2. The measure accurately captures whether the evidence-based care process has been provided complying with definite standards,
3. The measure addresses a process that has few intervening care processes that must occur before the improved outcome is realized,
4. Implementing the measure has little or no chance of inducing unintended adverse consequences.

The authors propose that only measures meeting all four criteria be used for purposes of accountability, whereas other indicators meeting less strict criteria should be used for quality improvement initiatives. Outcome measures for accountability purposes necessarily are risk adjusted in order to control for confounders due to case-mix.

In general the evidence shows that public reporting of performance measures have minor effects on consumer choices, and a much stronger influence on providers behavior. Hence although the intention and the rhetoric underline the importance of free and therefore informed choice by consumers of healthcare, coherently with democratic values, in reality citizens select hospitals and providers on the basis of other criteria, such as easy access, previous experience and words of mouth. Nevertheless given that clinicians pay serious attention to public reporting and presumably take initiatives to improve their performance, the end result is, by and large, positive.

When the goal is research, the meaning of gathering information is to predict and explain cause-effect relationships and inform the scientific community and hopefully policy makers, managers and providers about the new findings and their implications for planning and practice. Circulation of information usually remains within the boundaries of limited groups and the language is for professionals and experts. Confidentiality about subjects is strict. Data collection is very complex,

lengthy and involves numerous measures, frequently repeated, and samples are large in order to reduce uncertainty.

Promotion of measures' use

HIS usefulness derives from the capability of primary and secondary users to fully use its potential which also means understanding its limitations and using deeper analysis when appropriate. Current utilization of performance measure by secondary end users vary widely. The design and implementation of a health information system should also carefully consider how to promote its effective use. Without this step, a compelling effort by designers and primary end users can produce no effect. A first point to bear in mind is that most primary and secondary end users are very busy in other important tasks and can dedicate little time and attention to measurement; therefore those who design a IS should clearly focus on high reliability measures whose potential for important improvements of care is firmly established.

Without strategies bolstering IS utilization and supported by a constructive culture, a IS turns into a bureaucratic tool, only apparently a prerequisite of improvement and an instrument of accountability, in fact hiding, by design and/or by data manipulation, key facts about performance. The former Soviet Union is a perfect example of a manipulative use of information systems fabricated to celebrate many false achievements of an extremely rigid political system. A well designed HIS, capable to provide valid, reliable, relevant and timely information and supported by the most modern information technology, becomes a useless instrument in the hands of policy makers, managers and professionals moved more by a desire to please someone in power or sing their own praises, than by the aspiration to provide the best care to those who need it.

Beyond inherent technical difficulties, the resistance to build an IS capable to measure quality of care derive from the assumption that quality is, by and large, good, and the implied disrespect of medical professionals and distress to the public. As Keynes lucidly affirmed some policy makers prefer not to know; behind a fog of uncertainty and ambiguity any decision can be morally, technically, economically and politically justified, and the room for maneuvering becomes almost limitless. Politics as corridors' management is an important barrier to a streamlined HIS as well as a lucid formulation of DS policies. Policy makers should be aware of the importance of measurement and allocate sufficient resources to this component. In a context of limited economic growth, broader needs, demand for accountability and higher expectations concerning services' responsiveness and participation to decisions about one's own health implies accurate and reliable information on performance geared to better quality and better efficiency.

Stakeholders who might benefit from the analysis and tools produced by DSDP include international institutions, such as the EU Commission, OECD and WHO, together with Ministries of Health and local organizations, for instance regional and local health authorities, hospitals and Day Surgery units.

Statement on the use of resources

WP9 Activities	Tasks description	Staff involved	Timing
DS Information System Policy	Background of a policy concerning a Day Surgery information system Policy concerning a Day Surgery information system	CNAMTS Epidemiologist KCH Epidemiologist ARSS Statistician CNAMTS Statistician NIHDI Statistician	*From December 2011 to August 2012*
Final report by March 2012		Scientific Committee Members	*August 2012*

Specific objectives of this WP

	Title
1	To promote use of information and knowledge on DS services

List of deliverables linked to this work package

Deliverable	Title	Month of achievement
D10	Recommendations for implementation in ECHI indicators	M36

Milestones reached by this WP

	Milestone title
1	DS information system policy

Annexes

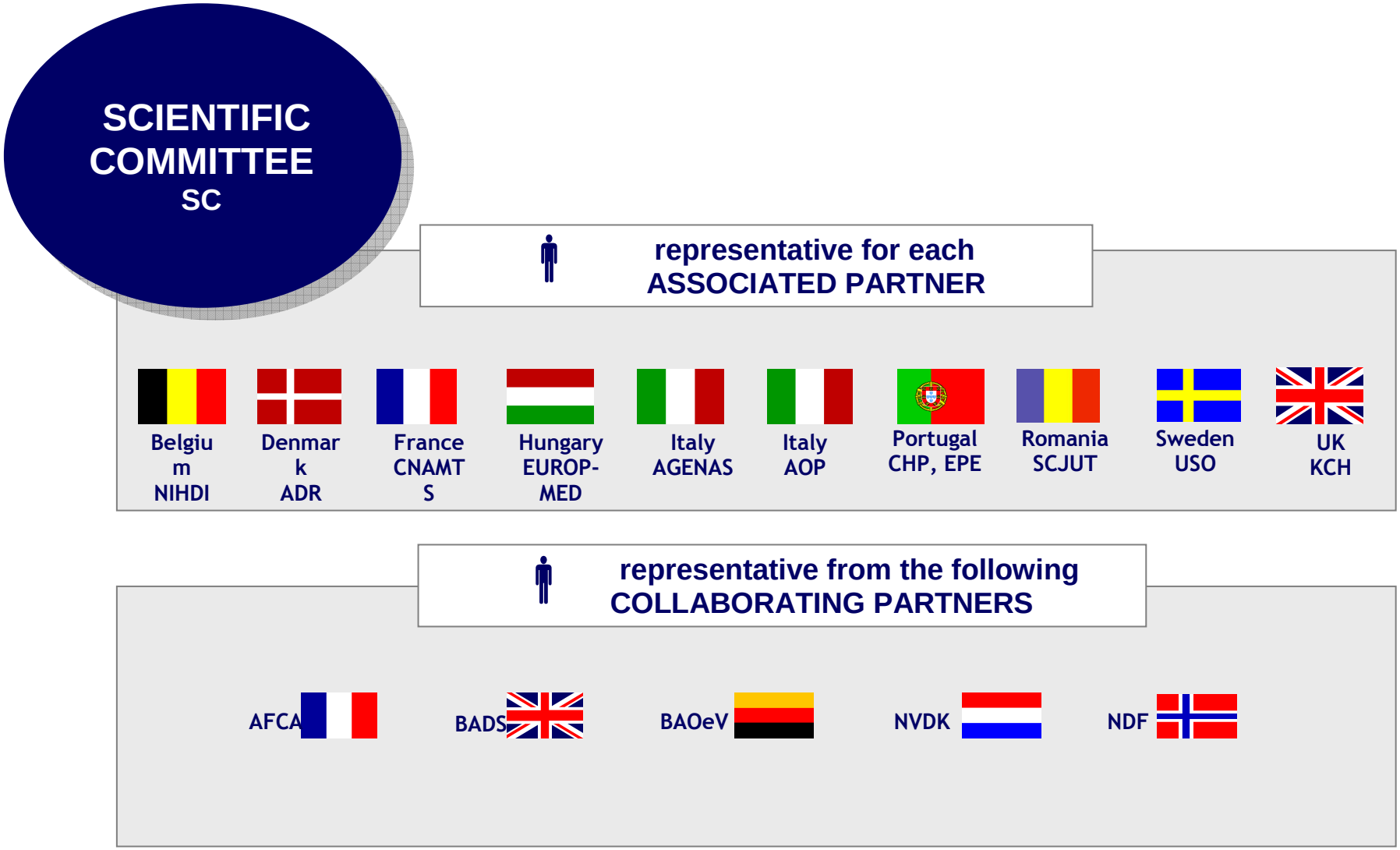
Annex WP9_I Deliverable:
D10 Recommendations for implementation in ECHI indicators

ANNEXES

ANNEX WP1_I

MANAGEMENT PLAN

DSDP MANAGEMENT PLAN


SCIENTIFIC COMMITTEE
SC
representative for each ASSOCIATED PARTNER
Belgium NIHDI
Denmark ADR
France CNAMTS
Hungary EUROP-MED
Italy AGENAS
Italy AOP
Portugal CHP, EPE
Romania SCJUT
Sweden USO
UK KCH
representative from the following COLLABORATING PARTNERS
AFCA
BADS
BAOeV
NVDK
NDF

PROJECT MANAGEMENT TEAM P.M.T.

FOR THE GENERAL COORDINATION, FINANCIAL ADMINISTRATION AND DISSEMINATION OF ACTIVITIES

Project Manager:	*C. Gallo*
Project Leader:	*U. Baccaglini*
Project Administrator:	*E. Perri*
Project Coordinator:	*P. Camporese*

WORK PACKAGE LEADERS

1 PROJECT MANAGER IN EACH PARTICIPATING COUNTRY WILL COORDINATE THE PROJECT AT LOCAL LEVEL

EXPERT TEAM E.T.

Public Health:
Roberto Gnesotto **MD, MPH (LSHTM), MSc (Harvard Univ. School of Public Health)**
Claudio Beltramello **MD, Specialized in Public Health - (WHO Geneva)**

Epidemiology:
Marcello Vettorazzi **MD, MSc (LSHTM)**

Biostatistics:
Rino Bellocco **BS, PHD (Harvard Univ. School of Public Health)-Karolinska Inst.,Stockholm**

ASSESSMENT GROUP A.G.

FOR THE PROJECT EVALUATION:
SCIENTIFIC VALUE OF THE OUTPUTS AND
THE PROJECT'S MANAGEMENT

EXPERTS IN DAY SURGERY
C. Castoro – P. Jarett – G. Parmentier

ANNEX WP1_II

KICK-OFF MEETING IN LUXEMBOURG

Executive Agency for Health and Consumers

Kick-off Meeting

Day Surgery Data Project – DSDP

Luxembourg, 7 October 2009

Venue: European Commission Drosbach building - 12, rue Guillaume Kroll – L 1882 Luxembourg

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Main Partner:

Agenzia Regionale Socio-Sanitaria del Veneto
Venezia, Italia

Associated Partners:

NIHDI
National Institute for Health and Disability Insurance
Belgium

CNAMTS
Caisse Nationale d'Assurance Maladie Travailleurs Salariés
France

KCH
King's College Hospital, London
United Kingdom

AGE.NA.S
Agenzia Nazionale per i Servizi Sanitari Regionali, Roma
Italy

AOP
Azienda Ospedaliera di Padova
Italy

ADR
Association of Danish Regions
Denmark

CHP-EPE
Centro Hospitalar do Porto
Portugal

USO
Orebro University Hospital
Sweden

EUROP-MED
Budaors Medical Centre
Hungary

SCJUT
Emergency County Hospital
Romania

Agenda

Time	Topics	
08:30-09:00	Welcome – Hand-out of material	
09:00-09:30	Key Staff of DSDP project: competence and experience in the project area (All the Partners involved)	
09:30-10:00	Presentations by EAHC: Interim and final reports Financial issues	 Guy Dargent, Scientific Project Officer European Commission Jean-Jacques Amity, Financial Officer European Commission
10:00-10:30	Question time	
10:30-10:45	Coffee-break	
10:45-11:15	General overview & Project Management	Ugo Baccaglini, Project Leader
	Technical Activities	
11:15-12:00	WP4 · General overview · Scientific issues · Staff involved	 Pascale Camporese, Project Coordinator Paulo Lemos, Lead Partner Pascale Camporese, Project Coordinator
12:00-12:30	Question time	
12:30-14:00	Lunch	
14:00-14:30	WP5 · General overview · Scientific issues · Staff involved	 Pascale Camporese, Project Coordinator Roberto Gnesotto, Public Health expert Pascale Camporese, Project Coordinator
14:30-15:00	Question time	
15:00-15:30	WP6	
	· General overview	Pascale Camporese, Project Coordinator
	· Scientific issues	Paul Baskerville, Lead Partner
	· Staff involved	Pascale Camporese, Project Coordinator
15:30-16:00	Question time	
16:00-17:00	WP7 – WP8 – WP9	
	· General overview	Pascale Camporese, Project Coordinator
	· Scientific issues	Roberto Gnesotto, Public Health expert
	· Staff involved	Pascale Camporese, Project Coordinator
17:00-18:00	Question time	

Executive Agency for Health and Consumers

Kick-off Meeting

Day Surgery Data Project – DSDP

MEETING MINUTES

Date: **October 7, 2009**
Location: **European Commission Drosbach building - 12, rue Guillaume Kroll – L 1882 Luxembourg**

Participants:

Eu Commission:

Mr. Guy Dargent	Scientific Project Officer, EAHC, Luxembourg
Mr Jean–Jacques Amity	Financial Officer, EAHC, Luxembourg

DSDP Representatives

ARSS del Veneto, Italy
Costantino Gallo (Project Manager), Evelino Perri (Project Administrator)

NIHDI, Belgium
Mickael Daubie, Luc Vanoutryve

CNAMTS, France
Michel Marty

KCH, UK
Paul Baskerville

AGE.NA.S, Italy
Barbara Labella, Modesta Visca

AOP, Italy
Ugo Baccaglini (Project Leader), Pascale Camporese (Project Coordinator)

CHP-EPE, Portugal
Paolo Lemos¸ Filinto Barros

EUROP-MED, Hungary
Gamal Eldin Mohamed

SCJUT, Romania
Florentina Cadariu, Simona Manciu

Assessment Group
Carlo Castoro, Italy – Paul Jarrett, UK – Gérard Parmentier, France

Expert in Public Health
Roberto Gnesotto, Italy

Apologies:

USO, Sweden
Anil Gupta

ADR, Denmark
Claus Toftgaard

The meeting starts at 8.00 am. The participants introduce themselves underlining their competence and experience in the project area.

Guy Dargent, in collaboration with Jean-Jacques Amity, explains the administrative and financial aspects of DG Sanco projects (**see slides here-attached**).

Ugo Baccaglini illustrates how the project management of DSDP project is structured (**see slides here-attacbed**).

Each Work Package of the project is introduced as follows:

General overview	Pascale Camporese
Scientific issues	Roberto Gnesotto
	For WP4: Paulo Lemos, project leader
	For WP5: Paul Baskerville, project leader
Staff involved	Pascale Camporese

(**See slides hereinattached**).

The next steps are the following:

1. Meeting in Luxembourg with DG Sanco to collaborate with other EU projects on health indicators (such as ECHIM, WHO, OECD).
2. Meeting in Paris with HAS (Haute Autorité de Santé) to analyse the review of Day Surgery indicators available from HAS.
3. Meeting in Porto with DSDP participants.

ANNEX WP1_III

FINAL MEETING IN PADOVA, ITALY

DSDP is co-funded by the European Commission under the Programme of the Community Action in the field of Public Health 2008-2013

Grant Agreement 2008 1305

FINAL MEETING

31 August 2012

Archivio Antico Palazzo del Bò
Università degli Studi di Padova, Italy

Main Partner:

Agenzia Regionale Socio-Sanitaria del Veneto
Venezia, Italia

Associated Partners:

Belgium

National Institute for Health and Disability Insurance - NIHDI

Denmark

Association of Danish Regions - ADR

France

Caisse Nationale d'Assurance Maladie des Travailleurs Salariés - CNAMTS

France

Haute Autorité de Santé - HAS

Hungary

Europ-Med Medical Company limited – EUROP-MED

Italy

Agenzia Nazionale per i Servizi Sanitari Regionali - AGE.NA.S

Italy

Azienda Ospedaliera di Padova - AOP

Portugal

Centro Hospitalar Do Porto - CHP

Romania

Clinical Emergency County Hospital Timisoara – SCJUT

United Kingdom

King's College NHS Foundation Trust - KCH

List of Participants

U.	**Baccaglini**	AOP, Azienda Ospedaliera di Padova	*Italy*
C.	**Beltramello**	Member of the Expert Team	*Italy*
F.	**Cadariu**	SCJUT, Clinical Emergency County Hospital	*Romania*
P.	**Camporese**	AOP, Azienda Ospedaliera di Padova	*Italy*
G.	**Caracci**	AGENAS, Agenzia Nazionale per i Servizi Sanitari Regionali	*Italy*
C.	**Castoro**	President International Association for Ambulatory Surgery	*Italy*
G.	**Dargent**	Scientific Project Officer European Commission	*Luxembourg*
C.	**Gallo**	ARSS, Agenzia Regionale Socio Sanitaria del Veneto	*Italy*
N.	**Gennaro**	ARSS, Agenzia Regionale Socio Sanitaria del Veneto	*Italy*
M.	**Gissler**	National Institute for Health and Welfare	*Finland*
R.	**Gnesotto**	Member of the Expert Team	*Italy*
C.	**Grenier**	Haute Autorité de Santé	*France*
P.	**Jarrett**	Member of the Evaluation Team	*UK*
J.	**Krausing-Vinther**	Association of Danish Regions	*Denmark*
M.	**Pasztori**	SCJUT, Clinical Emergency County Hospital	*Romania*
MA.	**Le Pogam**	Haute Autorité de Santé	*France*
M.	**Marty**	Caisse Nationale d'Assurance Maladie	*France*
G.	**Parmentier**	Member of the Evaluation Team	*France*
E.	**Perri**	ARSS, Agenzia Regionale Socio Sanitaria del Veneto	*Italy*
P.	**Pontello**	ARSS, Agenzia Regionale Socio Sanitaria del Veneto	*Italy*
C.	**Toftgaard**	Association of Danish Regions	*Denmark*
L.	**Van Outryve**	National Institute for Health and Disability Insurance	*Belgium*
M.	**Vettorazzi**	Member of the Expert Team	*Italy*

10:00-10:10	**WELCOME TO PADOVA**	*Pascale Camporese*
10:10-10:30	**THE EU PROJECTS AND THE ROLE OF THE INTERNATIONAL SCIENTIFIC ASSOCIATIONS**	*Carlo Castoro*
10:30-10:50	**DSDP PROJECT IMPLEMENTATION** ▪ Milestones ▪ Role of key actors	*Pascale Camporese*
10:50-11:20	*Coffee-break*	
11:20-11:50	**DAY SURGERY HEALTH INFORMATION SYSTEM POLICY**	*Roberto Gnesotto*
11:50-12:20	**HAVE THE EU PROJECT'S OUTCOMES GENERATED EVIDENCE BASE FOR POLICY ?**	*Guy Dargent*
12:20-12:50	**RECOMMENDATIONS TO IMPLEMENT DS INFORMATION SYSTEM INTO THE EU INDICATORS FRAMEWORK**	*Mika Gissler*
12:50-14:30	*Lunch*	
14:30-15:30	DEBATE	*All participants involved*

FROM DSDP PROJECT TO DS INDICATORS UTILIZATION BY MEMBER STATES: BALANCE AND PERSPECTIVES

Coordinated by: PEM Jarrett & G. Parmentier

16:15-17:00	ANATOMIC THEATRE	*Guided Tour*

DSDP is co-funded by the European Commission under the Programme of the Community Action in the field of Public Health 2008-2013

Grant Agreement 2008 1305

MINUTES OF FINAL MEETING

31 August 2012

Archivio Antico Palazzo del Bò
Università degli Studi di Padova, Italy

DSDP final meeting was opened in the Aula Magna of Padua University by Ms Pascale Camporese, who extended Padua's team welcome to the participants convened from several European countries. The first presentation "The EU Projects and the role of the International Scientific Associations" was given by Dr Carlo Castoro, who elaborated on the responsibility of scientific associations to be one of the important contributors to the EU applied research initiatives.
Ms Pascale Camporese summarized the evolution of the project through its diagnostic and therapeutic phases, illustrating how the first component not only investigated design and performance of current DS information systems, but also studied the peer and grey scientific literature finding almost one hundred DS indicators, which too frequently are not formal part of national health information systems. Ms Camporese also stressed the project's strategic importance, given that DSDP identified some of the main problems and best practices with regard to DS health information systems in Europe, and also suggested standard lists of essential and ideal DS indicators, which constitute a prerequisite for comparison of performance and learning across systems and units. Mrs Camporese stated that international institutions, such as the EU Commission, OECD and WHO, together with Ministries of Health and local organizations, for instance regional and local health authorities, hospitals and Day Surgery units might benefit from the analysis and tools produced by DSDP.

Dr Roberto Gnesotto presentation "Day Surgery Health Information System Policy" covered DSDP approach to the promotion of relevant and useful DS information systems, as one of the most important tools of a continuous quality improvement strategy.

Dr Guy Dargent offered his thoughts concerning actual and desirable relationship between evidence and policies in the public field. Dr Dargent also answered positively to the question presented to him, i.e. "Have the EU project's outcomes generated evidence base for Policy ?", and showed examples of how information from different MSs reveal important disparities in performance, which should stimulate questioning and subsequent solutions by policy makers and managers.
Prof. Mika Gissler presentation "Recommendations to implement DS information system into the EU indicators framework" described the progress achieved by ECHIM, its logic and current plan. This project increasingly incorporates indicators pertaining to different health problems and services and DS constitutes a priority for future inclusion.
The closing debate, titled "From DSDP Project to DS indicators utilization by Member States: Balance and Perspectives", was led by Professors PEM Jarrett and G. Parmentier, who submitted a set of key questions concerning both the results of the project and its implications. All participants were involved. The questions were as follows:

1. Has the study defined, as near as possible, an essential and ideal set of practical and implementable day surgery indicators?
2. Does the group think that the defined indicators are suitable for use at international, national and local levels?
3. The study shows that, in general, indicators have not been integrated into health information and management systems but rather used for research, etc. How can this be changed?
4. What conclusion has the group come to about the ideal and achievable set of indicators for the assessment and management of day surgery?
5. Is a short synopsis of the recommended indicators to be produced in order to facilitate their introduction? Will this list be ranked in the order of the group's perception of their importance?
6. These are harsh financial times. How does the panel think that European governments and hospitals can be persuaded to introduce a unified set of indicators?
7. The study has shown that there is not a common definition of day surgery amongst countries and that there is a resistance to change. Coding systems in countries vary. How can these differences be overcome so that indicators mean the same in each country and international comparisons can be made?
8. Will associations such as the IAAS be involved to encourage the introduction of the set of indicators?
9. What are the most interesting or most surprising findings in the reports?
10. The use of indicators is well established in companies, more recent in hospitals and very new in the management of health systems. Experience shows that in order to avoid adverse effects it is important to distinguish between indicators of internal management, public health indicators, indicators of monitoring and evaluation of policies and systems. Policies in terms of communication should also be adapted as appropriate. Would the panel care to comment?
11. Does the panel think that the original aims of the study have been met?

Participants agreed that DSDP has identified an essential and ideal set of practical and implementable DS indicators, though those should be adapted to cultural and structural features of national health systems, and that the defined indicators are appropriate for use at international, national and local levels. Several professionals in attendance stated that an indispensable step toward the adoption of a coherent set of DS indicators is the formulation and deployment of a DS policy where the information system becomes an essential instrument for monitoring, improvement and evaluation.

DSDP coordinators agreed to prepare a policy brief including the recommended indicators together with a strategy and tools facilitating their introduction and making clear the distinction between an essential and an ideal set of indicators. To the question concerning how European governments and hospitals can be persuaded to introduce a unified set of indicators in a context of harsh financial times, panelists agreed that those who have the authority to manage whole health systems cannot afford to disregard tools like a health information system, which represent not only a precondition of continuous improvement of quality, productivity and efficiency, but also an opportunity for learning from other experiences. The serious problems that there is not a common definition of day surgery amongst countries, coding systems vary and that there is a resistance to change, can only be overcome by national policy makers, aware of these constraints and willing to find strategic solutions with the support of EU institutions and professionals capable to systematically analyze and streamline the structure, processes and outputs of their DS information systems. The sustainability of the project depends on how far international, national and regional institutions consider DS a priority and understand that its successful implementation and improvement cannot overlook a solid information system. DSDP coordinators assured that they will try and give continuity to the project. They are presently negotiating an operating grant with the EU Executive Agency for Health and Consumers and they have already presented a proposal to the latest EU FP7 call.

ANNEX WP1_IV

WP1 DELIVERABLES

DELIVERABLE D1a: FIRST INTERIM REPORT

- See separate document and relevant CDRom -

DELIVERABLE D1b: SECOND INTERIM REPORT

- See separate document and relevant CDRom -

ANNEX WP2_I

DISSEMINATION MEETING IN PORTO, PORTUGAL

Day Surgery Data Project - DSDP

- Grant Agreement 2008 13 05 -

DISSEMINATION MEETING

Porto, Portugal - 12 May 2012

Sheraton Hotel

Main Partner:

Agenzia Regionale Socio-Sanitaria del Veneto
Venezia, Italia

Associated Partners:

Belgium

National Institute for Health and Disability Insurance - NIHDI

Denmark

Association of Danish Regions - ADR

France

Caisse Nationale d'Assurance Maladie des Travailleurs Salariés - CNAMTS

France

Haute Autorité de Santé - HAS

Hungary

Europ-Med Medical Company limited – EUROP-MED

Italy

Agenzia Nazionale per i Servizi Sanitari Regionali - AGE.NA.S

Italy

Azienda Ospedaliera di Padova - AOP

Portugal

Centro Hospitalar Do Porto - CHP

Romania

Clinical Emergency County Hospital Timisoara – SCJUT

United Kingdom

King's College NHS Foundation Trust - KCH

List of Participants

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Belgian Association of Ambulatory Surgery
Belgium

Paul Vercruysse
Belgian Association of Ambulatory Surgery
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Sven Felsby
Dansk Selskab for Dag-Kirurgi
Denmark

Antti Haavisto
Suomen Päiväkirurgiset Anestesiologit
Finland

Corinne Vons
Association Française de Chirurgie Ambulatoire
France

Jost Brokelmann
Bundesverband für Ambulantes Operieren e.V.
Germany

Jacky Reydelet
Bundesverband für Ambulantes Operieren e.V.
Germany

Gamal Eldin Mohamed
Multidiszciplináris Egynapos Sebészeti Társaság
Hungary

Maria Janescko
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Manmal Begani
The Indian Association of Day Surgery
India

Carlo Castoro
Federazione Italiana Day Surgery
Italia

Bjarte Askeland
Norsk Dagkirurgisk Forum
Norway

Morten Finne
Norsk Dagkirurgisk Forum
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Paulo Lemos
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Carlos Magalhães
Associação Portuguesa de Cirurgia Ambulatoria
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Fernando Docobo Durantez
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Douglas McWhinnie
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Kathryn E. McGoldrick
Society for Ambulatory Anesthesia
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Raafat Hannallah
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Robert Williams
Ambulatory Surgery Center Association
United States

Arnaldo Valedon
Ambulatory Surgery Center Association
United States

Beverly K. Philip
Ex-Officio, Ambulatory Surgery Journal
United States

Pascale Camporese
DSDP Coordinator
Italy

Claudio Beltramello
DSDP Expert Team
Italy

Grant Agreement n° 2008 13 05

4.15 pm to 6.00 pm

16:15-16:30 **PRESENTATION OF DSDP PROJECT** *Pascale Camporese*

- How has the project developed ?
- Where have we come, so far ?
- What are the next steps ?

16:30-17:00 **PRESENTATION OF SCIENTIFIC WORK PACKAGES RESULTS** *Roberto Gnesotto*

- Major achievements -

- WP4: Review of existing DS indicators at international level
  Project Leader: CHP, Portugal
- WP5: Analysis of current DS data and indicators in participating countries
  Project Leader: ARSS Veneto, Italy
- WP6: Summing up of MSs research and testing new indicators
  Project Leader: KCH, UK
- WP7: Defining a minimum and an ideal set of DS indicators
  Project Leader: Agenas, Italy
- WP8: Devising guidelines for indicators' statistical analysis, presentation, Interpretation and utilization
  Project Leader: CNAMTS, France

17:00-17:15 **DISSEMINATION OF INFORMATION AND RESULTS** *Carlo Castoro*

- National and International Congresses
- "Teach the Teacher" courses
- Ambulatory Surgery Journal
- IAAS Website
- IAAS Newsletter

17:15-17:45 **INTERNATIONAL ROUND TABLE** *All IAAS members*

Comments of IAAS experts on

- DSDP results achieved
- How to disseminate DSDP information and results

17:45-18:00 **DSDP FINAL MEETING** *Pascale Camporese*

to be held on August 30th, 2012 in Padova, Italy


Executive
Agency for
Health and
Consumers


DAY
SURGERY
DATA
PROJECT

Day Surgery Data Project - DSDP

- Grant Agreement 2008 13 05 -

MINUTES
DISSEMINATION MEETING

Porto, Portugal - 12 May 2012

Sheraton Hotel

The International Association for Ambulatory Surgery (IAAS) is the leading organization which promotes DS worldwide from different perspectives, i.e. clinical, technical, organizational and political. 21 countries are officially members of IAAS through their National DS organizations. Therefore, the most effective and fastest way to disseminate DSDP contents, principles and results is through IAAS members.

For this reason, three months before the project conclusion, IAAS members were invited to a meeting in Porto in order to understand the added value of the project, its aims and outputs, and the possible implications for members and the IASS itself. At the meeting the following Nations were represented: France, Italy, Norway, Belgium, Spain, Portugal, Netherlands, Denmark, Finland, Germany, Hungary, United Kingdom, India, Australia, United States. It is important to underline the participation of non-European Countries. The dissemination of DSDP also outside Europe should be considered an important achievement. In particular USA and Australia play a crucial role to drive innovation in DS and therefore their involvement in DSDP was necessary.

Dr. Roberto Gnesotto, coordinator of the expert groups, gave a presentation concerning key features of the project including its results. The presence of Beverly K. Philip, Editor of the "Ambulatory Surgery Journal" represented an important opportunity occasion for a tight partnership. In fact, Dr. Philip, appreciating all the work performed and the results achieved within DSDP, offered to dedicate a special issue of the scientific Journal totally to DSDP objectives and achievements.

Moreover, Dr. Douglas McWhinnie from UK (responsible for IAAS website) assured the promotion of DSDP results in the website also past the conclusion of the project, due to the fact that for IAAS a common set of selected indicators for DS represents a strategic step.

Last but not least, the presence of Dr. Gamal Eldin Mohamed from Hungary (organizer of the next IAAS international conference in Budapest) allowed DSDP leaders to negotiate a dedicated session to disseminate the project's results. The meeting will occur in May 2013 and more than 1.000 participants from all around the world are expected to join.

Participants to the dissemination meeting discussed and commented on the project results, in particular on the following two issues:

- how to integrate key indicators identified through DSDP within every national database;
- how to promote the adoption of key indicators, identified through DSDP, by MSs as an important strategic objective of IAAS.

ANNEX WP2_II

IAAS QUATERLY NEWSLETTER

- see separate document -

ANNEX WP2_III

AMBULATORY SURGERY JOURNAL

- see separate document -

ANNEX WP2_IV

UNHPC JOURNAL

- see separate document -

ANNEX WP3_I

DELIVERABLE D3a:
INTERIM EVALUATION REPORT

- See separate document and relevant CDRom

ANNEX WP3_I

DELIVERABLE D3b:
FINAL EVALUATION REPORT

- See separate document and relevant CDRom -

ANNEX WP3_II

GANT DIAGRAM

WP n°	D = Deliverable M = Milestone	First Interim report (M1-M12)												Second Interim report (M13-M24)												Third Interim report (M25-M36)											
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36
WP1	**Kick off meeting in Luxembourg**		M																																		
	D1a First interim report												D																								
	D1b Second interim report																								D												
	Final meeting in Padova, Italy																																				M
	D1c Final report																																				D
WP2	***D2*** Implementation of the official project website			D																																	
	Publication of an article concerning the project on Ambulatory Surgery Journal (Volume 6.1 – April 2010)								M																												
	Participation to the International Congress "Colloque sur la chirurgie ambulatoire: enjeux et perspectives"				M																																
	Presentation of the project in IAAS official website and IAAS Newsletter																								M												
	Participation to the International Congress "Journées Internationales de la Qualité Hospitalière & en Santé", Paris-France															M																					
	Participation to the « Colloque International : Hopital de Demain » Venice-Italy																M																				
	Participation to the « 9th International Congress on Ambulatory Surgery », Copenhagen-Denmark																					M															
	Dissemination meeting, Porto-Portugal May 2012																																	M			

WP n°	D = Deliverable M = Milestone	First Interim report (M1-M12)												Second Interim report (M13-M24)												Third Interim report (M25-M36)											
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36
WP3	**D3a** Interim Evaluation Report																								D												
	D3b Final Evaluation Report																																				D
WP4	**D4** Report on the analysis of DS indicators available at international level								D																												
	Technical meeting in Lisbon -Portugal									M																											
WP5	**D5** Report on the analysis of DS available data and indicators at MSs level																		D																		
WP6	**D6** Report on summing up of member states research and testing DS indicators																									D											
WP7	**D7** Minimum and ideal set of DS indicators to be adopted by EU Member States																															D					
	D8 Fact sheet of DS indicators																															D					
WP8	**D9**Guidelines for presentation, interpretation and use of DS indicators																																				D
WP9	***D10*** Recommendations for implementation in ECHI Indicators																																				D

ANNEX WP3_III

CURRICULUM VITAE ASSESSMENT GROUP

Professor Paul E. M. Jarrett,
M.A., M.B., BChir., D(Obst)R.C.O.G., F.R.C.S.(Engl.).

Paul Jarrett is Professor of Day Surgery at Kingston University and a consultant vascular surgeon. He has been medical director of Kingston NHS Hospital, a UK private hospital group and an international healthcare company. He is managing partner of a medical limited liability partnership. Prof. Jarrett was the founding Chairman of the British Association of Day Surgery and is a past President, executive committee member and Editor-in-Chief of the journal of the International Association for Ambulatory Surgery. He has been involved in the detailed design of 10 day units in 5 countries and advised on the design of many others. Recent consultant work for governments and international agencies on surgical re-engineering and management has been undertaken in Denmark, the Slovak Republic, Egypt, Serbia and Palestine.

Gérard PARMENTIER

Né le 22 avril 1947

Docteur en Economie

10 ans dans l'industrie à des postes de direction financière, d'organisation et de contrôle de gestion (Compagnie Générale d'Electricité).

10 ans dans l'agriculture à des postes de direction industrielle et direction générale d'un groupe Coopératif.

16 ans dans la santé d'abord comme directeur général de Cliniques (hôpitaux privés), puis, actuellement, Secrétaire national de l'UNHPC (Union Nationale Hospitalière Privée de Cancérologie) qui fédère toutes les organisations professionnelles de la cancérologie libérale et hospitalière privée en France (et qui prennent en charge un patient atteint du cancer sur deux en France).

Nombreuses responsabilités dans le système hospitalier (ancien secrétaire fondateur de l'AFCA [Association Française de Chirurgie Ambulatoire], ancien membre de l'Executive Committee de l'IAAS [International Association for Ambulatory Surgery], ancien membre du Conseil d'administration de l'ANAES [Agence Nationale d'Accréditation et d'Evaluation en Santé], puis Vice Président du Collège de l'accréditation], ancien responsable pour les cliniques privées de l'introduction des DRG en France [sous le nom de PMSI]…).

Auteur de nombreux articles sur le système de santé, la chirurgie ambulatoire, la qualité, l'évaluation, la régulation et l'allocation de ressources. Livres sur la fonction qualité et sur l'organisation de la cancérologie. Enseignant à la chaire d'économie de la santé du Conservatoire National des Arts et Métiers.

Carlo CASTORO

Personal Information
Place and date of birth: Valdobbiadene (Treviso), 5 marzo 1957
Present Position
Director in charge, Department of Surgical Oncology, Istituto Oncologico Veneto, Padova
Assistant Professor of Surgery: Postgraduate school of General Surgery, University of Padova School of Medicine
Education and Qualifications
1977-1982: Medical School (University of Padova School of Medicine)
1983: M.D. License Certification cum laude (University of Padova School of Medicine)
1983-1988: Residency in General Surgery (University of Padova School of Medicine)
1988: General Board Certification of General Surgery cum laude (University of Padova School of Medicine)
1992: General Board Certification of Thoracic Surgery cum laude (University of Padova School of Medicine)
1990 – present: Assistant Professor of Surgery, Postgraduate school of General Surgery, University of Padova School of Medicine
Awards
1986: Scholarship for Research in Esophageal Cancer from the University of Padova
1987-1989: Scholarship for Clinical Research from the Italian Association for Cancer Research (AIRC)
Clinical
Appointments
1983-1988: Resident in Surgery
1989-2006: Assistant surgeon, General Hospital / University of Padova
2007 – present: Consultant surgeon, Director in charge, Department of surgery, Istituto Oncologico Veneto, Padova
Faculty
Appointments
1990: Assistant Professor in the Postgraduate school of General Surgery, University of Padova School of Medicine
Pubblications
40 indexed full papers
90 abstracts published in Congress Proceedings Books
Author of a book on Lichtenstein Hernia Repair, 1998
Author of the Policy Brief “Day Surgery making it Happen” published in 2007 by the European Observatory on Health Systems and Policies, WHO Office for Europe.
Author of many videos and 3 training lessons (cd-rom) on surgical techniques
Fields of Interest/Research Acitivity
- Thoracic and Abdominal Surgery,

- Esophageal diseases, main interest: cancer surgery & multimodal treatments
- Day Surgery and reorganization of surgical services
- Medical Education, new technologies and distance learning

Memberships

Societa' Italiana di Chirurgia (S.I.C.)
European Society of Esophagology (ESE) - Groupe Europeen d'Etude des Maladies de l'Oesophage (GEEMO)
International Association for Ambulatory Surgery, Italian representative in the General Assembly
President Elect 2011-2013 International Association for Ambulatory Surgery (IAAS)

Research Grants and Projects

2001-2005: Scientific head and coordinator of the distance learning project, SkyMed, financed by the European Space Agency. The project was carried out in collaboration with the International Association for Ambulatory Surgery and it involved 7 major hospitals in the Veneto Region of Italy, the University of Amsterdam (NL) and Kingston Hospital (UK).
Collaborator in two European projects financed by the Executive Agency for Health and Consumers: DSDP (Day Surgery Data Project) 2009-2012 and DAYSAFE (Improving patient safety through day surgery) 2010-2013.

ANNEX WP4_I

DELIVERABLE D4:
REPORT ON THE ANALYSIS OF DS INDICATORS AVAILABLE AT INTERNATIONAL LEVEL

- See separate document and relevant CDRom -

ANNEX WP5_I

DELIVERABLE D5:
REPORT ON THE ANALYSIS OF DS AVAILABLE DATA AND INDICATORS AT MSs LEVEL

- See separate document and relevant CDRom -

ANNEX WP6_I

DELIVERABLE D6:
REPORT ON SUMMING UP OF MEMBER STATES RESEARCH AND TESTING DS INDICATORS

- See separate document and relevant CDRom -

ANNEX WP7_I

DELIVERABLE D7:
MINIMUM AND IDEAL SET OF DS INDICATORS TO BE ADOPTED BY EU MEMBER STATES
and
DELIVERABLE D8:
FACT SHEETS OF DS INDICATORS

- See separate document and relevant CDRom -

ANNEX WP8_I

DELIVERABLE D9:
GUIDELINES FOR PRESENTATION, INTERPRETATION AND USE OF DS INDICATORS

- See separate document and relevant CDRom -

ANNEX WP9_I

DELIVERABLE D10:
RECOMMENDATIONS FOR IMPLEMENTATION IN ECHI INDICATORS

- See separate document and relevant CDRom -