Hogeschool van Amsterdam
European School of Physiotherapy

getPTsmart.com

Project Plan

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Chapter 1

Project Plan

Introduction

This project plan concerns 'getPTsmart.com' (working title), the professional assignment project (PAP) of Pascal Bolla and Maria Tervahauta at the European School of Physiotherapy (ESP), Amsterdam, the Netherlands. The project time-frame extends from April 2011 to January 2012.

Problem identification & general objective

Professional accountability, evidence based practice and autonomy of the profession are primary concerns in contemporary physical therapy. To accommodate for these concerns, regulatory bodies and educational institutions seek solutions to implement sound clinical reasoning frameworks into their practice guidelines and curricula. Currently, such implementation remains a major challenge due to the complexity and abstract nature of the subject.

Finding ways to practice case-based clinical reasoning outside clinical settings remains challenging for physical therapists and students alike. Internationally recognised frameworks of clinical reasoning appear too complex and vast in theory for students and physical therapists to deliberately employ them into their studies and practice routines.

The objective of this project is to create a way for teachers, students and physical therapists to engage in the teaching and learning of clinical reasoning in a contemporary, time-independent environment that serves as a link between the classroom and clinical practice.

Target group

The target group is physical therapy students in the last year of their entry level education as well as novice physical therapists. In this project this target group is mainly represented by third year students of the European School of Physiotherapy (ESP), Amsterdam, the Netherlands.

Solution overview

Our solution to the above listed problems is to supply students, novice physical therapists and teachers with an e-learning web application, in which the users can learn to apply the Hypothesis Oriented Algorithm for Clinician II (HOAC II) (Rothstein et al. 2003), a current state-of-the-art approach to clinical reasoning in physical therapy. The web application offers a time-independent, easily-accessible and stimulating environment for users to advance their clinical reasoning skills. Several case studies in neurological physical therapy, presented in digestible chunks, form the backbone of this e-learning platform. Cases of different complexity are provided and the content of all cases is validated by expert physical therapists.

The HOAC II clinical reasoning framework represents contemporary, evidence-based physical therapy practice that incorporates the concepts of prevention, a topic receiving much attention in physical therapy (e.g. Pistorius et al. 2006), in its structure. HOAC II provides a clear structure for physical therapists to engage in conscious, process-like, systematic and effective practice as advocated by the Royal Dutch Society for Physical Therapy (KNGF) (Pistorius et al. 2006). The HOAC II has received growing interest at the Hogeschool van Amsterdam and is integrated in the re-designed European School of Physiotherapy curriculum. In addition, the HOAC II framework is used in continuous professional development programmes (personal communication: de Bakker 2011). The following sections outline the relevant background information, in-depth rationale, procedures, product details and further relevant regulations.

Background information

Clinical reasoning

Clinical reasoning is "the sum of the thinking and decision-making processes associated with clinical practice" (Higgs et al. 2011). During this process, the therapist analyses multiple variables contributing to the patient's limited physical capacity (the ability to execute a task or action in a standard environment) and performance (what an individual can do in his or her own current environment). The key elements of the process include generation of hypotheses of factors assumed to underlie the

limitations of physical capacity and performance and postulation of the magnitude of those factors. The therapist interacts with the patient and other persons involved in the patient care (family, other health care professionals) and guides the patient in finding meaningful goals and health management strategies (Edwards et al. 2004). All decisions and actions need to be made in line with professional ethics and community expectations (Higgs et al. 2011).

Relevance to physical therapy practice

The American Physical Therapy Association (APTA) adopted "Vision 2020" as their official vision statement for the future of physical therapy in 2000. As an incorporation of the community expectations for the development of the profession, Vision 2020 calls for autonomous physical therapy practice characterised by independent, self-determined professional judgement and action (APTA 2000). Evidence-based practice, right for direct access and professionalism are at the heart of Vision 2020.

Clinical reasoning skills constitute the essence of professional accountability and autonomy (Rothstein et al. 2003, Edwards et al. 2004, Higgs et al. 2011). Resnik et al. (2003) concluded that expertise in physical therapy is not necessarily based on the years of experience but rather on the development of advanced clinical decision making skills. Therefore, as the profession moves toward the ideals of Vision 2020, more emphasis is placed on clinical reasoning processes (Atkinson et al. 2011). The topic has become a prominent area of research (Edwards et al. 2004) and several clinical reasoning frameworks have been proposed to guide physical therapy practice.

The HOAC II

Rothstein et al. first published the Hypothesis Orientated Algorithm for Clinicians (HOAC) - a method for evaluation and treatment planning in 1986. In 2003 the algorithm was updated to be compatible with the contemporary physical therapy practice. The update was termed the Hypothesis Orientated Algorithm for Clinicians II (HOAC II) (Rothstein et al. 2003).

The HOAC II offers a conceptual, patient-centred framework for physical therapists to use in the management of any type of patient (Riddle et al. 2003). It addresses the five elements of patient management: examination, evaluation, diagnosis, prognosis and intervention (APTA 2003). Importantly, the HOAC II provides a means to engage in evidence-based practice and to differentiate between the types of evidence and science used (Rothstein et al. 2003, Thoomes et al. 2011). In the HOAC II clinical reasoning process hypotheses are generated about the underlying causes to the patient's problems. Testing criteria are established to test the correctness of the hypotheses and to evaluate the chosen patient care strategies. Inclusion of identification of anticipated problems, including e.g. risk factors and evidence-based justification for interventions directed at prevention is a benchmark of the HOAC II.

The International Classification of Functioning, Disability and Health & the ICF Core Sets

In their original HOAC II article Rothstein et al. (2003) adopted the terminology of the Nagi model. However, in this project the terminology of the International Classification of Functioning, Disability and Health (ICF) is integrated in the HOAC II clinical reasoning framework. This choice was made to reflect the view of the World Confederation of Physical Therapy (WCPT) that supported the implementation of the ICF in 2003.

A common language is seen essential in advancing the science of disablement (Jette 2006, Jette 2009). The ICF offers such common language and offers a way to standardise the terminology used to describe functioning, disability and health in the communication between therapists and in the documentation of the health care process. It considers the complex interactions of personal features and contextual factors that lead to functioning and disability (Escorpizo et al. 2010).

We have chosen to integrate the use of the brief ICF Core Sets in the case studies of this project as the Core Sets have been developed to facilitate the systematic and comprehensive description of functioning in clinical practice (Stucki et al. 2008). The Core Sets include a list of the ICF categories that typically capture the aspects of functioning most likely affected in specific health conditions. The Core Sets consist of as few ICF categories as possible but as many categories as necessary. They may protect the therapists from missing important aspects of functioning (Kesselring et al. 2007, Stucki et al. 2008).

The KNGF physiotherapist competences

In their professional profile of the physical therapist, the Royal Dutch Society for Physical Therapy (KNGF) calls for physical therapists to engage in a methodological physiotherapeutic work method. The method is characterised by a conscious, process-like, systematic and effective approach in which decisions regarding the physical therapy practice are based on the best available evidence (Pistorius et al. 2006). We have spoken with several professors of the Hogeschool van Amsterdam, Amsterdam School of Health Professions (de Bakker, van Egmond, Koolen, Voigt) who agree with us in that the HOAC II clinical reasoning framework is a valuable tool to help students and clinicians engage in physical therapy practice as advocated by the KNGF. We envision that getPTsmart.com can be used as part of the final year clinical reasoning modules at the European School of Physiotherapy (ESP). The web application can potentially be a valuable tool for the ESP to ensure their graduates have excellent opportunities to develop their clinical reasoning skills during the undergraduate diploma.

Products & Objectives

Internal deliverables

Internal deliverables are items that aid a successful flow and execution of the project. They enable the project to continue towards completion. Our internal deliverables are outlined as black diamonds in the Gantt chart (figure 1) and consist of:

- Case studies
- Canvas
- Web application
- Meeting minutes.

External deliverables

The external deliverables are the items the project produces. Our external deliverables are outlined as red diamonds in the Gantt chart (figure 1) and consist of:

- Project plan
- getPTsmart.com
- Presentation
- Evaluation (mid-term & end of project).

Choice rationale

Web application

Spencer in Grant (2008) points out that clinical teaching, in a clinical setting, is at the center of medical education. However, as the clinic is the site of practice as well as of learning, conflicts of interest often emerge. Time and competing pressures on the clinician in his role as a teacher and a practitioner often make deliberate teaching of clinical reasoning in a clinical setting sparse and difficult to manage. In her recent elaboration on the value of distance learning for developing clinical reasoning skills, Grant (2008) offers a possible solution to this problem by concluding that e-learning is a necessary medium for teaching clinical problem solving skills.

Online clinical reasoning has previously been shown to potentially be highly effective (Ryan et al. 2004). Feasibility studies conducted by the United Kingdom Open University and other universities have shown that distance learning is a powerful support in teaching of clinical reasoning (Grant 2008). As the education of health sciences follows the concept of a distributed system in practice, the general benefits of distance learning methods, i.e. accessibility in time and space, quality-assured material, ease of use and cost-effectiveness, fit well into the education.

Our aim is to develop a web application that is easy to update and extend. This ensures that the content continuously matches the latest available evidence and concepts in physical therapy. In accordance with Schuwirth in Grant (2008), our aim is to stimulate active clinical reasoning, rather than teaching a generic strategy to solve clinical cases.

In the web application the user is encouraged to solve the cases by filling in the "PT client management Canvas" (in short: Canvas), introduced later in this project plan. The Canvas can be filled in on screen or it can be printed. As multi-modal learning has be proven to be more effective than uni-modal learning (Fadel et al. 2008) and because it has been found that students wish to retain printed text which offers active learning, problem solving and feedback (Grant 2008), we choose to deliver our learning material via different media. We envision two key applications of the Canvas: 1) Students can use the printed and filled in Canvas to share, reflect and discuss their results in the class-room or in group study sessions, and 2) Students and clinicians can use the Canvas to apply the same clinical reasoning structure in clinical settings.

Look & feel

The web application and other products are given a fresh and inspiring look and feel that appeals to the target group. Clean visual structure in combination with casual and precise language is intended to respect and reflect the professional field of physical therapy as well as to set the mood for an inspiring learning environment. Our sources of ideas and influences are sites of similar target groups and/or purposes. Some of those sites include: businessmodelgeneration.com, commoncraft.com and informationarchitects.jp.

Canvas

Charting and documenting the decision making process is central to clinical reasoning, quality of client care and essentially to professional accountability (Rothstein et al. 2003, Harman et al. 2009). Good charting practice is imperative not only for evidence and justification of a treatment approach but also for tracking and solving trends and problems so that coherent continuity of the treatment is ensured. Harman et al. (2009) note that poor documentation has a potential to reduce the effectiveness and quality of physical therapy practice.

Harman et al. (2009) affirm that improvements in charting are needed. We could not find an existing tool for charting and documenting a HOAC II - based clinical reasoning process. Therefore, we decided to develop a data recording tool, the "PT client management Canvas", or simply the Canvas. The Canvas is utilised to manage the amount of information given in the presentation of the cases, explicitly to avoid redundancy of information, and as a way to give the user short and precise, yet complete data to work with. Disclaimer: *although our aim is to base the Canvas on a structure that can be be applied in clinical practice, the purpose of the Canvas is to guide students and clinicians in the documentation of the HOAC II clinical reasoning process in the case studies.*

The basic structure of the Canvas includes four sections reflecting the elements of patient management: initial data, problem tracking (including progress monitoring), examination

and intervention. As Rothstein et al. (2003) note, the type and extend of information gathered during the initial data collection remains a choice of the clinician and depends on his approach to practice. Therefore, the initial data sheet consists of free space where the user can record any relevant information in his preferred way. When preferred, the free space allows the user to also draw in the Rehabilitation Problem Solving (RPS) form. A box 'guidelines, evidence & remarks' is included to ensure adequate documentation of the evidence used (e.g. best practice guidelines, ICF core sets, brief notes on rationale based on scientific principles).

The 'problem tracking' sheet directly follows the HOAC II algorithm. In their introduction article to the HOAC II and in the accompanying case study, Rothstein et al. (2003) and Riddle et al. (2003) use the Nagi disablement model for terminology. However, as explained in the background information section of this project plan, we have chosen to depart from the Nagi model and instead integrate the ICF terminology on getPTsmart.com. As Riddle et al. (2003) point out, the identified health care problems almost always include descriptions of functional limitations and disabilities. The generated hypotheses of underlying causes are most commonly linked to impairments. Following the cross-comparison of the Nagi model and the ICF terminology by Jette (2006), we have linked the 'problem list' with the ICF terms 'activities & participation' and 'hypotheses' with the ICF terms 'body functions & structures. Contextual factors (including personal and environmental factors) are included in the section of the hypotheses.

The 'problem tracking' sheet continues with a structure to document baseline measurements. The next step in the 'problem tracking' is to create goals. The term 'goal' only appears in the section concerning 'activities & participation' as in the HOAC II goals are almost exclusively expressed in terms of functional activities that the patient wants or needs to perform. Changes at impairment level are rather monitored through the 'testing & predictive criteria' and are not usually goals (Rothstein et al. 2003). The 'problem tracking' sheet gives the user an overview of the identified problems and the baseline situation. This information directly guides the user in the formation of a goal fulfilling the criteria of the SMART-acronym.

The structure of the 'examination' sheet follows the division between 'activities & participation' and 'body functions & structures'. The sheet is divided into three sections in which the user can note their examination strategy, the examination findings and the indications of the findings in relation to the generated hypotheses.

The 'intervention' sheet structure invites the user to consider all relevant factors for the intervention. The HOAC II distinguishes between the intervention 'strategy' (broad statements about the types of intervention used, e.g. exercise) and 'tactics' (elements of the intervention specifying frequency, duration and intensity of the interventions) (Rothstein et al. 2003). In addition, the HOAC II encourages the therapist to note who implements the tactics (e.g. the patient, family members, other health care workers). The sheet provides space for noting progress and remarks.

Case studies

The case studies are the centerpiece of getPTsmart.com. Cases of different complexity are provided to accommodate users with different levels of knowledge, experience and clinical reasoning skills. The cases are separated into eight sections that divide the HOAC II clinical reasoning process into logical and easily-digestible steps. The section structure was discussed and evaluated as a good theoretical foundation by experts (personal communication: de Bakker 2011, van Egmond 2011). The sections are displayed in a menu on the left side of the case pages (appendix 5 - 3rd screen shot). To provide the user with an overview of the clinical reasoning process as well as easy access to any section of the case, the menu remains on the screen as the user scrolls down the page.

Each single section proceeds in the same step-by-step manner: information given, actions-to-take, validated solution and rationale & evidence. The steps are displayed in tabs to maintain the feeling of working through the case in digestible chunks one step at a time (appendix 5 - 3rd screen shot). In every section a Canvas, filled with case information up to the current reasoning section, is available for review. This way the user can choose to go through the entire case section-by-section or to select a specific part of the clinical reasoning process.

The 'actions-to-take' list asks the user to take actions based on the HOAC II algorithm. Additional notes for points to consider are given to maximise learning from each step. Afterward the user can compare his solution with our 'expert-validated solution'. This way the user receives immediate feedback and has an opportunity to reflect on his clinical reasoning process.

As the HOAC II emphasises the recording of the evidence used in the clinical reasoning process, 'relevant rationale and evidence' completes each section. When applicable, digital object identifiers (DOI) are used in references to offer the user a direct access to the referenced material available electronically.

Didactic methods

Several didactic methods are applied in the structure and flow of the case studies to stimulate the development of the users' clinical reasoning skills. In addition to knowledge, cognitive and metacognitive skills have been identified as key factors in the development of clinical reasoning strategies and professional growth (Atkinson et al. 2011).

Cognitive skills include data analysis and synthesis and enquiry strategies. On getPTsmart.com, the user is continuously requested to analyse the given data and to synthesise the information to continue the clinical reasoning process. Metacognitive skills include self-awareness and reflection. Throughout the case studies, the user is stimulated to reflect on their own process

at strategical points and to compare his solution with that of the case. The reflection is intended to slow down the clinical reasoning process and, as Rencic (2011) points out, to avoid premature decision-making. Atkinson et al. (2011) emphasise the importance of cultivation of reflective thinking and critical enquiry to help physical therapists develop into autonomous practitioners and to promote the ideals of Vision 2020.

Management & execution

Work Breakdown Structure & Gantt Chart

The work breakdown structure reflects all relevant project tasks. The tasks are broken down so that they are manageable in time and volume. The Gantt chart in figure 1 presents a hierarchical breakdown of all relevant tasks over time.

The Gantt chart is the cornerstone of this project plan as it outlines the relation and dependency of the individual tasks over time (the dependencies are indicated with black arrows). In addition, the Gantt chart shows all deadlines, as well as the start and end dates per sub task.

The work period from April to September 20, 2011 is not indicated in the Gantt chart. The period included brainstorming, resource and case study gathering, understanding of the underlying concepts and brainstorming and designing of website's look and feel.

Quality control and evaluation

The quality control for each deliverable includes internal and external quality control.

Internal

The internal quality control is performed on continuous basis by both group members and also includes evaluation of all products before each external deadline (black bar in the Gantt chart indicating a buffer period — figure 1). The details of the feedback and evaluation procedures are outlined in the contract section 4.1. These feedback sessions are geared towards a final, detailed quality evaluation and guarantees the best possible results based on the team member's abilities and capacities.

In addition, the internal quality control includes scheduled time for creative breaks throughout the project and time for daily sports activities. The creative breaks may take place in the form of climbing sessions, swimming lessons for children or playtime in general, going to gigs or just relaxing leisure time spent with good food, weissbier, red wine and good music in good company.

External

Several individuals have agreed to provide us with external evaluation of the product(s) or part of them:

- Coach (Bas Moed) - six hours of meetings are scheduled with the coach for professional content feedback regarding the project process and products.
- Client (Jan-Jaap Voigt) - two meetings are scheduled with the client for professional content feedback regarding the structure and content of the case studies and Canvas.
- Project plan and presentation specialist (Reinhold Bolla) - final evaluation of the project plan and the presentation before the external deadlines.
- HOAC II specialists - to review and give feedback on the final draft
  - » Daniel L Riddle, P.T., Ph.D., FAPTA, Otto D. Payton Professor, Richmond, the USA
  - » Erik Thoomes, PT, MMT, SPT - Amersfoort, the Netherlands
- HOAC II specialists - to review and give feedback on the case study structure
  - » Pauline de Bakker, Professor in Physiotherapy, Hogeschool van Amsterdam, the Netherlands
  - » Maarten van Egmond, Professor in Physiotherapy, Hogeschool van Amsterdam, the Netherlands
  - » Frank van Hartingsveld, Professor in Physiotherapy, Hogeschool van Amsterdam, the Netherlands
  - » Pim Ranzijn, Professor in Physiotherapy, Hogeschool van Amsterdam, the Netherlands
  - » Marleen Koolen, Team manager European School of Physiotherapy, Hogeschool van Amsterdam, the Netherlands
- Physical therapists from international locations (e.g. Finland, Norway) - to review and give feedback on the final draft
- Physical therapy students from the Netherlands (ESP, HvA Dutch students) to review and give feedback on the final draft
- English native speaker (Miwa Hiroe) - final language check

In the Gantt chart the time points of evaluation with the coach are indicated with a green diamond and with the client with an orange diamond. The process of gathering external feedback on the final draft from other sources takes place over a period of time as indicated in the Gantt chart.

Organisation of external feedback

The external feedback is collected in two forms: by individual feedback as described below and by an analysis of user statistics with Google Analytics.

The experts & professors are involved in the following steps with the specified content:

- Initial consultation - project brainstorming, adjustment and confirmation of project plan with professors
- After completion of first student review - value / vision integration, usability

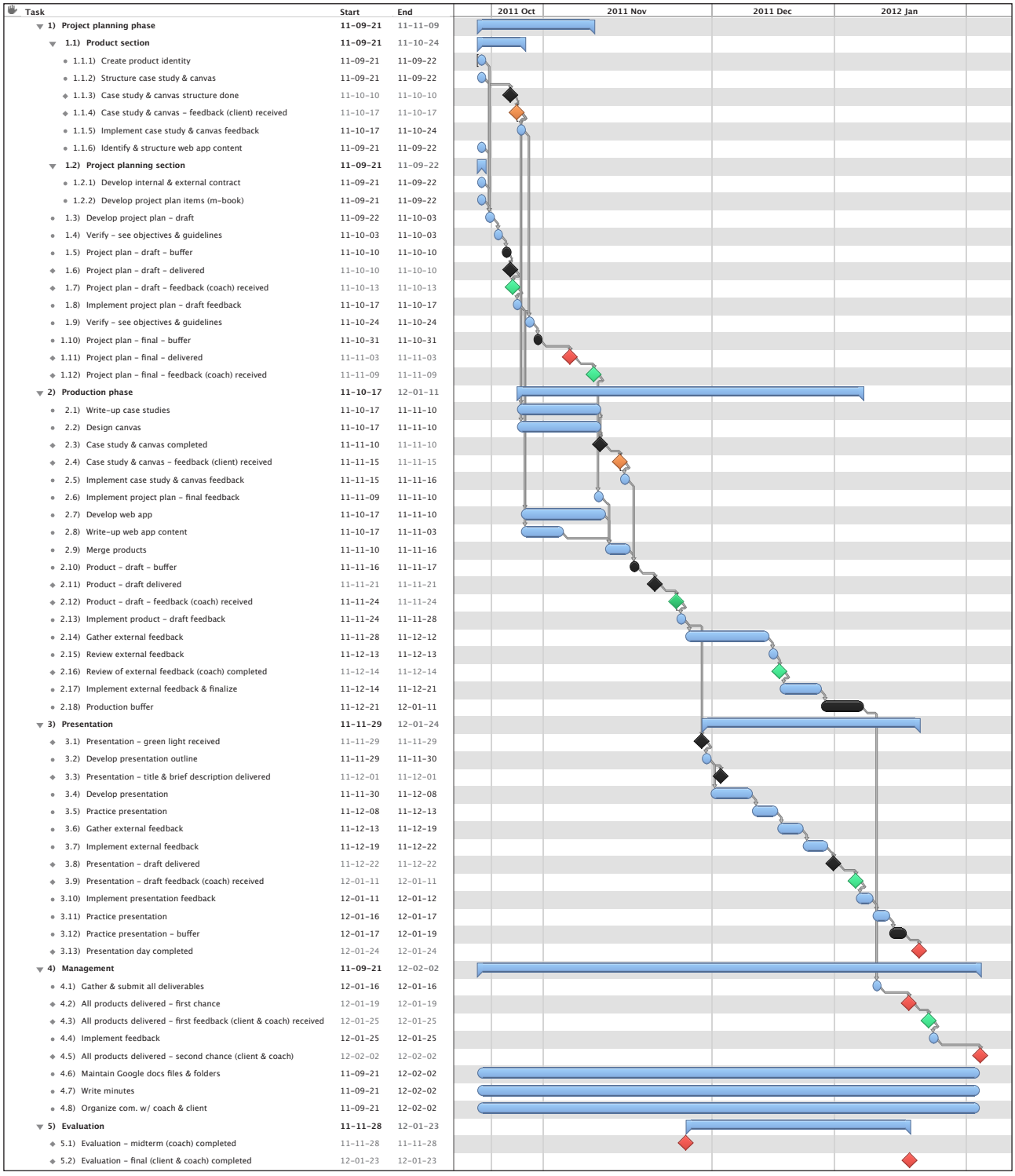

Figure 1 - Gantt chart - Footnote: Blue bars - regular tasks; Black bars - buffer; Black diamond - internal deadline; Red diamond - external deadline; Orange diamond - client related deadline; Green diamond - coach related deadline.

- Review of the final product draft before 12 December, 2011.

Students are involved in the following steps with the specified content:

- After publication of first case on the web application (see figure 1) two students are asked to review product - usability, navigation, value, general impression
- Review of the final product draft by (ideally) a group of students before 12 December, 2011 - usability, navigation & value, general impression.

Physical therapists from international locations are involved in the following steps with the specified content:

- Review of the final product draft before 12 December, 2011 - usability, navigation & value, general impression.

A semi-structured Google form with closed and open questions is created to guide the process of giving feedback and to point out main topics we are interested in receiving feedback. When feasible, a meeting is arranged to receive verbal feedback from the external reviewers.

Internal evaluation of the Gantt chart

The checklist from the Project Management Institute (2004) is used to do internal quality control of the development of the Gantt chart. All points were found to be achieved.

1. Are all the deliverables included as milestones?
2. Do they all have a quality check scheduled?
3. Is there time for rework after the quality check?
4. Are the chunks of work too big? Can you go down another level with the WBS?
5. Do all the tasks start with a verb?
6. Do all the milestones start with a noun?
7. Milestones should occur every 1 to 2 weeks to both keep focus, and provide feedback if you are on track or not. Do you have milestones at least once every 2 weeks?
8. Are all dependencies in place?
9. How reliant is the timing on everything going exactly as planned? Is there a buffer when something doesn't go to plan?
10. Are resources assigned to all tasks and milestones

Resources

Internal

The internal resources consist of Pascal Bolla and Maria Tervahauta. The individual strong and weak points with a SWOT analysis are outlined in appendix 2 - Skill assessment table.

External

The main external resources are comprised of the those outlined in the section 'External evaluation'.

Resource allocation

Tasks not separated in the Gantt chart as both group members take equal responsibility for the production and internal quality control of all tasks and products. In the main production phase Pascal Bolla takes prime responsibility of producing the web application and Maria Tervahauta of producing the final content of the case studies. The review, evaluation and final decisions regarding both parts of production is completed by both group members.

Risk management & safety net

The detailed safety net can be found in table 1. The table includes solution regarding timely delivery of high quality material, in part guided by Project Management Institute (2004). Rules and regulations concerning consequences for group members are outlined in the contract below.

Contract

To ensure best possible collaboration within the team throughout the entire professional assignment project (PAP), the students (Pascal Bolla and Maria Tervahauta), the coach (Bas Moed) and the client (Jan-Jaap Voigt) agree to the following conditions.

1 Meetings

1.1 Scheduling & agendas

All meetings are scheduled in agreement with the concerned team members and may take place in person or over Skype. All appointments are made through Google calendar. A proposal of a detailed coaching schedule is shared with the coach in week 41. The agenda for the meetings with the coach and/or client is prepared by the students and shared with the coach/client a minimum of 24 hours before the meeting through Google docs.

1.2 Absence & information supply

If a group member cannot attend a scheduled meeting, he/she informs the other student as early as possible and supplies his/her input beforehand in digital format. This includes produced materials, objective feedback, progress notes and other relevant information.

Table 1 - Safety net

Risk Scenario (what if...)	Risk rating (high, medium, low)	Safety net / solution (then...)
Material quality		
A group member produces poor quality material	medium	Frequent internal & external review sessions will allow for identification of the poor material; The scheduled buffers leave room for material adjustments
The entire group produces poor quality material	low	External quality control by the coach and the additional external professionals catch the mistakes in the scheduled feedback sessions
Timely delivery		
Group member anticipates to not be able to meet the deadline	medium	The scheduled buffers leave room for material adjustments
Group (member) does not supply material in time	high	The scheduled buffers leave room for material adjustments
Limitations		
• Skills and knowledge in project planning and research work are limited to student level • Available time is minimal, therefore time-buffers are short and group/external reviews are sparse		

1.3 Meeting minutes

The meeting minutes are taken by one of the students and placed in the 'Meeting minutes' Google spread sheet in the 'Meetings' folder. The minutes track the topics discussed, conclusions and, if applicable, new tasks that need to be taken care of and who is responsible for completing the task.

1.4 Discussion leading

The discussions are guided by one of the group members. The discussion is lead in a manner that each group member has the chance to express his/her productive contribution to the discussed topics.

2 Communication

2.1 Email correspondence

Email correspondence between the students takes place via Gmail. Email correspondence with the coach takes place primarily via the HvA email system.

2.2 Google docs guidelines

A set of folders are created for gathering all resources and production material. The main guidelines include:

- Keep the folders clean and only share productive information
- Check for redundancy
- Upload files to the correct sub folder
- Name article documents just as you would label a citation (e.g. Author's last name [et al] YEAR Headline of the article.pdf)
- Upload articles as PDF documents
- When formatting (text) documents, please use the text formatting tools (e.g. headings, list formats, etc.)

2.3 Project management software & progress tracking

We make use of a project management software (OmniPlan). This software will allow us to track progress, workload and other relevant project topics. It should serve the purpose of simplifying management processes and offer a transparent platform for project evaluation.

3 Consideration of skill-level

3.1 Skill-level evaluation at project start

A SWOT-analysis was made at the start of the project to identify the strengths and weaknesses in skills of both group members.

3.2 Responsibilities

All tasks and responsibility of the end products is shared equally with the group members.

4 Quality control

4.1 Evaluation

Before each external deadline all delivered material is evaluated by the group to ensure best possible quality control. Upon material delivery each member of the group has two days to submit his/her relevant, precise and objective feedback unless specific arrangements have been made beforehand. The feedback is goal-oriented and productive in nature. Following feedback, necessary changes to the delivered material are agreed upon by the group.

4.2 Material revision & adjustment

After the feedback on a piece of work has been received and changes have been agreed upon, the group or the individual

adjusts the material accordingly within a specified time-frame. This time-frame matches the work load and work schedule of the individual(s). Further, the changes are made within the scheduled task time-frame, as outlined in the project plan Gantt chart and completed before the related deadline.

5 Final statements

For best possible group atmosphere and for the benefit of an efficient work environment, each group member is expected to address major performance concerns to the other group members well before the scheduled evaluations. This way each group member has a chance to adapt their contribution and behavior accordingly before an evaluation session. The feedback may be given during group meetings and/or from person to person. The midterm evaluation is scheduled in agreement with Bas Moed. The evaluations are based on the forms and procedures outlined in the PAP module book (Berg et al. 2011).

Group members

Maria Tervahauta

Pascal Bolla

Coach

Bas Moed

Client

European School of Physiotherapy, Amsterdam, the Netherlands: Jan-Jaap Voigt

Product content

This section of the project plan further introduces the vision we have developed for getPTsmart.com. Detailed content of the planned structure of the case studies and the Canvas is given. As pictures speak a thousand words, visuals of the web application are provided via snapshots.

Case studies

The structure of the content of the case studies is included as appendix 3.

Web application

The planned items of the web application are included in the appendices as follows:

- Site map - appendix 4
- Look & feel - appendix 5

Canvas

A draft of the Canvas is included as appendix 6.

Learning objectives

The group learning objectives consist of three topics outlined as detailed SMART goals in appendix 1. The learning objectives express our engagement in the development of expertise in physical therapy. In their 'Professional Profile of the Physical Therapist', the Royal Dutch Society for Physical Therapy (KNGF) (Pistorius et al. 2006) divide expertise in physical therapy into two dimensions: the dimension of the profession and the dimension of the individual professional. The value added to the dimension of profession is a key objective of this project, extensively elaborated on in 'Problem identification & general objective'. In the following we elaborate on our vision of how this project benefits the dimension of the individual professional.

We expand our knowledge, expertise and professional assessment skills while developing our final product. We integrate new insights in our professional actions as we research for the best available evidence and incorporate accepted assessment and treatment principles in the case studies in neurological physical therapy. By developing our skills in clinical reasoning based on the HOAC II and the ICF frameworks, we engage in the methodological physiotherapeutic work method characterised by a conscious, process-like, systematic, effective and evidence-based approach as advocated by the KNGF (Pistorius et al. 2006).

Throughout this project we develop our competences as a manager. We manage and organise all project activities internally and in relation to external advisers. We use effective and efficient work strategies to ensure a successful completion of the project.

References & reading list

Project planning

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Clinical reasoning

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Chapter 2

Project plan - Appendicies

Appendix 1 - SMART goals

Clinical reasoning skill	
Specific	We are able to apply clinical reasoning to neurological (& orthopaedic) cases based on the HOAC II and the ICF
Measurable	*Progress:* Positive self-reflection and feedback from clinical experts on clinical reasoning items of this project, including the case studies, Canvas & clinical reasoning website content *Outcome:* Grade ≥8 for the case studies, Canvas & clinical reasoning website content
Attainable	Both team members have proven sufficient abilities in all relevant assessment, exercise & neurology modules as well as clinical sessions and their internships with grades of ≥8
Relevant	As soon-to-be physical therapists, we feel the burning need to develop our own clinical reasoning to a level that brings accountability and efficiency to our clinical practice.
Time-bound	End of module 3.2
Skills & knowledge in neurological physical therapy	
Specific	We possess outstanding skills and knowledge for a starting physical therapist in neurological physical therapy. Our skills and knowledge are based on the best available evidence.
Measurable	*Progress:* Positive self-reflecion and feedback from client and expert content validators. *Outcome:* Content of the case studies, including evidence-based working, is graded at ≥8
Attainable	Both team members have proven sufficient abilities in all relevant assessment, exercise & neurology modules as well as clinical sessions and their internships with grades of ≥8
Relevant	The professional development plan of both team members includes working in neurological physical therapy directly after graduation.
Time-bound	End of module 3.2
Competence as manager	
Specific	We have sufficient skills & knowledge in the Clinical competence list sections of manager & developer of the profession (2.3; 2.4; 2.5; 3.1; 3.4; 3.5; 3.6)
Measurable	*Outcome:* Grade ≥8 on a third level in all above listed items of the Clinical competence list of the KNGF
Attainable	Both team members have proven sufficient abilities in some or all of the competences at level ≥2.
Relevant	The listed competences are core items of physical therapists seeking higher employment and self-employment opportunities
Time-bound	End of module 3.2

Appendix 2 - Skill assessment table

Member	Strength	Weakness	Opportunities	Threats
Maria	Evidence-based working; language; competences of manager and profession developer;	Transparent clinical reasoning through the whole process; skills & knowledge in neurology and ICF	Full concentration on PAP (along with EBP) during 3.2	Time limitations; EBP project
Pascal	Planning; Structured approach; Media skills & knowledge; Reliability	Setting limits; Prioritizing; Skills & knowledge in neurology; Best practice in clinical reasoning	Flexible work hours	Time limitations due to family situation; EBP project; Available time in planning phase

Appendix 3 - Case studies - Structure

The case studies are divided into eight major clinical reasoning steps intended to break the case down into digestible parts. Each single part consists of the information given to the user about the case. Based on this information the user is asked to take actions based on the HOAC II algorithm. Afterward the user can compare his solution to ours and reflect on his clinical reasoning process. Each section is rounded off with relevant rationale and evidence. In the summary an overview of the goals achieved and the planned continuation of treatment are given.

The flow of the content of the case studies is planned as follows:

Initial data - referral, medical records

- Information given: referral / medical records, domain of problem
  - » Note: about NPIPs - start collecting them here
- Actions-to-take:
  - » Generate initial hypotheses for data collection (ICF core sets, guidelines)
  - » Validated solution
- Rational and evidence

Initial data - interview, informal observation

- Information given: interview, informal observation
- Actions-to-take:
  - » generate PIPs list
  - » Include NPIPs
  - » list initial hypotheses
- Validated solution
- Rational and evidence

Examination strategy

- Information given: Initial hypotheses; NPIPs with related hypotheses testing
- Actions to take:
  - » specify examination strategy
- Validated solution
- Rationale and evidence

Examination

- Information given: examination outcomes, incl. additional examination (in table)
- Actions-to-take:
  - » analyse data
  - » refine initial hypotheses
  - » add NPIPs
  - » add related hypotheses
- Validated solution
- Rational and evidence

Goals

- Information given: notes on client-centred approach and problem priorities
  - » Rothstein et al. 2003, p. 466
- Actions-to-take:
  - » establish goal(s) for each problem
  - » set functional measures
  - » set testing criteria (PIPs) & predictive criteria (NPIPs)
  - » set dates of reassessment
- Validated solution
- Rational and evidence

Intervention

- Information given: environment, what equipment is available, treatment hours
- Actions-to-take:
  - » Plan strategy
  - » Plan tactics
- Validated solution
- Rational and evidence

Tactic implemention

- Information given: short summary of process

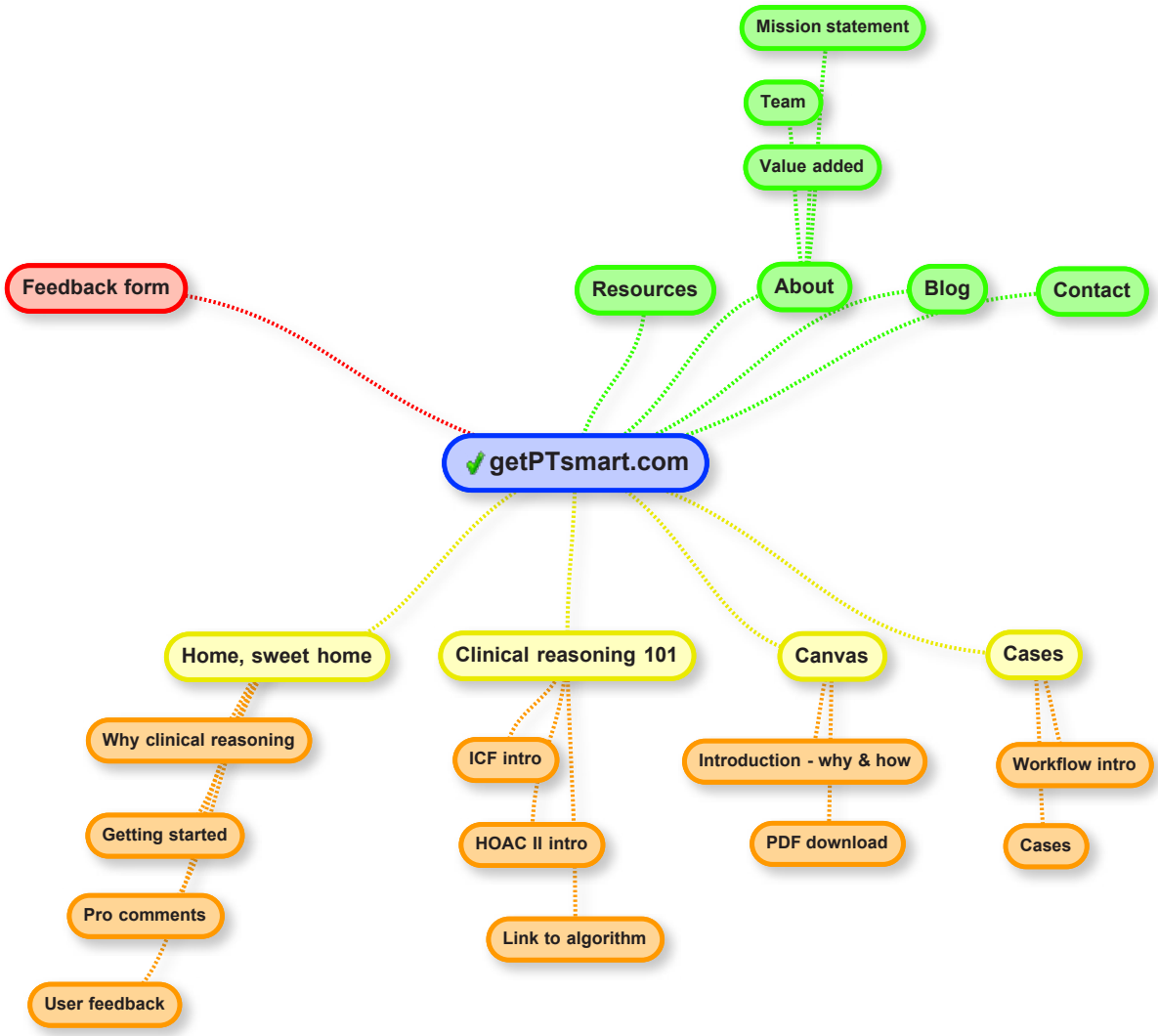
Reassessment

- Information given: reassessment findings (in table)
- Actions-to-take: HOAC II part 2 (see Rothstein et al. 2003)
  - » Existing problems
  - » Anticipated problems
- Validated solution
- Rational and evidence

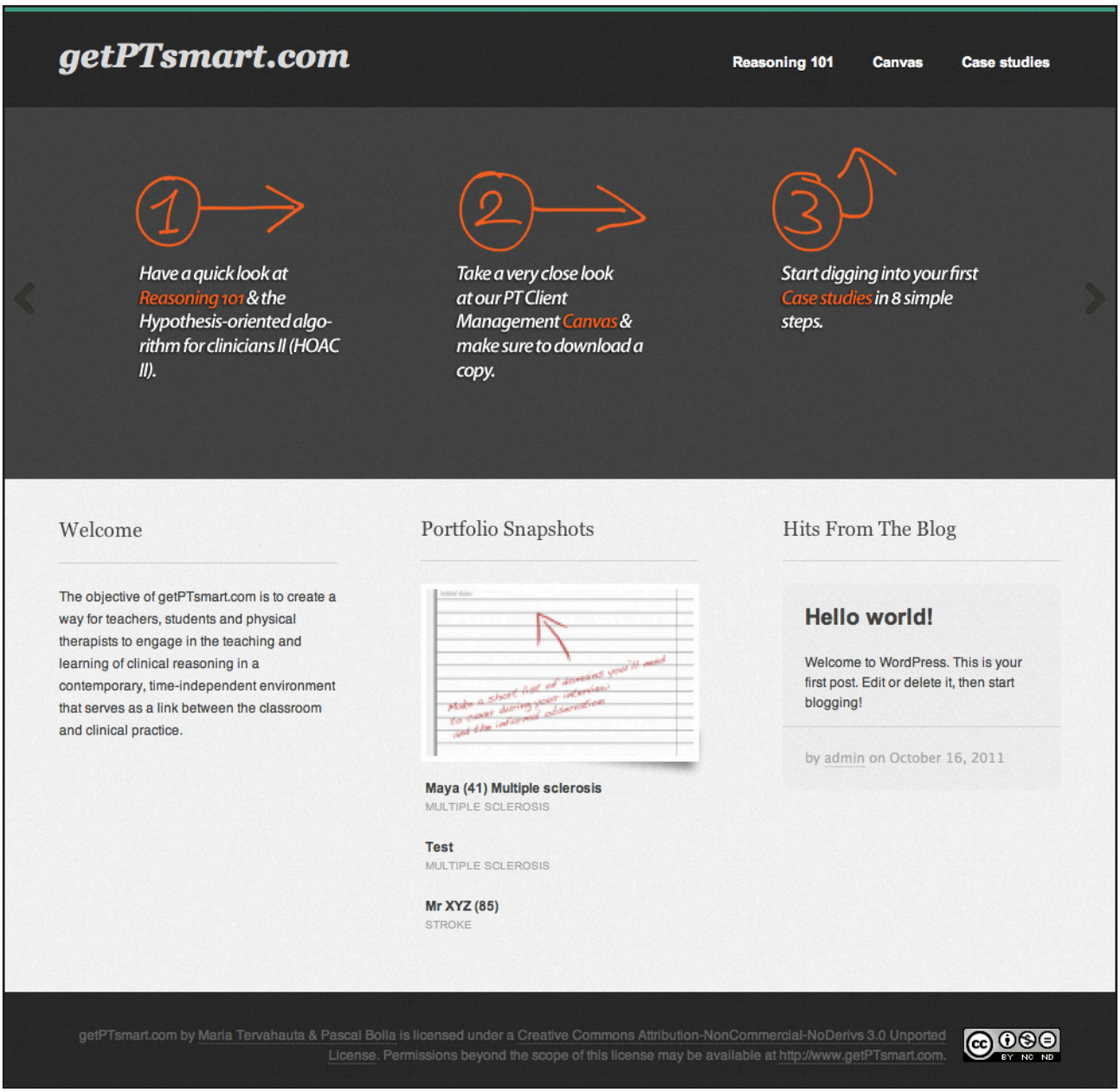
Summary

- Achievement of goals, discharge/continuation of treatment
- Disclaimer

Appendix 4 - Web application - Tentative sitemap



Appendix 5 - Web application - Look & feel



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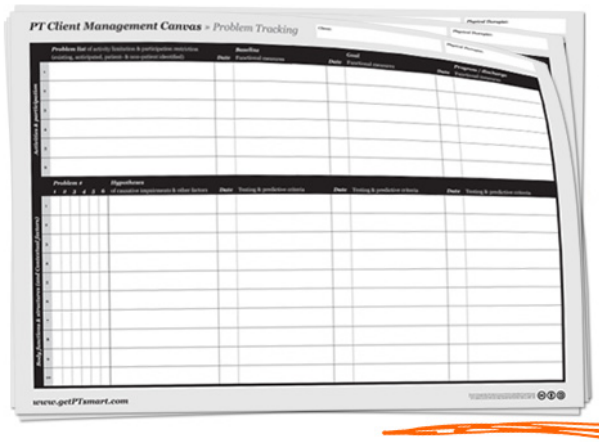
Reasoning 101 | Canvas | Case studies

PT Client Management Canvas



Four pages of organised beauty. It may take a little while until you find your way through it, but most people find this canvas extremely handy when using the HOAC II in a case study.

Download the Canvas

8 easy steps to complete your case with the Canvas

1. Initial data — referral

Generate initial hypotheses for data collection and make your notes in the correct spot PT Client Management Canvas. TIP: use the ICF core sets and available guidelines.Generate initial hypotheses for data collection and make your notes in the correct spot PT Client Management Canvas. TIP: use the ICF core sets and available guidelines.Generate initial hypotheses for data collection and make your notes in the correct spot PT Client Management Canvas. TIP: use the ICF core sets and available guidelines.

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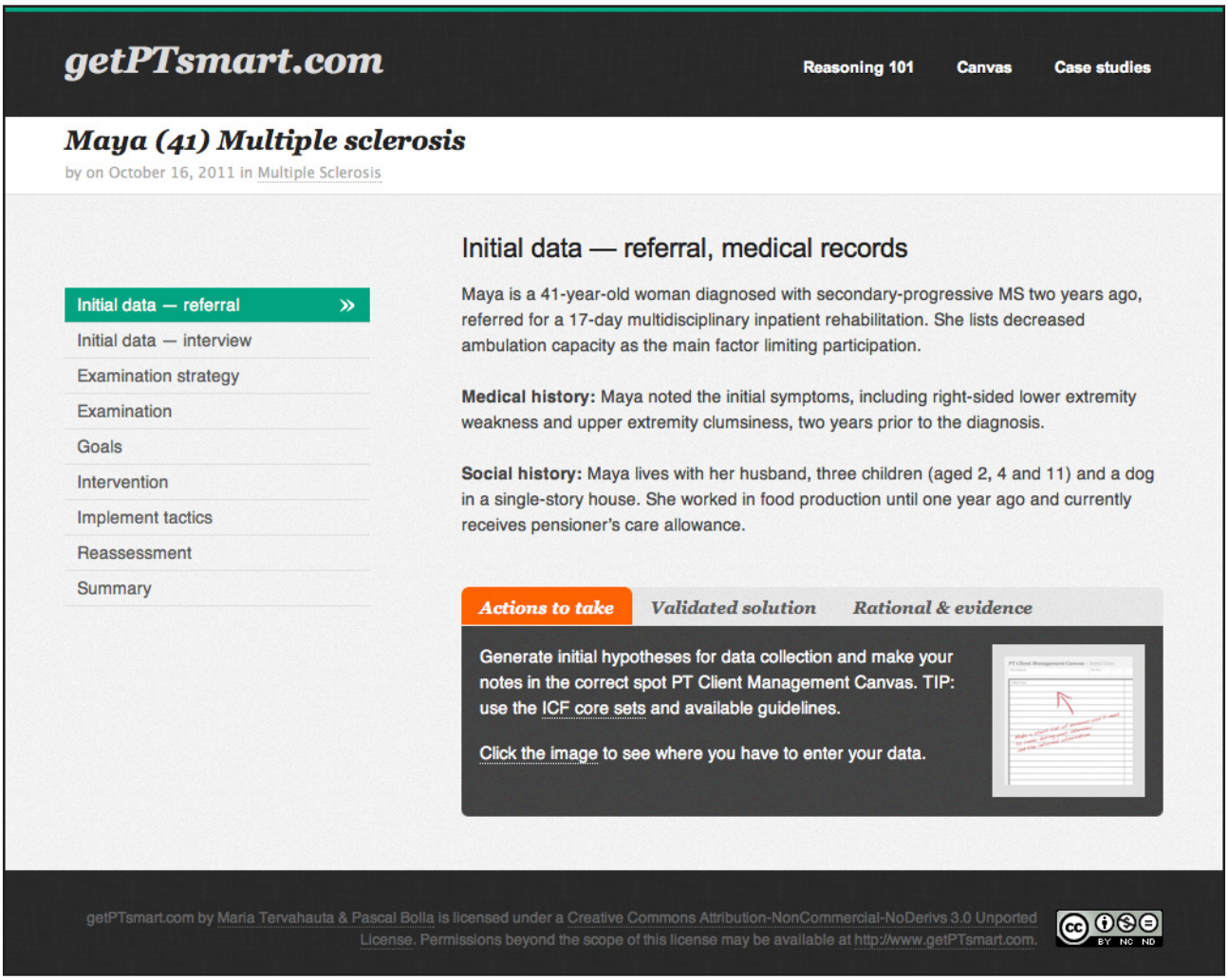
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Reasoning 101
Canvas
Case studies
Maya (41) Multiple sclerosis
by on October 16, 2011 in Multiple Sclerosis
Initial data — referral
Initial data — interview
Examination strategy
Examination
Goals
Intervention
Implement tactics
Reassessment
Summary
Initial data — referral, medical records
Maya is a 41-year-old woman diagnosed with secondary-progressive MS two years ago, referred for a 17-day multidisciplinary inpatient rehabilitation. She lists decreased ambulation capacity as the main factor limiting participation.
Medical history: Maya noted the initial symptoms, including right-sided lower extremity weakness and upper extremity clumsiness, two years prior to the diagnosis.
Social history: Maya lives with her husband, three children (aged 2, 4 and 11) and a dog in a single-story house. She worked in food production until one year ago and currently receives pensioner's care allowance.
Actions to take
Validated solution
Rational & evidence
Generate initial hypotheses for data collection and make your notes in the correct spot PT Client Management Canvas. TIP: use the ICF core sets and available guidelines.
Click the image to see where you have to enter your data.
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Appendix 6 - Canvas

PT Client Management Canvas » *Initial Data*

Client:

Physical Therapist:

Medical diagnosis (Dx):

Date of Dx: Year | Month | Day

Date of birth: Year | Month | Day

Gender:

Date of intake: Year | Month | Day

Interview & informal observation

Guidelines, evidence & remarks

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PT Client Management Canvas » *Problem Tracking*

Client:

Physical Therapist:

Activities & participation

	Problem list of activity limitation & participation restriction (existing, anticipated, patient- & non-patient identified)	***Baseline*** ***Date***	Functional measures	***Goal*** ***Date***	Functional measures	***Progress / discharge*** ***Date***	Functional measures
1							
2							
3							
4							
5							
6							

Body functions & structures (and Contextual factors)

	Problem # ***1*** ***2*** ***3*** ***4*** ***5*** ***6***	***Hypotheses*** of causative impairments & other factors	***Date***	Testing & predictive criteria	***Date***	Testing & predictive criteria	***Date***	Testing & predictive criteria
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

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PT Client Management Canvas » *Examination*

Client:

Physical Therapist:

Activities & participation

Tests & measurements	*Findings*	*Indications*

Body functions & structures (and Contextual factors)

Tests & measurements	*Findings*	*Indications*

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PT Client Management Canvas » *Intervention*

Client:

Physical Therapist:

Problem #'s	*Hypotheses #'s*	*Strategy*	*Tactic* (description, intensity, duration & frequency)	*Implemeter*	*Progression & Remarks*

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