**Can you briefly introduce yourself, and give some background on which part of DECIDE your work contributed to?**

I’m Per Olav Vandvik, I’m an Internist and practising Physician but I also do research on guidelines and evidence-based practice. I’m heading the MAGIC research and innovation programme, which is a large programme centred in Oslo, Norway where we are developing new tools to create, publish and update guidelines. MAGIC was my route into the DECIDE project, I contributed to two key work packages in particular; one being the work package to create strategies to disseminate evidence to healthcare professionals (WP1), and related to WP1 the other one was WP3 where we focussed on evidence dissemination to patients. MAGIC and DECIDE collaborated on these particular issues throughout, and I also took part in work on the Evidence to Decision framework.

**What are the most important findings from your work with DECIDE?**

The most important findings from the collaboration between MAGIC and DECIDE are the new presentation formats of guidelines; clinical practice guidelines now being presented in a multi-layered digital format where clinicians can quickly find answers to their questions at the point of care by finding recommendations first. These recommendations are presented as strong or weak evidence according to the GRADE system, and users can click on the recommendations to find more information. This is one key finding and result that we’re very pleased with; I’ll come back to how these have been implemented with real guidelines later.

The other key finding from DECIDE is the consultation decision aids, which related to how to disseminate evidence to patients as well. We found out that we wanted to have tools so that clinicians can share information about benefits and harms of treatment alternatives with patients in consultations. We build on work done by colleagues at the Mayo Clinic that had made such consultation decision aid cards and we decided we wanted to link such decision aids to recommendations and guidelines. We have now produced these decision aids on top of recommendations and guidelines, which means that clinicians can sit down with patients and discuss treatment alternatives as part of the consultation.

**How has DECIDE changed the way you work?**

Thinking about the way we perform our research in MAGIC, it’s been very helpful to be a part of the DECIDE project because it was a nice protocol that explained the methods we were going to use to create these new presentation formats for guidelines for instance. We’re following the same approach now for other research projects in MAGIC. We do brainstorming, sketching with designers and then stakeholder feedback, user testing, sitting down with clinicians and exploring with them how they like and understand the presentation formats, then moving to surveys and trials – which I thought was innovative in DECIDE in terms of building on current frameworks for research methodology and coming up with a streamlined process and moving from an idea to actually a product. That process has changed the way we work in MAGIC for current and future projects, it’s been very helpful.

**How might DECIDE’s work help other guideline groups?**

That’s where we’re also very happy to see outputs of DECIDE and MAGIC work together. It’s clear that we need tools to actually help guideline developers to create and publish guidelines in useable formats, so MAGIC app is our tool, it’s an authoring and publication platform which is web-based, and GDT is another tool. Over the past few years we’ve interacted with the Nordic Health Authorities who are responsible for creating national guidelines, now they’ve started using MAGIC app and they’re publishing guidelines and recommendations in these multi-layered formats that we created together with DECIDE. We’re seeing real life implementation of the strategies, and there are lots of advantages with moving to that way of publishing which makes it easier to collaborate and share the hard work of creating and updating guidelines across say for instance the Nordic countries. We have some innovation projects now in the Nordic countries and for the first time we’re seeing collaboration on guideline development which has been made easier by the DECIDE strategies and these tools.

**How did MAGIC work with DECIDE?**

At the time when the DECIDE project got funding we started the MAGIC project and it was very clear that we had overlapping objectives so we were part of DECIDE from the first meeting in Geneva in 2011. We decided that we would contribute to work packages 1 and 3. From there on we had funding in MAGIC to have PhD students work on these project so we have been closely working with Pablo Alonso (heading WP1) throughout the project, I think that’s been very successful for both parties.

**Were there any challenges and how did you overcome them?**

The challenges were all related to the fact that there were 2 projects and that creates additional challenges in comparison to a situation where everything is run from within DECIDE. The leadership in DECIDE, Shaun Treweek and Andy Oxman, did a great job in making this happen in a nice way. I think a general challenge in big projects, in particular in EU projects with 10 partners is to have all the partners contribute. We felt that there was limited interest from some of the partners in actually taking part in the research and user testing. The other challenge I guess is to actually have these organisations who were partners, to now adopt the strategies, some of them are really big organisations and they have their internal barriers or challenges which makes it difficult for them to make use of the strategies. I think we overcame some of the challenges by great leadership and a very good set up of the DECIDE project. Another challenge was that the technology was not really clearly formulated from the start in DECIDE, and we came in for MAGIC with a very clear objective to also create tools – in this context we’re talking about really presenting recommendations to clinicians at the point of care even in the electronic medical record. That’s work that we’re now moving forward with in MAGIC, but I think we in DECIDE had a very strong focus on the methodology, the GRADE system, evidence to decision framework and the presentation formats, but not a strong enough emphasis on the whole digitalisation of information which is happening worldwide in every area. I think we nicely addressed this throughout the collaborative project, and the fact that these big guideline organisations are now using new tools like the MAGIC app or GDT to create and publish recommendations in these new formats has shown that in fact we have overcome some of the challenges. We’ll now continue working with the GRADE working group to ensure that the work of both MAGIC and DECIDE can continue to benefit guideline development and communication in the future.

**What is the difference between MAGIC app and GRADEProGDT?**

That’s an important question for current and future users of these tools, there are some commonalities and also some differences. I think GDT offers a wider range of services to a wider range of target groups. MAGIC app is set up and focussed very much on clinical practice recommendations and guidelines but also now the decision aids we’ve developed. GDT I would think would offer a wider functionality for health policy makers and other target groups beyond practice guidelines. We have a very strong focus on digitally structured data in MAGIC app, which allows us to create decision support systems in the electronic medical record for instance. This automated link between creation of guideline content and publication has some advantages. For example, once you have created content in MAGIC app you can publish on smart phones, tablets and other devices. So far GDT hasn’t got that in place yet so the outputs from GDT are less advanced for what we have in MAGIC app at the moment; I would think that might change with GDT, it’s very much down to the hard-core technology and the structure of the database which was our key interest from day 1 in MAGIC; to make sure that we structured the data in the authoring part of our platform so that you could publish in all sorts of formats but also actually to build more advanced decision support systems. I think that’s a difference at least in how these platforms worked out so far.

If we split between guideline creation and authoring, and how it looks for the end users, the two platforms are two distinct things for two different target groups. Those who create guidelines and want to publish in scientific journal a typical Word format or .pdf - a ‘flat format’ – they might want to create evidence profiles, summary of findings tables and recommendations in the GDT. GDT have better outputs right now for use in journals than we have in MAGIC app, though we are building this functionality now. So I think if guideline or systematic review authors want to produce those ‘flat’ formats GDT is likely what they need. If they want to also be able to automatically publish the content through smart phones, tablets etc and then create more advanced decision support then MAGIC app has that. It’s important that people understand these are alternative platforms, both adhere to the GRADE approach and capture new improvements in the GRADE system, but they have slightly different functionalities giving people the choice of using the tool they like to work with best.

The other really important part is you have to make sure you can export data from GDT to MAGIC app and vice versa so that users can switch tools later on, that’s on going work now where we hope GDT will be able to export to MAGIC app. We can export MAGIC app to other platforms already but they haven’t come that far just yet. The collaboration is ongoing on this, within health IT there is never one app that will have monopoly, and it’s good to have several tools that have been developed to allow people to choose which fits their purposes best. The integration becomes key though, that’s the next stage of MAGIC – the evidence ecosystem, ensuring that tools are able to interact across different steps and moving from evidence synthesis to guidelines and decision support systems.

**What is the single biggest benefit of the collaboration between MAGIC and DECIDE?**

The single biggest benefit – a difficult question to answer! – I think I would say the great international network of collaborators that are experts in health research methodology, the GRADE system and then big organisations that have lots of experience in guideline development, coming together in the development of tools; that’s the biggest benefit we have harvested from this collaboration. Several of the organisations that were a part of DECIDE are now a part of our project in MAGIC (Shaun Treweek for example), collaboration with MAGIC has definitely increased after working with DECIDE. I’m curious to see to what extent the big organisations want to adopt strategies, I would hope that the big organisations such as NICE and WHO would also implement the strategies downstream. Through this project we have established very nice personal collaborations with representatives from these organisations, I hope these go on to allow real life guidelines to materialise using the tools we’ve developed.

**What have the reactions of guidelines users been to using the MAGIC app?**

We’re doing large scale innovation projects, say within the Nordic Health Authorities, where we actually really explore how the authors make use of the tool; we’re now making improvements in MAGIC app based on the feedback we’ve got from users. Generally we’ve had very positive feedback, we now focus largely on improving functionality in the authoring side. On the end user side we’ve done similarly both the research in this side to find how the clinicians actually find, understand and make use of the recommendations in top layer formats. According to the studies we’ve published, experiences have been positive, as always there is room for improvement; people like the top layer formats as it makes a lot of sense to them, but they are often frustrated by the fact they can’t find more than a few guidelines out there now. The big question for me now is to see how if an increasing number of organisations will use DECIDE strategies and tools like MAGIC app and GDT to publish recommendations, clinicians will be more exposed to them and will more easily understand the concept of strong and weak recommendations. One of the key findings from the DECIDE project and the work we did was that clinicians suddenly have to understand these concepts, so with dissemination of DECIDE strategies it will be really interesting to see how clinicians value the outputs.

**What are your overall thoughts on the DECIDE project; has it been a success?**

I think DECIDE has been a success and a great project, but still there’s so much work to be done. For instance there’s guidelines that we tested in physicians, we need to also test in other healthcare professionals. We need to improve the presentation formats for how to present recommendations and evidence summaries. Also thinking about patients and consumers, people, how they can get access to the guidelines, evidence summaries and decision aids to make better use of them. I’m hoping that there will be future large projects that will pick up where DECIDE left. One such project that I’m responsible for is the Evidence Ecosystem Project – through DECIDE and MAGIC we now know how we can create, publish and dynamically update guidelines in these tools, but we need to link to other stages of the evidence ecosystem. It’s basically broken now, for example the evidence production part – how you do trials and studies quickly for the most important questions, how you apply the right methodology – Trial Forge is a great project headed by Shaun Treweek which will be a resource to support trialists to do more high quality research. If groups like Trial Forge are able to structure the data in the right way in their own tools, we will be able to effectively and quickly import it into systematic reviews. We’re already working with Cochrane to ensure that all the data in systematic reviews is in the correct format to allow us to export into meta-analyses and evidence summaries, and then straight into guidelines. Then MAGIC app can take this information all the way down to the point of care. The final community of people we need to link with in the evidence ecosystem is those doing quality improvement; all those people struggling with implementing, evaluating and improving care, they typically don’t talk to the systematic review people, the guideline people or the trialists. We want to have those people doing quality improvement work with us through digitally structured data in the electronic medical record to make it possible to actually implement recommendations and measure performance of those recommendations in the medical record. This for us in MAGIC is the next 5 or 10 years of work, to make a real change in healthcare.