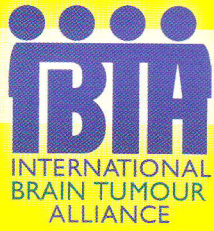


World Edition 2011

Brain Tumour



Clinicians, patients, caregivers, advocates, surgeons, researchers, nurses, allied healthcare professionals and others – all part of the international brain tumour community

You are not alone on this journey...



A publication from the International Brain Tumour Alliance
"Greater Knowledge, Greater Collaboration, Greater Hope"

Neurosurgery in the “app” age

By Dr Pieter Kubben
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I work at the Maastricht University Medical Center in The Netherlands where I'm a senior resident in neurosurgery.

I don't come from a family environment that had a connection with medicine or research – rather both of my parents have been working in education as teachers. I have to admit I did not even like biology at high school level, but I felt that the ideology of helping people was strong enough in me to aim for a career in medicine.

Besides the mandatory topics in medical school we could choose some topics ourselves that we liked to explore in more detail. First I chose “neuroanatomy” as the topic fascinated me. I liked it a lot, so I continued with “clinical neuroscience” the year after. This laid the basis for a career in the neuro-field. The preference for neurosurgery came during my clerkships, and my interest in brain tumours developed later on. Most of the patients I treat cannot be cured at the moment, and although I cannot cure, I do very much care and try to empathise with them as they live between hope and fear.

I became interested in the medical use of mobile devices during a study trip to the USA (Harvard, UCLA, Stanford) and Canada (Montreal, Toronto) in 2002.

Afterwards I developed a framework for collaborative mobile content distribution for which I won two international awards. In 2008 I bought my first iPhone and soon discovered that there was hardly any neurosurgical content available for this

device – or later on, the iPad and Android. I decided to develop something myself, and my first app - called NeuroMind - is currently the most downloaded neurosurgical iPhone and iPad application in the world (over 65,000 downloads so far). It is also available for Android, and a web version (NeuroDSS.com) is under development.

The amount of medical literature is overwhelming. PubMed currently indexes more than 700,000 articles every single year! If we are serious about evidence-based medicine, we have to find a way to deal with all this knowledge. In my opinion, interactive clinical decision support systems can help here. The interactivity that computers can offer combined with the portability of handheld devices, make a good combination.

But we must realize that it will remain decision support. Even the highest quality literature cannot give advice on an individual patient. Therefore, the final decision is made by the physician who treats the patient. I have no troubles with “cookbook medicine” as long as the “recipe” is considered as a guideline that you can change if you have reasons to do so. Forcing physicians to follow guidelines step-by-step in all cases - regardless of their experience and clinical intuition - would be a dangerous and stupid thing to do.

In the future, I think the amount of apps will increase, just as the amount of websites with medical information has increased. For both, the challenge will be to find the good sources of information. Independent sites will review apps for their quality, which will help people to find useful content. For that reason, I am very pleased that iMedicalApps.com have already twice selected NeuroMind for their “Top 10” rankings on the best free medical



Maastricht neurosurgeon-in-training Dr Pieter Kubben, whose app for iPhone and iPad – called NeuroMind – is the most downloaded neurosurgical application in the world.

apps for healthcare providers.

What is my favourite non-medical app? Besides the default mail and calendar applications, I like to use “Things” from Cultured Code. It is a useful task management application that helps me to stay organized.

Besides computer programming to develop mobile applications for neurosurgery, I like sports (cycling, running, swimming, sometimes diving) and I like to play my banflute.

More information on Pieter Kubben and his apps can be found on his website DigitalNeurosurgeon.com and he can be followed at Twitter via @DigNeurosurgeon. A video presentation on clinical decision supporting systems by Pieter can be viewed here: <http://dign.eu/tedx>

Some thoughts regarding decisions about home or hospital in the end stages, or any decisions you need to make on this journey

"I guess the decision to make is heavily dependant on the care that you can get where you live. In addition to that, let me clarify that I strongly believe that in this process the right decision is the one you make, the right treatment is the one you chose, and the right way to face the situation is the one you take, and you shouldn't allow any doctor, friend, newsgroup, wizard or fortune teller tell you otherwise, because in the end, it is your loved one who is the one that will have to face the consequences of those choices, and you as a caregiver, the one that will have to live with them ... and I can tell you that one thing you do NOT need if things go the wrong way, is an extra 'what if I hadn't listened to ...' in your head..." - Fernando Garcia, former caregiver to Rut Sanchez, written on 7 April 2011.