

## **Epilepsy at JSS**

### *Some background*

Epilepsy is the commonest serious neurological disease. In well-off countries almost everyone is on treatment and two thirds will have their seizures completely controlled. But in poor countries or poor places like Bilaspur (for India isn't really a poor country) people are not on treatment. This is for a variety of reasons but often because there are no doctors available.

Unfortunately people whose epilepsy is untreated have a much higher chance of dying than the general population. More people die from epilepsy in India than die from malaria. There are never going to be enough doctors to treat epilepsy in these rural areas. But what about health workers? They might be able to treat epilepsy if they were given a suitable tool. At JSS the hospital has trained village woman to be health workers and I have developed to a mobile app which can be used to diagnose epilepsy. So we wanted to see how the health workers got on using the app to diagnose epilepsy in people in their villages.

### *What we did*

The health workers were provided with a tablet computer with the app on it. They were given a one-day training course on epilepsy and a half-day training course on using the app and the computer. They were then asked to go back to their communities and test the system out on patients who were known to have epilepsy or episodes of unconsciousness which might be epilepsy. The patients that the health workers identified with then seen face-to-face first by JSS doctors and second by a visiting neurologist – Dr Mamta Singh from AIIMS in Delhi.

### *What we found*

The results of the comparison of the health workers diagnosis with that of the local doctor are not available yet but we do know how the health workers coped with the tablet and the app. First only two of the 15 health workers had had any experience of a computer or a smartphone. Yet they had few problems with the tablet or the app. There were occasional instances of broken screens but no more you would be expected in normal use. The tablets were well looked after and most health workers or their families used the tablets for other applications for example downloading music or using the camera or accessing the internet. The health workers also had little difficulty using the app with over 75% of the questions being regarded as easy to ask. The health workers were very enthusiastic and suggested improvements that could be made to make the system easier to use. They also were able to think about the other applications for this technology such as mental illness or diabetes.

### *Conclusion*

So the health workers at JSS took to this new and unfamiliar technology like a duck takes to water. Using an app on a tablet is a great way of involving health workers in the care of patients in the community and so reducing the burden on the few doctors available.