Comment[*]

Use of an Electronic Database for Psychiatry (Microcares™) in Mexico. A Decade of Experience at the National Medical Center[**]

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Psychiatry is without a doubt the branch of medicine most related to human communication; its core clinical data arise from a skillful interview with at least the dyad patient-psychiatrist, but usually the family and the medical team are also involved in the recollection of behavioral, cognitive and emotional data.

Every patient has a different experience of life with his own psychodynamics and meaning of those events, which the psychiatrist needs to interpret and translate to medical words judging what seems normal and what would seem psychopathological.

Psychiatry compared to other specialties in medicine has always had a special language with an abundance of subjective terms; it is a medical language but at the same time a psychosocial language closely related to culture. The enormous task of making these psychiatric terms correlate with the same reality in different countries has been undertaken successfully in the development of the Diagnostic and Statistical Manual (DSM) but at the cost of over simplifying psychopathology.

- Which are the core data that I need as a doctor to make a psychiatric diagnosis?
- Does this knowledge allow me to understand the bio psychosocial context of this patient and help me place the diagnosis in broad perspective?

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- How can I be sure I did not overlook relevant information for me or my colleagues?

The process of choosing which data are necessary to register in psychiatry is one of the most difficult tasks for the clinician, you can go from just filling the blanks of a standardized form of a Symptom Check List to a complete and broad description of experiences like a professional novelist.

Try to think about these difficulties not only among colleague psychiatrists but in the arena of a general hospital with a team of other medical specialists, with different causes of referral, severe physical comorbidities and a variety of medical treatments with the probability of pharmacological interactions.

Almost two decades ago, James J. Strain MD at the Mount Sinai hospital in New York begun the development of a standardized electronic psychiatric database that would be able to gather enough relevant data in the context of a general hospital, in order to save time and allow for a comprehensive clinical record useful for different purposes (hospital notes, clinical research, academic supervision, etc). I first met him in 1992 at an APA meeting and asked him specifically about his experience with transplantation and other C/L psychiatry issues, kindly he accepted and during the conversation he told me

that he was developing and using an electronic database to record his cases at Mount Sinai Hospital in New York. From that DOS system to the one we are using now in Windows there is a big difference specially now that it is available for Palm™ .

With his usual generosity Dr. Strain trusted me a copy of the Microcares™ electronic database in 1994, which we use in psychiatry at the National Medical Center since then.

It has helped me to develop a regional database unique to my country and to answer many of the questions that clinical psychiatrists have to deal with in the management of a psychiatric service in an institution and also for the benefit of my own patients, for example what amount of antidepressants should we be allotted during the next six months? ; Which are the most frequent psychiatric diagnoses at the hospital?; Why do some patients in a surgery ward spend more time hospitalized than others with the same surgical procedure?, etc.

The database allows for a very quick and simple ordered gathering of standardized data for every member of the psychiatric department, same data for everyone regardless of a biological or psychodynamic bias.
- The database among other many things takes into account the time and cause of referral allowing you to record which services

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are more prone to ask a for psychiatric consultation and which services are closer to making a reliable psychiatric prediagnosis. For example, we did an analysis of the time of referral by clinical department correlated with the diagnosis and we were able to demonstrate that more than 80% of the referrals were not timely; delirium cases or severe depressions without treatment were detected and recorded in the file at entrance but the referral was made at least several days later and after many laboratory and imaging studies; in many cases emotional problems were detected in previous hospitalizations but the patient was not referred to psychiatry until the current severe episode. When we correlated the diagnosis of the referral (made by a non psychiatric specialist) with our diagnosis we found that only in half of the cases they were similar, one example are patients referred as depression who really have hipokinetic delirium. Or patients sent with presumptuous schizophrenia which are really abusing metilphenidate or having a manic episode.

Surgical services were regularly less skilled in detecting delirium as they usually think of it as the common evolution of surgery and do not regard it as a different diagnosis.

Medical services usually are skilled at detecting delirium but to our surprise less apt to detect chronic depression as they think is a conventional part of the chronic physical illness.

With this in mind, we were able to develop clinical courses on detection and management of delirium and depression with a different emphasis for each of these medical and surgical colleagues.

- Recording the psychiatric history of the patients and their families we were able to detect which groups were vulnerable and start psycho-education sessions and self help groups for these special populations. In our experience, as psychiatric histories carry a stigma it is difficult to study the families but with the database it is easier to form homogeneous groups.

- 67% of the patients seen at the National Medical Center in Mexico City, by other specialties have psychiatric symptoms or a psychiatric history with enough relevance to deserve at least one session with a psychiatrist.

- With the standard method of registering at our hospital you can add only one diagnosis, which of course for medical reasons, usually is the main physical diagnosis. With this database you can have three medical diagnoses (DSM Axis III) , and five

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different spaces to record the psychiatric diagnoses (Axis I and II), making it very easy to correlate and study comorbidities and most of all to register exactly the correct integral diagnosis. One of the main difficulties we encountered before Microcares™ when we were using Excel as our previous way to enter and register our data was that depending on the person doing the job we could have several different answers, for example speaking about a depressive episode we could find: (In spa nish) *Depresión, Depresion, depresión, depresion, episodio depresivo, Episodio depresivo, Episodio Depresivo Mayor, episodio depresivo mayor, DM, EDM*, etc. and I had to change every item one by one and standardize the different ways it was recorded, usually this standardization took more time than entering the data the first time. However with the Microcares™ software it is just a click away to enter exactly the same diagnosis; and you even have the option of knowing if that diagnosis was confirmed or not later on.

- Adherence to treatment is another important element available for record with the follow up of our treatment suggestions. We have found analyzing our data that when our treatment suggestion implies diminishing psychi-

atric medication (in number of tablets or doses), our directions are usually welcomed and performed with almost a hundred percent success, but when it is about influencing the medical treatment started by others we only succeed half of the time. The database allows you to check which departments are more confident in your ideas of treatment and to implement a "special treatment" with the team and probably add one or two scientific articles that support your professional opinion.

- As for medications, you can have a complete record by clicking each one at the database and check its evolution in time, if they were medically prescribed or self medicated.; and what kind of response each one attained. The average number of medications in our hospital is 7 different drugs, at least a third of the patients are using or have used a psychotropic and usually this was prescribed by a doctor outside our hospital or self medicated getting it from a family member.

- Being a hospital with four hundred residents of different medical specialties and many pre and postgraduate students, the National Medical Center has become one of the most widely recognized hospitals in Mexico for its academic excellence; the

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option to register data from our own students and being allowed to develop specific tutorial programs for each one of them is remarkable. We can easily detect what kind of patients they have ommited during their training and reinforce those blind areas. An example is that psychiatric residents in their first year usually are very similar to other specialties' residents in their psychiatric diagnosis except for affective disorders, but after a few months they develop the skills to recognize for instance a hipokinetic delirium without thinking that it was only a depressive episode or worse, a personality trait. The supervision of our students is enhanced by this kind of data.

- A great advance in technology is to have several psychiatric scales literally in the palm of your hand ready to fill in just a minute, including the Hamilton for depression, Folstein, Goldberg, Glasgow, Arizona Sex scale, etc. We can see objectively the progress in the scales from date to date and even show their own advances to the patients.

- The data gathered with the software has been the best way to demonstrate the importance and relevance of our interventions to the authorities at the hospital and the rest of the specialties, not only in terms of quality of life

but also in the spending of economical resources (cost-benefit). The richness of data is so great that usually you don't get a hold of all the comparisons that could be made. It is information that can be presented in many different papers in other specialties' journals and our own. A clear example of this opportunity is the work done by Graeme Smith MD, psychiatrist and friend in Australia who has published not less than 16 papers using this database.

- For research purposes it is the quickest and easiest way to record relevant psychiatric clinical data ready to be compared with other databases from general hospital psychiatric units in Mexico or other countries.
Six years ago I had the opportunity to participate with Dr. Strain in a presentation at the Mexican Psychiatric Association annual meeting in Cancún, showing data from a small sample of consultations (500 patients) from our hospital compared with Dr. Strain's huge database (several thousands) at the Mount Sinai hospital in New York. The comparison demonstrated the differences and similarities of treatment between the two clinical groups.

- Not all is milk and honey. The main difficulty encountered along the way was not the bar-

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rier of technology prices in Mexico or the barrier of language, but that too often the data were filled incomplete, I used to think that the ommisions were because of time limitations but I have seen that most of all it is the attitude, since people are not used to register other data that may not seem relevant at the time of the consultation but that are necessary for later purposes.

- We are still gathering more and more data with the Microcares software, and the new generation of psychiatric residents can behold the impact of this data in their own graduation thesis.

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