Terry, thanks for sending this -- very good ideas within (and nice colors).

There is very active work going on at Bahmni to create a solid, reusable formdriver toolset -- and I believe it has recently been posted to OpenMRS talk for design comment, with anticipation of having a Design call about this very soon and also with the idea to leverage any good prior OpenMRS efforts.

We used formdrivers extensively in our work at Brigham/Partners, and there are a few dozen do's and don'ts that can be beneficial to any other effort.  With regard to data fields, my thoughts are aligned with Tom's.  In particular:

Most data we are collecting is either "Status" or "Transaction" data (a recurring theme in design meetings).

* **Status** are items that are not associated with a specific date, and are usually slow-varying:  name, address, birthdate, primary doctor, next of kin.
* **Transactions** are items specific to a particular episode, date, visit, etc. -- lab tests, vital signs, med orders, med administrations, blood transfusions.  Sometimes transactions are part of a series (chart of blood pressures, history of medications), sometimes you care about the most recent values (latest weight shown on your patient dashboard), and sometimes they modify the accumulated status - see next item
* **Accumulated status** items are those which are slow-varying and which are modified by smaller transactions -- medication list, problem list.

The practical implication?

* You can mix status and transaction items in the same form, but often it's better to cordon off status items in one form (that is to say, in one part of the data entry/edit area) and transactions in another.
* Definitely cordon off areas that are done by different role-players, and in particular cordon off areas you wouldn't expect to be changed in every visit. There should be a separate form for demographics, a separate form for clinic/clinician associations, a separate form for visit administrative data -- even though all three of these could appear on the same page or on adjacent tabs.  There should be one or more forms for clinical data: for example, early-in-the-encounter data collection (history and physical), late-in-the-encounter actions (orders and consults); any written visit conclusions or summary could go in either place but tend to get lumped in with the H&P.  In the case of nutrition, data collection would include latest nutrition info and latest measurements of weight etc., and end-of-visit actions would include a change in plan, followup needs, prescriptions.

Prior data - to show or not to show?:

* Transaction fields usually should not be pre-populated with earlier data, although for some single-valued transactions (e.g., weight) it is possible to include prior data as a label next to the actual entry field or control.  With time of the essence in any clinical encounter, the temptation to just leave a pre-populated data field unchanged, or even to not look at it at all, is very great.
* Most slow-varying status doesn't have to be immediately available for enter/edit. Registration and demographic fields should require an extra step to edit, e.g., you click the Demographics tab and it shows you the fields, then there can be an Edit button to bring up editing controls. When editing such fields, they can be pre-populated -- chances are you only want to change one of several fields on the form, and you want to see the others as a way of visual confirmation.  Alternatively, you can show the existing data as a label and leave the control blank, telling the software only to change items where the field was filled in.
* Accumulated status lists don't have their own New Item entry, it's usually a New button above or below the list.  However, deleting or editing an item in an accumulated status list usually is done by showing the list and having Delete and Edit buttons next to each item.  The Edit button brings up a small transaction form (for a single med or a single problem), which is pre-populated.  The New button brings up a similar form, but not pre-populated.

Hopefully that helps a little with deciding what to do for each section, along with Tom's comments.