

DATA BANKS AND THEIR APPLICATIONS

Robin S. Willard

The computer is a relatively new tool in the field of dietetics, but it has already made a substantial impact. Dietitians are typically computer novists who now must make intelligent decisions regarding possible automation for their operation. Therefore, the dietitian must seek the skills or counsel of a computer specialist. This combined expertise in dietetics and data processing will secure full utilization of the strengths of a computer, speed and memory, for execution of the necessary "clerical" tasks, while relieving the professional in dietetics to pursue a higher level of administrative planning and performance.

Each of you must analyze your own situation to determine if automation is the path to travel or whether streamlining your present manual method of operation would prove sufficient. Obviously each of you are here, however, because you are seriously considering automation -specifically automated nutrient analysis of individuals' foods, food records, menus and recipes.

A systems analysis should answer the following questions:

- what kind of information?
- what are the capabilities of the primary user of the system?
the sophistication of the user must match that of the system.
- what will the full cost be, including installation, training and redesigning of work space?
- will there be interfacing with other departments (nursing and pharmacy)?
- will there be necessary restaffing or reorganization? Who will use it, who will manage it, how will security of the system be insured?
- will there be sufficient data processing support for developing or buying a system?
- is the system really needed in the first place? - the least asked question.

As you consider the acquisition of a compiled source of nutrient data, or data base, plus the software for manipulating the data, referred to as application programs, you should weigh four options:

- 1) develop both the data base and application programs
- 2) purchase both the data base and application programs
- 3) purchase the data base and develop the application programs
- 4) although less common, purchase the application programs and develop the data base

Common features of a nutrient data base include:

- nutrient composition of foods (brand name, USDAO)
- food group classification
- common allergy classifications (gluten, lactose)
- common portion unit assignment (volume unit with associated gram weight)
- source of data documentation

Common features of application programs include:

- calculation of total or averages of nutrients from the food records entered
- comparison of totals to the NRC-RDA
- calculation of the percentage of carbohydrate, protein, fat and alcohol contributing to the total calories
- formats of input and output forms will vary greatly

There are responsibilities that are assumed when acquiring a nutrient data base system. The coordinator of a nutrient data base is primarily responsible for maintaining the integrity of the data base. The user of the nutrient data base is ultimately responsible for the end results of manipulating the data and the priorities established in utilizing these results.

Only you can decide whether you should develop your own system or purchase one of the many systems - or components of a system available. There are definitely situations when developing a tailor-made system is in order, but such added convenience should be weighed against the extra time and cost. Finally, remember to 1)know your business well so as to plan and weigh options 2)do not hold false hopes - there will be missing values for some nutrients 3)sustain the system once you have acquired it and 4)embrace the future because your patience in planning for the system will be rewarded!