



# HIV RESOURCE REVIEW

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## EVOLUTION OF NUTRITION SCREENING SERVICES IN A COMMUNITY BASED HIV CLINIC

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The Early Nutrition Intervention Program in HIV and AIDS in Reno, Nevada was started in October of 1994 with Ryan White funding from the Health Services Resources Administration (HRSA). It was one of 23 projects designated as Special Projects of National Significance (SPNS) intended to answer questions important in the delivery of HIV care. It is expected that findings from the projects, which will be completed in September, 1999 will have broad implications for effectiveness and design of HIV/AIDS services. Our project was the only nutrition project in the group. The goal of this nutrition SPNS project was to develop and integrate a model for HIV/AIDS nutritional services into the medical care system of a community based HIV clinic. The University of Nevada School of Medicine was granted funding for this project, which was operated as a research study requiring client informed consent and oversight from the university's institutional review board. Other SPNS projects include rural outreach and care, women's projects, substance abuse outreach and managed care of HIV. Details about these projects are at The Measurement Group web site (<http://www.themeasurementgroup.com>), which is the organization responsible for the national evaluation and data management of the SPNS projects.

An overview of project activities that have been implemented to accomplish the goal include the following:

1. Informing persons with HIV/AIDS and medical and social service providers about the availability, scope, benefits, location, etc., of SPNS nutrition services and enrolling clients in the program.
2. Learning about what is needed to provide routine nutrition services through applying,

*(Continued on page 2)*

### INSIDE THIS SPECIAL INSERT ISSUE

EVOLUTION OF NUTRITION SCREENING SERVICES IN A COMMUNITY BASED HIV CLINIC	1
ALTERNATIVE FOCUS: MILK THISTLE - SILYMARIN	1
MED WATCH: LOMOTIL	5
RESOURCE CORNER	5
GLOSSARY -- DEFINITION OF WORDS DENOTED WITH THIS SYMBOL *	9
PROGRAM SPOTLIGHT: CHASE BREXTON HEALTH SERVICES	10
HANDOUT -- MAINTAINING OPTIMAL NUTRITIONAL STATUS	INSERT



## ALTERNATIVE FOCUS: MILK THISTLE - SILYMARIN

Silymarin, a polyphenolic\* antioxidant, is derived from the milk thistle plant. A member of the family Asteraceae or Compositae, milk thistle is also known by several other names (Silybum marianum L. Gartneri, Carduus marianus L., the Marian, Mariana thistle, St. Mary's, and Our Lady's thistle).<sup>(1-4)</sup> This tall herb with spiked leaves, which have white veins, has milky sap and grows in dry, sunny soils of southern and western Europe and in some parts of the U.S.<sup>(2,3)</sup> It is commercially grown and can also be found growing wild in dry waste areas or grown in gardens.<sup>(5)</sup>

Milk thistle was named Silybum by Dioscorides in 100 AD for its large purple flower heads that are like thistle.<sup>(6)</sup> Although people have used milk thistle derivatives for almost 2,000 years their popularity has increased greatly since 1968 when someone discovered its active ingredient. The active constituent in milk thistle is silymarin, which consists of many flavonolignans (silybin, isosilybin, dehydrosilybin, silydianin, silychristin, and others).<sup>(1-3)</sup> The principal component is silybin also known as silibinin, silibin, or silybinin.<sup>(7)</sup> Other compounds in



## EVOLUTION OF NUTRITION SCREENING SERVICES IN A COMMUNITY BASED HIV CLINIC

*(Continued from page 1)*

testing, evaluating and continually modifying nutrition protocols, hiring and training staff, organizing clinic scheduling, and identifying/developing patient education materials, data collection forms, client reports, etc.

3. Emphasizing and demonstrating the importance of nutrition to overall HIV care to obtain the support of clinic administration, staff, and patients in order to achieve full integration of nutrition services within the medical clinic setting.

4. Developing a system for identifying clients at nutritional risk.

5. Assessing the importance of location (in a medical clinic versus in a community based organization) of nutrition services on enrollment, utilization of services, and client satisfaction.

6. Developing an information management system for continuous program improvement to answer questions about the characteristics of clients served and about the effectiveness of nutrition services on both quantitative (for example- number of illnesses, weight and body composition change, calories consumed, etc.) and qualitative (for example- client perception of services, impact on quality of life, etc.) outcome measures.

7. Measuring the impact of the project on stakeholders including individual clients, the clinic and medical staff, and the larger community of HIV service providers.

8. Informing the HIV care community about our experiences and findings that would facilitate similar integration of nutrition services.

9. Providing ongoing nutrition assessment and individualized counseling services to HIV-positive persons.

The need to provide nutrition assessment and counseling services early in the course of HIV care to prevent complications has guided many of the activities of this project. For this reason, the development of an effective nutrition screening system, which could serve as an entry point to nutrition care, was a focal activity that cut across several of the main project objectives.

Our goal was to develop a system that would identify common problems in this population as well as those that are less common but which could have serious consequences if not identified. It was also clear that we needed to develop a tool that would be simple enough to give to every client entering care and to repeat at least annually.

Early efforts of the project were directed towards understanding the extent and nature of nutritional needs of our clients, the factors that put them at risk for poor nutrition, and the barriers to providing and accessing nutrition services. Review of the HIV nutrition literature, coupled with other widely used more general nutrition screening parameters, guided the first of many versions of a data collection form and relatively cumbersome nutrition risk identification and documentation system. The initial forms and documentation were completed by the nutrition counselors using information from the client interview, medical and laboratory records, food intake records <<http://www.themeasurementgroup.com/modules/module41.htm>>, nutrition questionnaires, and physical and metabolic measurements. Periodic review of findings, analyses of the types of risks identified, changes in medical care, and changes in patient health status and needs guided the almost continual updating and refinement of the nutrition risk form.

There were practical considerations and

barriers to be overcome before a viable screening system could be put in place. Observations and experiences, that helped to shape the system we are now using include the following:

\* The knowledge that nutritional health is critical to the well being of HIV-positive clients and to the effectiveness of their therapies is not universally translated into policy that incorporates nutrition assessment and counseling for all clients as part of routine medical care.

\* Clinics are busy places and staff may feel overwhelmed by multiple demands and limited time for each client, making efficiency a high priority.

\* Clients often have a short waiting period either in the reception area or in the examination room that can be used for completion of a nutrition questionnaire.

\* Non-nutrition members of the health care team (physicians, physician assistants, nurses, pharmacists, social workers) may all provide nutrition education at some time to clients.

\* Not all clients need or want nutrition services.

\* Some clients are unable to access nutrition services because they lack transportation or are unable to get time off from work for non-medical appointments.

\* The registered dietitian (RD) and diet technician (DTR) offer special skills in providing direct nutrition assistance to clients and serving as resource persons or consultants to the clinic team.

\* The RD/DTR benefit from the insight of the other team members and their familiarity with a patient's medical condition, living situation, personality, etc., which allows them to give practical suggestions for the type of nutrition assistance that might be most appropriate for that individual.

\* Weight loss and wasting as well as weight gain and weight redistribution are

**“NOT ALL CLIENTS  
NEED OR WANT  
NUTRITION  
SERVICES.”**

### DEVELOPMENT OF THE NUTRITION SCREENING SYSTEM

*(Continued on page 3)*



## EVOLUTION OF NUTRITION SCREENING SERVICES IN A COMMUNITY BASED HIV CLINIC

*(Continued from page 2)*

important indicators of need for nutrition intervention. Information on weight and body composition must be routinely collected to evaluate weight change over time.

\* Emerging new knowledge and therapies, and changing nutritional needs require frequent patient follow-up and updating of nutrition risks.

\* A screening system can serve as a secondary purpose of raising awareness and educating clients and providers about the relationship of nutrition to disease and alert them to identify and treat problems early.

\* The screening system can provide a formal mechanism for clients to request and access the services of the RD/DTR.

After careful analysis of the risk data collected <sup>(1)</sup> and consideration of the above factors, we were ready for our first attempt at implementing our first screening system. We developed and tested a form that required an average of five minutes to complete and included the risk factors identified by our preliminary work.

We then met with the clinic staff to show them the form (Table 1) and propose a screening system that would be implemented as follows:

◆ The nutrition staff would provide in-service training explaining how the screening form items represent potential nutrition risks and about what additional information is needed to estimate the extent or severity of the problem.

◆ Each client would be asked to complete the nutrition screening form once and to update it once per year; or more frequently if needed.

◆ After the form has been completed, the first person seeing the client (usually the nurse) would review the form, probe further about the yes answers, and decide whether to

provide information/handouts on the spot, ask for more information from the dietitian and get back to the client, or refer the client to another team member (doctor, social worker, pharmacist, dietitian) for more in-depth assessment or help.

◆ Each item was coded to indicate a suggested pathway for referral. For example, some nutrition problems need a more thorough medical work up before referral to a dietitian, while other nutrition problems may be related to a lack of resources or side effects of medications, and a referral to a social worker or pharmacist is needed.

◆ Some statements will need more information to determine if they are really causing nutrition problems. For example, it is difficult but not impossible to have a good overall diet if a person skips many meals. For these statements, a good food diary could be completed by the client to examine dietary intake more closely. The dietitian would assess overall dietary adequacy from the food diary and determine the need for further intervention.

◆ The original screening form becomes part of the client's medical record with additional findings and interventions noted in progress notes or other usual formats.

◆ Clients with more in depth nutrition problems or questions can be scheduled to see the dietitian. If immediate help is needed and no appointments are available or if the client lives out of town, the dietitian may be able to do the consultations by telephone.

The staff supported comments that we proposed and suggested modifications to the form to make it more user friendly. They also requested that we provide them with additional materials to use with the screening form:

◆ A small reference book that can be put in a pocket or kept handy in the exam room that gives very brief information for each of the items (why it might be a nutrition risk, further questions to ask to determine level of risk, basic suggestions to help, and specific examples of what type of help the dietitian might provide).

◆ A collection of nutrition education materials to give to clients with less serious concerns or for clients who may not want to see the dietitian or when there is a long wait before the next available nutrition appointment.

◆ A food intake questionnaire to get more specific dietary information.

We continue to maintain and update client education materials, have completed a food and supplement record form, and are in the process of developing the "guide book" for staff.

The second draft of the form (see Table 2) included suggestions from the staff to eliminate the coding for the referral system. Instead of the coding, we initiated ongoing team interactions to ensure appropriate cross-referrals for nutrition risks. Some staff opposed an automatic or "externally" prompted referral system. They suggested instead that clients who would be most likely to benefit from

NUTRITION SCREENING FORM			
Your Name: _____	Today's Date: _____		
1. I have a poor appetite.	Yes	No	(RD)
2. I often feel too tired or sick to eat.	Yes	No	(MED)
6. Without wanting to, I have lost weight.	Yes	No	(MED)
10. I eat out often.	Yes	No	(RD)*
11. I don't have a place to store or cook food.	Yes	No	(SW)
Legend for referrals from responses to Nutrition Screening Form: RD=Nutritionist Med=Physician Assistant Nurse or Physician SW=Social Worker Pharm=Pharmacist			
* Indicates that client can fill out a food questionnaire to provide more information.			
<b>TABLE 1. EXCERPTS FROM FIRST DRAFT OF THE SCREENING FORM</b>			



## EVOLUTION OF NUTRITION SCREENING SERVICES IN A COMMUNITY BASED HIV CLINIC

<b>HOPES Clinic Nutrition "Check Up"</b>		
Your Name: _____	Today's Date: _____	
Good nutrition is an essential component of your health. Answer the questions below to "check out" your nutrition and let us know if you would like help from our		
1. What is your present weight? _____ What is your healthy weight? _____ (This is a weight where you feel good and one that you can maintain without starving or stuffing yourself.)	Yes	No
2. Do you have a poor appetite or often not feel like eating because you aren't hungry?	Yes	No
3. Do you often feel too sick or too tired to eat or prepare food?	Yes	No
4. Are you often too busy or too "on the go" to eat or prepare food?		
20. The dietitian will be able to review your present eating habits with you to see if there are ways you may be able to improve your diet. She will also be able to discuss food safety and give you personalized suggestions for helping with some of the problems you checked above. Would you like to schedule an appointment with her?	Yes	No
21. The social worker is available to talk with you about some things that may be interfering with your nutrition like feeling depressed, lack of resources, or use of alcohol or drugs. Would you like to schedule an appointment with her?	Yes	No
22. The pharmacist can help you with your medications if you are having a tough time working out the schedule for meals and medications or knowing what foods to eat or not eat with your medications. Would you like to schedule an appointment with her?	Yes	No
23. Measurement of your body composition will tell you how much of your weight is fat and how much is lean (muscle and organ). This can be		

**TABLE 2. EXCERPTS FROM SECOND DRAFT OF THE SCREENING FORM**

*(Continued from page 3)*

consultations with a dietitian, social worker, or pharmacist were those who requested these services voluntarily. Therefore, a section was added to the form briefly describing the services of these staff members and providing the opportunity for clients to request a consultation.

At this time we were fortunate to attend the World AIDS Conference in Geneva, Switzerland, to present some of the initial outcome findings from our project. <sup>(2)</sup> Several months later we presented our preliminary work and first draft of the form at ANSA's (AIDS Nutrition Services Alliance) national conference where we got additional ideas and suggestions from conference attendees. New information and valuable input and ideas gained at these conferences coupled with suggestions from our staff guided the development of the second draft. Items were regrouped and reworded in the form of direct questions instead of as statements. Questions were added that related to emerging metabolic problems such as changes in body shape and presence of elevated lipids, diabetes, and hypertension. Also added were questions based on our findings presented in Geneva that there is a significant correlation between dietary quality and

certain subjective responses about perceived nutrition knowledge and dietary adequacy. We adapted the title from an example in a nutrition handout used at Project Open Hand in San Francisco to make it more inviting and less clinical.

This second version was then pilot tested with several clients in our study and reviewed again by the nutrition team. We decided that it still needed refinement and developed a third version (see Table 3 on page 8) that we are currently using. We reformatted questions back to simple statements and replaced the yes/no answers with boxes to check to allow for more "white space" to make it visually more inviting. Questions were grouped into one of three areas with bold headings: "General Nutrition Concerns", "Weight and Body Composition", and "Things That Keep You From Eating As Well As You Would Like". The intent of this change in format was to foster use of the screening form as an indirect method of nutrition education by raising awareness of why or how the items might pose a nutritional risk. Input from PWAs regarding the burden of paperwork they face was also considered, and it was decided that administration of the nutrition screening form should be approached as completely voluntary. As a result of this conceptual sift, the forms are

placed in the clinic waiting room ready to be filled out on a clipboard with a pen attached. The clipboards are placed in a basket with a colorful sign "Have You Had Your Nutrition Check-Up?" and with free snack bars to encourage interest. The opportunity to complete a nutrition screening form is also offered to all new clients by the worker as part of their initial intake and evaluation but is not required.

The SPNS projects are intended to implement and evaluate untested or innovative ideas in HIV care with the goal of dissemination of findings about successes and failures and sharing of products developed. Therefore, we are striving to learn how our experiences may be of use in other settings and to identify considerations for adapting the screening form and materials to different settings.

We expect that clients in other clinics are experiencing many of the same nutrition problems identified in our study. However, we understand that the constellation of staff and clientele of each clinic, factors such as environment (small versus large city, urban versus rural), clinic setting, and the predominant culture/ethnicity, gender, and age of clients will influence the nature of risks to be evaluated. The form and

*(Continued on page 5)*



## EVOLUTION OF NUTRITION SCREENING SERVICES IN A COMMUNITY BASED HIV CLINIC

<b>HOPES Clinic Nutrition "Check Up"</b>	
Your Name: _____	Today's Date: _____
Good nutrition is important to your health and well being. Take a few minutes for your "check up" and see how you are doing. Check each item that is true for you.	
<b>General Nutrition Concerns</b>	
<input type="checkbox"/> I'm not sure if my diet provides everything I need. <input type="checkbox"/> I'd like to know more about which foods to eat to stay healthy. <input type="checkbox"/> I'd like to know if I should take supplements or if I'm taking the right ones in the right amounts.	
<b>Weight And Body Composition</b>	
<input type="checkbox"/> I am not at my healthy weight. (This is a weight where you feel good. A weight that you can maintain without starving or stuffing yourself.)	
<b>Things That Keep You From Eating As Well As You Would Like</b>	
<input type="checkbox"/> Poor appetite, don't feel hungry, feel too full <input type="checkbox"/> Too busy or too much "on the go" <input type="checkbox"/> Problems with teeth and chewing or swallowing <span style="float: right;"> <input type="checkbox"/> Feel very sick or tired  <input type="checkbox"/> Sad, depressed, lonely  <input type="checkbox"/> Diarrhea or constipation                 </span>	
<b>Would You Like To Schedule An Appointment?</b>	
<input type="checkbox"/> <b>Dietitian</b> She will review your present eating habits with you, answer your questions and give personalized suggestions and menu ideas. <input type="checkbox"/> <b>Social worker</b> She is available to talk with you about some things that may be interfering with your nutrition like feeling depressed, lack of resources, or use of alcohol or drugs. <input type="checkbox"/> <b>Pharmacist</b> She can help you with your medications if you are having a tough time working out the schedule for meals and medications.	
<b>TABLE 3. EXCERPTS FROM THE CURRENT VERSION OF THE SCREENING FORM</b>	

(Continued from page 4)

system developed for our project will almost surely need some modification to fit the unique culture and experience of every setting.

The rapidly changing nature of knowledge about nutrition in HIV infection and the emerging new treatments also dictate that any screening system provide for continual modification and updating. Clinics need the ability to easily modify, update and customize the form to meet their needs and to allow for continuous evaluation and redesign to ensure that clients at nutrition risk are being identified. A copy of our screening form is available either as a hard copy or on disk (in Word Perfect 6.0) that can be modified and used as needed.

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