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NEWS
Remarks

United States Department of Agriculture
Office of Public Affairs
News Division
Room 404-A
Washington, D.C. 20250

Release No. 0499.93

Mary Dixon (202) 720-4623

Prepared for Delivery by
Secretary of Agriculture Mike Espy

National Hunger Forum
Washington, D.C., June 17, 1993

I am proud to welcome you to the National Hunger Forum. And proud that this is one of the biggest gatherings on hunger since the Kennedy days.

You are such an illustrious and respected group -- the best minds -- the warmest hearts -- that to recognize any one of you individually would mean recognizing all of you -- so we'll just get right down to the business at hand.

We have come together today to discuss hunger in America. Yet, hunger is a feeling few of us here have ever really experienced. Most of us had at least a cup of coffee and a muffin before coming this morning -- and of course, we've scheduled an hour for lunch this afternoon.

WHAT IS HUNGER?

So, we might find ourselves wondering, "What IS hunger?" Is it that slight pang that tells us it's time to head down to the cafeteria for lunch? Or is it the gnawing pain of not having had breakfast or lunch?

Is it saying "no" to that second dessert so we can lose a pound or two? Or is it chronic malnutrition from not eating enough, or eating too much of a limited diet?

Is it wondering which carryout to stop at to pick up a bite before the movie? Or is it wondering where in the world our next meal is coming from?

HUNGER EXISTS

Hunger may be hard to define -- but it is not hard to locate. Here in this United States -- a country whose national anthem sings of "amber waves of grain" and of "fruited plains" -- there are senior citizens who wake up hungry in the morning -- working people who toil at their jobs hungry all day long -- and young children who go to bed hungry at night.

It's time we acknowledged our hunger problem. Some highly placed government officials and national commentators have actually questioned whether it exists. What planet do they live on? I'm only the Secretary of Agriculture and I can tell you: Hunger exists in this country!

Look at the shamefully familiar facts and figures: One child in five lives in poverty. The number of people on food stamps is at an all-time high of 27.4 million!! 12 million American children are going hungry. How can we not be painfully aware that hunger is part of the daily lives of our fellow Americans from Sacramento to Sioux City, from Sarasota to Cedar Falls?

USDA

Hunger exists. The next question is, what can we do about it? The U.S. Department of Agriculture is one of the most powerful tools available in this country to make a difference in the daily quality of lives of hungry people -- of real American families -- all American families.

I feel privileged to have the honor -- and the responsibility -- of overseeing USDA. At the top of my agenda today -- and every day -- and for the next four years -- is the overall health and well-being of our nation's citizens.

But government can't do it all. We surely have a role to play, but we must also look for links with the private sector in fighting hunger through economic development -- fighting hunger through health care -- fighting hunger through food assistance programs -- fighting hunger through nutrition education, -- and fighting hunger through welfare reform.

QUESTIONS

By making hunger the focus of the first of our series of issue forums, I am honoring a passionate and personal commitment.

I am here to ask questions -- and to find answers.

-- How can we reduce administrative costs in the Food Stamp Program?

-- How can we -- and should we -- regulate fat and salt content in foods produced for commodity distribution?

-- How can we encourage the use of Electronic Benefit Transfer systems to help cut down on fraud and to remove some of the stigma of standing in the grocery store line with a book of food stamps in your hand?

-- How can we convince farmers that it is to their benefit to support food assistance programs -- to wipe out the false choice between farm programs and food programs.

-- How can we help families move toward self-sufficiency and independence -- empowering them to go from the welfare rolls to the payrolls?

-- How can we offer targeted assistance to the most distressed communities?

-- How can we ensure that the basic benefit levels allow people to purchase an adequate -- though inexpensive -- diet at the end of the month as well as at the beginning of the month?

-- How can we ensure that staying eligible for food stamps doesn't force people to sell the very car they need to get out and look for work?

-- How can we make sure that the next generation of Americans doesn't have to choose between heat for their home -- or food for their children?

-- How can we reach out so that every child in need receives the food he or she needs to grow strong and healthy?

In short, how can we eliminate hunger in these United States?!! Together we can find the answers. Together we can do it.

#

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PPEP Inc.

PPEP TALK

Rural Arizona News

Published by **Portable Practical Educational Preparation, Inc. (PPEP)**
Dr. John David Arnold, CEO, 802 E. 46th Street, Tucson, AZ 85713 (602) 622-3553

Volume I, Number 2 | **"BACK TO BASICS"** | **May, 1993**

Vaya Con Dios, Amigo

Cesar Chavez (L.) and **Dr. John David Arnold**, CEO of PPEP & Affiliates in March, 1992 .

CESAR CHAVEZ DIES IN AZ

Cesar Chavez, 66, farmworker labor organizer and activist, died on April 23rd, apparently of natural causes, in the San Luis home of a long-time friend, not far from Yuma where he was born. Called the "Martin Luther King, Jr. of the Chicano movement," Chavez was eulogized by the poor and the powerful.

Senator Dennis DeConcini said, "Cesar Chavez was a leader whose legacy will live on in the hearts of farmworkers. No one can dispute his absolute dedication to the welfare of his followers. *Congressman Ed Pastor* called him "a leader who belonged not only to the farmworkers who have toiled in unbearable working conditions, but to all Americans who believe in his philosophy of non-violent protest."

Si se puede (yes, it can be done) is the slogan and legacy that Cesar Chavez gave to PPEP's CEO, *Dr. John D. Arnold,* Chavez friend for 15 years. "There was no single person who could take his place,' says arnold. "He was like David vs. Goliath, but he knew how to throw the rock and make people listen. He could use that slogan, "si se puede," and draw both the common people and the Kennedys and (Jesse) Jacksons."

Arnold met Chavez in 1978 when he went to install a solar water heater for a laundry for Chavez in California. "Chavez loved nature and hated to see a plant disturbed," Arnold reminisced. He had to saw a small limb off a tree which was blocking to sunlight to the solar panel and Chavez noticed the loss immediately. 'That taught me a lot about his perceptiveness on many issues," says Arnold.

(Continued on Page 3.)

BUSINESS ADVISORY COUNCIL

PPEP's Business Advisory Council (BAC) was formed to provide input and support for PPEP, its Training for Employment Centers (PPEP TECs) and MICRO. The BAC allows PPEP to maintain a close relationship with the business community in order to continually evaluate and develop a curriculum that best meets the changing requirements of the job market.

Current participating members in PPEP's Business Advisory Council (BAC) and their representatives are: **AiResearch/ Tucson Div.**, *Candy Adams;* **AZ DES/ Employment & Training Administration**, *Alex Witzeman;* **AZ DES/ Job Service**, *Barry Batson;* **Bank of America**, *Bob Brauer;* **Burr-Brown**, *Kathy Robinson;* **Citibank**, *Norm Rebenstorf;* **Colonial Life Insurance**, *Carol Van;* **Davis Monthan AFB**, *George Rodriguez;* **First Interstate Bank**, *Maria Alday;* **Galseth & Gregson Insurance**; **Hughes Aircraft**, *Jim Mize.*

Also, **IBM Corporation**, *Ricardo – Ramon;* **Kelly Temp Services**, *Robin Jones;* **National Bank of Arizona**, *Don Jenks;* **Richards & Pennington**, *Max Richards;* **Tad Temporaries**, *Vera Martinelli;* **Teleservices**, *Kathy Banks or Pamela Gibson;* **Tucson Indian Center**, *Rodney Palimo;* **University of Arizona**, *Jay McKenzie;* **University of Arizona**, *Dr. Celestino Fernandez.*

"Dedicated to improving the quality of rural life"

PROJECT

PPEP Inc.

John David Arnold, Ph.D.
C.E.O.

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Since 1967

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Weather
Today: Partly sunny, warm, late thunderstorm possible. High 82. Low 57. Wind northwest 7-14 mph.
Friday: Mostly sunny, less humid. High 78. Wind 5-10 mph.
Yesterday: Temp. range: 63-78. AQI: 40. Details on Page C2.

The Washington Post

FINAL

Inside: **The Weekly, Classified, Washington Home**
Today's Contents on Page A2

116TH YEAR · · · · No. 152 THURSDAY, MAY 6, 1993 Prices May Vary in Areas Outside Metropolitan Washington (See Box on A4) 25¢

Harvesting a Living From Seeds of Credit

Anti-Poverty Strategy Called Microenterprise Is Growing in U.S.

PPEP By Guy Gugliotta Washington Post Staff Writer MICRO

NOGALES, Ariz.—Three years ago Julio Magallanez almost died of a massive heart attack. Last year, heart disease again almost killed him and kept him in bed most of the time.

Sickness cost him his driver's license, and sickness means he will never get it back. "More than 20 years' driving a truck, and all of a sudden no job," said Magallanez, now 39.

So he went into business for himself. Today Magallanez is a "bean broker," using a lifetime of experience on both sides of the Mexican border to build a new career from his house trailer on a windswept stretch of desert a few miles from Nogales. Mexican clients contract for pinto beans, and Magallanez finds them in the United States and sees that they are delivered.

"It's a good business," Magallanez said, and he thinks it will get better. So does the Micro Industry Credit Rural Organization, a nonprofit development company that loaned Magallanez $1,000 so he could buy a computer to keep his records.

MICRO, now beginning its seventh year, is one of the nation's leading practitioners of "microenterprise development," providing very small loans and, in most cases, business training, to low-income entrepreneurs who have little or no access to banks or other forms of credit.

Microenterprise, a tried-and-true Third World development technique for more than three decades, is per-

See MICRO, A28, Col. 1

BY EDWARD McCAIN FOR THE WASHINGTON POST

With $1,000 loan, Julio Magallanez became a "bean broker" in Nogales, Ariz.

U.S. Has 150 Microenterprise Groups, Most Less Than 3 Years Old

Col. 2

PPEP MICRO, From A1

haps the hottest anti-poverty strategy in the United States today.

Experts list about 150 microenterprise organizations nationwide, most of them less than three years old. The Small Business Administration last year authorized a $15 million pilot program. Legislation to encourage microentrepreneurs is pending in Congress. Secretary of Agriculture Mike Espy is a leading advocate, and President Clinton, as governor of Arkansas, actively encouraged a microloan program for rural areas of his state.

Using a variety of training programs and loan guarantee devices, the organizations have achieved extraordinary results. MICRO, based in Tucson and operating in rural and border areas of Arizona and eastern California, has made $1.6 million in loans over the life of its program, and has a cumulative default rate of 2.89 percent.

Its clients include near-rookies like Magallanez and seasoned pros like Danny Renteria, a onetime "shade-tree mechanic" who has opened his own garage in Nogales with MICRO loans. MICRO also helps a man who buys Mexican charcoal for resale in the United States, a woman who grows squash and sells gourds to novelty shops, and a man who makes his own lace and grosses $2,000 a week from amateur dressmakers and local milliners.

In Los Angeles, the Coalition for Women's Economic Development reports no defaults during almost four years of operations, and has $260,000 on loan, much of it to low-income women running tiny businesses in inner-city neighborhoods.

Many coalition clients are Latinas, selling clothing or jewelry door-to-door at lower than retail prices and accepting installment payments. Zoila Perez bought a load of T-shirts inscribed with California motifs, traveled to her native El Salvador and sold them, then picked up a load of El Salvador T-shirts and sold them in East Los Angeles.

What makes microenterprise programs alluring is that they successfully promote jobs for poor people, an area of particular futility in traditional anti-poverty policy. "We have a terrible record of placing people in the mainstream economy," said Margaret Clark, director of the Aspen Institute's Self-Employment Learning Project. "Microenterprise can do that."

But not in overwhelming numbers, and not cheaply. MICRO, perhaps the largest program in the country, has made 900 loans since 1987 and has 200 loans outstanding. Interest and fees cover 15 percent of MICRO's operating expenses, as close to profitability as any organization in the industry.

By contrast, the Los Angeles coalition, a model among newer organizations, has 100 active borrowers. Interest received in 1992 was $7,600, less than 1 percent of operating expenses. This is a typical percentage for microenterprise programs, all of which rely on grants for most of their working capital.

"It's one of the most adaptable anti-poverty strategies, and that's a reason it's proliferated," said Fred O'Regan, who studies microenterprise and other jobs strategies for the Aspen Institute. "But expectations in terms of scale and sustainability have been higher than most programs can meet."

Inflated hopes probably arose because of the spectacular success of the Third World's model microenterprise programs. The prototype Grameen Bank, of Bangladesh, has loaned more than $400 million to more than 1 million clients since its founding in 1976. Indonesia's Bank Rakyat has 2 million borrowers and 8 million savers.

In Latin America, the Cambridge, Mass., based Accion International has set up microloan programs that have 147,000 borrowers in 14 countries. Seven of their programs are paying for themselves, and Banco Sol in Bolivia has evolved into a full-scale

Program that—in a relatively short time—can operate independently.

Accion and other organizations have discovered basic differences between microenterprise in the Third World and the United States, chief among them the size and nature of the potential client base, the "informal sector" of self-employed people who are trying to earn a living on the fringes of the mainstream economy.

In the Third World, experts say, the sector easily can include more than one-third of the labor force, everything from street vendors to freelance plumbers and portrait painters. In the United States, by contrast, the sector is relatively tiny: "We don't have these massive informal sectors here," O'Regan said. "It's very unconventional to be poor and self-employed in the United States."

Also, Third World informal sectors include legions of highly motivated and trained people whose only real need is credit. For them, a microenterprise program simply is a finance company with reasonable interest rates. "In Latin America you can break even with a portfolio of $1 million, and you can put $1 million out in two years," said Accion associate director Maria Otero. "You're giving people a lifeline and an opportunity."

It's different in the United States, where a highly developed social welfare program takes away the sense of urgency. Accion researcher Elisabeth Rhyne described the difference in a recent essay: "While America has been trying to perfect and expand its social safety net, developing countries have to create strategies that work without one."

And finally, Third World entrepreneurs usually know how to use a loan once they get it, but even without business basics they can succeed in an environment where regulations are mostly honored in the breach.

In the United States, by contrast, microentrepreneurs often need business training, both to learn how to handle money and to prepare for the intrusion of the real world. "Very soon you start to rub up against the formal economy," O'Regan said. "The competition is fierce everywhere; even poor neighborhoods have a 7-Eleven."

To build competitive skills, virtually all U.S. microenterprise organizations have a training regimen to complement banking activities.

Coalition executive director Forescee Hogan-Rowles, like many experts, accords training and banking equivalent priorities. Her borrowers, she said, are embarked on a long-term "development process," involving "60 percent training and 40 percent lending." Clients must attend four to 10 weeks of business instruction before they can get any money.

Most experts agree that microenterprise is not the "magic bullet" that will end national poverty, but, they add, it is as good, if not better, than any other current policy at bringing poor people into the work force and rewarding their creativity. And despite the impossibility of cloning the international models, the U.S. organizations have shown that many of the Third World concepts can work.

Chief among these is the idea that it is possible to loan money successfully at market rates to people who are excluded from the mainstream banking system. Most U.S. microentrepreneurs, as in the Third World, have little or no formal credit history, and virtually all of them want loans so small that banks cannot justify the costs of processing them.

MICRO operations director John Newsome, a former banker, said Arizona banks will not issue a business

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to CONTINUE

With $1,000 Loan, Julio Magallanez Built a Career as a 'Bean Broker'

PPEP MICRO, From A28

loan for less than $25,000, also the minimum for a Small Business Administration-backed loan. At MICRO the average loan is $1,600, at 13 percent interest.

MICRO, like many microenterprise organizations, would like to forge an alliance with mainstream banks—offering to run a microloan program using bank funds—and is exploring a statewide relationship with Arizona's Bank One.

"We think our program trains future bank customers," said MICRO executive director Frank Ballesteros. "There is an untapped market out there, and banks see the handwriting on the wall."

Maybe so, but a more likely inducement is the Community Reinvestment Act, requiring banks to use some of their resources to meet credit needs of disadvantaged neighborhoods. Clinton has spoken of passing a "more progressive" act, and microenterprise may prove to be a useful way for banks to comply with the law.

"We could act as an intermediary between banks and borrowers, because we have the infrastructure to manage a small loans portfolio," said Accion's Otero, who has recently received several bank inquiries about the program's activities.

A large number of U.S. microenterprise programs, including the coalition, have adopted the Grameen Bank's "peer lending group" technique, in which a small number of borrowers (generally four or five) guarantee each other's loans and meet periodically to discuss business strategies and give each other pep talks. Zoila Perez's group, called "El Progreso de Bellas Ilusiones" ("the Progress of Beautiful Dreams"), includes one other clothing vendor, two custom clothing designer/seamstresses and a jewelry business. Each woman used a $2,000 loan to buy inventory.

Peer group lending substitutes shared responsibility for the collateral that the borrowers do not have. It is, program supervisors agree, the main reason microentrepreneurs seldom default. "Besides the payments, they develop solidarity and learn about bookkeeping and planning," said Paula Sirola, El Progreso's supervisor. "Bit by bit they develop."

If they wish. For most microenterprise organizations, goals are fuzzy. Experts speak of bootstrapping first-time business people into the mainstream, of stabilizing fragile family incomes, of nurturing self-image, of encouraging asset building and weaning poor people from welfare.

At El Progreso, the women speak of stability, extra spending money and modest expansion, always within Los Angeles's Latino community. One key to the coalition's success is that it has encouraged its Latin borrowers to replicate the informal street economy most of them knew as youngsters in Mexico and Central America.

Perez would like to become a full-scale importer-exporter, carrying goods to and from El Salvador on a regular schedule.

MICRO's Magallanez, as a facilitator in the bean trade, is filling a market niche that nobody else has discovered. "I'm taking a very tough gamble here, but I'm almost sure that it will work," he said.

Also running a gamble are Valerie Holton and Ava Jackson, partners in the coalition's "Five Star Unlimited" peer group. Holton runs "Black L.A. Tours" for visitors to Los Angeles ("They don't have to be black!") and is interested in negotiating a deal with Ramada Inns. Jackson has a maintenance company that has expanded from two to five employees. She is bidding large jobs, and needs only one long-term contract to hit the big time. "We are a phone call away," she said.

Already in the big time is MICRO's Danny Renteria, who used to fix cars on the street and now has a garage with two lifts and seven full-time employees wearing blue "Danny's Service Center" uniforms.

Renteria is a microenterprise "graduate" working on a $10,000 loan, his fourth from MICRO and the biggest loan the program can provide. He is tired of paying rent on his garage ($28,000 last year) and would like to buy it from his landlord along with the rest of the building.

He figures he will need at least $300,000, and he will have to borrow it from a bank. No bank has ever granted Renteria a loan, but he thinks maybe this time will be different: "They couldn't find a better candidate than me," he said.

United States of America

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PROCEEDINGS AND DEBATES OF THE 102d CONGRESS, SECOND SESSION

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House of Representatives

United States of America

THE 25TH ANNIVERSARY OF PROJECT PPEP PROVIDING HELP FOR RURAL POOR IN THE SOUTHWEST

HON. JIM KOLBE

OF ARIZONA

IN THE HOUSE OF REPRESENTATIVES

Wednesday, August 12, 1992

Mr. KOLBE. Mr. Speaker, by now we all are aware that many regions of the United States have suffered serious declines in jobs in the last decade. Particularly hard hit are areas dependent on agriculture, mining, or traditional manufacturing. Many of these declines are not short-term, cyclical or recession-related declines, but are due to fundamental structural shifts in the local economic and industrial base of many regions around the country. Given these economic conditions, I would like to take this opportunity to pay tribute to a longstanding and very successful program that has been providing assistance to the rural poor in the deserts of Arizona and southern California. Known as Portable Practical Educational Preparation [PPEP] this program serves the rural communities of the Southwest by offering literacy and life skills training, GED and ESL classes, and practical education to the disadvantaged residents of the region.

On the occasion of the 25th anniversary of the PPEP program, we can look upon its many achievements and those of its founder, Dr. John D. Arnold. From a young age, John Arnold has taken it upon himself to provide assistance to the working poor and disadvantaged of our region. At age 16 he had his own church-bus ministry that provided social services, food, clothing, etc., to Braceros (Mexican farm laborers). After 10 years of working directly with the migrant workers, John Arnold approached community leaders for support to initiate a mobile, or itinerant, school to serve the various labor camps. Thus emerged Project PPEP. This school was unique because it went to where the people worked and lived, and provided instruction in practical educational experiences which prepared the farmworkers in basic survival skills. In PPEP's humble beginnings, with a $19,000 annual budget, John was the bus driver, mechanic, janitor, and teacher.

Today, PPEP has grown with rural community support to serve farmworkers and rural poor throughout Arizona, the Navajo Nation and the Imperial Valley in southern California. During this, the 25th anniversary of PPEP, 10 million people will benefit from their services. Because of this success, dozens of third world countries have been advised by the State Department to examine PPEP's rural self-help projects.

To point directly to one successful program sponsored by PPEP, I would draw my colleagues' attention to an ambitious program called Micro Industry Credit Rural Organization [MICRO]. Through MICRO, economically disadvantaged residents of these areas can receive loans to start their own small businesses. As an outgrowth of the PPEP program, MICRO's purpose can best be summed up by its mission statement—"To enhance family self-sufficiency and quality of life by facilitating the development, growth, and participation of family-based micro and small business enterprises in their local economies". MICRO seeks to assist the disadvantaged by having them rely on their own hard work and ingenuity, not on seemingly endless government handouts.

There is increasing evidence that small businesses, known as microenterprises, are an important option for many of the unemployed and working poor today. Microenterprises are businesses that are usually family-owned, employ 10 or fewer people, but are too small to get bank financing.

The success of the program to date has been phenomenal. Business loans of $500 to $10,000 have been provided at market interest rates to nearly 400 small business owners, with a default rate of less than 3 percent. MICRO clients have created an estimated 400 jobs in the rural areas of the Southwest, fostering the American tradition of free enterprise among our Nation's disadvantaged citizens.

I would like to submit for the RECORD two articles detailing the success of John Arnold, PPEP, and the MICRO program, one from the Christian Science Monitor, the other from the Arizona Daily Star. In honor of their 25th anniversary, I commend the attention of my colleagues to project PPEP and the microenterprise concept. I believe that programs demonstrating this kind of success rate deserve our attention and support.

[From the Christian Science Monitor, July 30, 1991]

POOR TAKE MICRO-STEPS OFF WELFARE

(By Clara Germani)

When Catalina Barajas's husband left her to raise the last three of seven children alone, she was forced onto welfare and into public housing. But to make ends meet, she knew she was going to have to find another means of income.

Going out and starting a business was not the first thing she thought of—nor would it be the first thing the United States welfare system would prescribe for the former farm worker, who speaks only Spanish and has minimal business qualifications.

What Mrs. Barajas didn't recognize, until the Micro Industry Credit Rural Organization (MICRO) stepped in to show her, was that the small sewing jobs she had taken in for years were a business she could develop.

It's this kind of entrepreneurial seed that MICRO, a Tucson, Ariz., nonprofit development group, cultivates through small, business loans. On collateral as small as a wedding band or a color television, low-income and disadvantaged people, who would qualify quicker for welfare than a traditional bank loan, can get business loans as small as $500.

Barajas's first loan of $500 three years ago allowed her to buy more fabric at a lower price than she was used to. This increased her profit on the brightly colored bedspreads she makes. Demand for her work increased, so she bought a better sewing machine with her second loan of $1,000. Having paid off her first loans, with a third loan of $2,000 she was to travel to Los Angeles from this remote area to buy cheaper fabric and supplies.

"I never thought someone would lend me the money," says Barajas. "This has motivated me to work more, whereas before I had to take from my food money to invest and sometimes there just wasn't any." She would never have considered asking a bank for money after having been turned away by a local bank when she tried to open a savings account with a crisp $20 bill and was told it wasn't enough.

Microenterprise development in many cases can substitute a ladder of opportunity for the dependency fostered by the welfare safety net, says Robert Friedman, founder and chairman of the board of the Corporation for Enterprise Development, a Washington policy advocacy group that also sponsors demonstration microenterprise projects.

"Microenterprise [development] crosses both liberal and conservative lines," he says. For conservatives, he adds, "it's quid pro quo. It's not a handout. And for that part of the liberal establishment that simply looks at income redistribution, it works."

Microenterprise, which is free enterprise in its most basic and spontaneous form, is a sort of business counterpart to subsistence farming: It exists in pockets of poverty all over the world where the unemployed must use their wits to survive. The informal sector—that market in which microenterprise exists off the books, outside taxes and government regulation—is believed to constitute 30 to 50 percent of the economies of developing nations.

In Latin America, for example, Peruvian economist Hernando de Soto's studies of the informal sector (documenting the capitalistic nature of upward mobility among squatter settlements in Lima) became the inspiration for a whole school of international development that has grown up around microenterprise.

The Grameen Bank in Bangladesh, on the other hand, has been the international model for how to loan to the poor. It pioneered the idea of giving credit—in amounts as little as $50—to the poor when it began offering loans in 1975 to peasant women who made bamboo furniture. Today, reaching perhaps 500,000 people, the bank offers loans to small groups of people who are trained together in basic business procedures, divide the money among themselves for this own businesses, and are responsible for the collection and reinvestment of the money. The incentive of future loans maintains discipline within the groups, which have a repayment rate of 98 percent.

NATIONAL ASSOCIATION OF WIC DIRECTORS

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92-001

POSITION PAPER

NATIONAL ASSOCIATION OF WIC DIRECTORS

The Role of Infant Formula in the WIC Program
28 August 1992

The WIC Program and the National Association of WIC Directors (NAWD) promote breastfeeding as the optimum infant feeding choice, unless medically contraindicated. If a woman cannot, or chooses not to, breastfeed her infant, WIC recommends and provides iron-fortified formula as the best alternative to breastfeeding. The fact that WIC promotes breastfeeding yet provides infant formula has generated discussion and debate among breastfeeding advocates.

Promoting sound infant feeding practices is a major educational objective of the WIC Program. The primary means of achieving this objective has been through breastfeeding promotion and support activities. The "Position of the National Association of WIC Directors on Breastfeeding Promotion in the WIC Program" and the "Guidelines for Breastfeeding Promotion in the WIC Program" outline strategies for promoting and supporting breastfeeding in all program management areas. Public Law 101-147, the WIC Reauthorization Act of 1989, further strengthened breastfeeding promotion in the WIC Program.

The Special Supplemental Food Program for Women, Infants, and Children (WIC) has provided supplemental foods, nutrition education, and linkages to preventive health care for economically disadvantaged families throughout the United States since 1974. The WIC Program is unique among food assistance programs because it integrates nutrition education with food assistance and serves as an adjunct to preventive health care services.

The nutrition education component of the WIC Program is designed to achieve two broad goals:

1. Stress the relationship between proper nutrition and good health with special emphasis on the nutritional needs of pregnant, postpartum, and breastfeeding women, infants and children under five years of age.
2. Assist the individual who is at nutritional risk in achieving a positive change in food habits, resulting in improved nutritional status and in the prevention of nutrition-related problems through optimal use of the supplemental foods and other nutritious foods.

This paper presents the position of the National Association of WIC Directors (NAWD) that the WIC Program must continue to provide infant formula to ensure the best possible nutrition for infants whose mothers cannot, or choose not to breastfeed.

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The Infant Feeding Decision

The infant feeding decision reflects many personal issues, ethnic and culture-specific values, beliefs, and lifestyles. It is a decision that each woman, whatever, her socioeconomic status, has the right to make for her infant.

The benefits of breastfeeding for mother and infant are so great that one might expect all mothers to breastfeed. At this time, almost forty-seven per cent of mothers do not initiate breastfeeding.

Women choose not to breastfeed for many different reasons, including societal barriers, health care barriers, psychological barriers, and economic and cultural barriers. These barriers are well documented elsewhere.

The role of the WIC Program in the infant feeding decision is to provide all pregnant women with accurate information about breastfeeding so they can make an informed decision. Once a woman chooses a feeding method, the WIC Program staff provide support and guidance so that she can succeed with her chosen method.

Infant Feeding Practices

In the early 1970s, only twenty-five per cent of newborn infants were breastfed in the hospital. Bottle-fed babies were introduced to whole cow's milk at an early age (by six months of age or even earlier). This feeding practice, along with a diet low in iron, resulted in a high prevalence of anemia in infants and toddlers. One goal of the newly created WIC program was to improve the health status of low-income infants by providing commercial iron-fortified formula for formula-fed infants (consistent with the recommendations of the American Academy of Pediatrics, Committee on Nutrition).

By 1980, more than half of United States mothers giving birth in hospitals initiated breastfeeding. The upward trend continued until 1984 with sixty-three per cent breastfeeding at discharge. It seemed likely that this country could meet the Department of Health and Human Services objective of a seventy-five per cent breastfeeding initiation rate by 1990. New breastfeeding promotion and support programs, projects, and activities were spurred by this goal yet by 1989, only half of new mothers were initiating breastfeeding in the hospital. In-hospital breastfeeding rates had declined for all income groups as had breastfeeding duration rates.

Iron-fortified Formulas

The American Academy of Pediatrics recommends iron-fortified formula for infants for the first year of life when mothers choose not to breastfeed, can not breastfeed, or wean their infants before their first birthday. This recommendation is based upon the uncertainty of solid food intake and iron intake during the second half of the first year. Iron-fortified formula augments iron stores and helps prevent later development of iron deficiency, the most common pediatric nutritional problem in the United States.

The WIC Program provides iron-fortified formula because it provides a constant and predictable amount of iron. Its use has contributed to the declining prevalence of iron-deficiency anemia in the United States. Any restriction of its distribution for the high risk population served by WIC would contradict the preventive role of the WIC Program.

Removing infant formula from the WIC food package could increase the use of cow's milk for infant feeding because commercial infant formula is so costly. Some mothers would purchase formula but could not afford to purchase a sufficient supply of formula and may overdilute it, unintentionally causing water intoxication in their infants. The net effect of removing infant formula could be an increase in the risk of inadequate nutrition, including iron-deficiency for thousands of infants and health problems related to water intoxication.

The question is not whether the WIC Program should provide or eliminate infant formula from the infant's food package. The issue has always been how to ensure the best possible nutrition for at-risk infants. Some women on WIC will choose not to breastfeed or not to exclusively breastfeed for the first year of life. For the infants of these mothers, the WIC Program must continue to provide the option of iron-fortified formula to assure their health and well-being.

The WIC Program continues to work towards establishing breastfeeding as the norm for infant feeding in this country. Breastfeeding promotion and support activities are a major priority for the program and for the National Association of WIC Directors. NAWD is committed to encouraging breastfeeding as the preferred method of infant feeding. All WIC personnel have a role in promoting and providing support for the successful initiation and continuation of breastfeeding.

POSITION PAPER

NATIONAL ASSOCIATION OF WIC DIRECTORS

Breastfeeding Promotion in the WIC Program
9 October 1992

Goal

Breastfeeding has been shown to have significant advantages for women and infants. As health professionals have a responsibility to provide services designed to optimize the health of their clients, WIC health professionals are committed to encouraging breastfeeding as the preferred method of infant feeding. Therefore, the National Association of WIC Directors (NAWD) calls for all WIC state and local agencies to aggressively promote breastfeeding.

Introduction

The Special Supplemental Food Program for Women, Infants and Children (WIC), authorized by Public Law 95-627, as amended, makes cash grants to state agencies to provide supplemental foods, nutrition education, and referrals. Those eligible for the program include pregnant, breastfeeding, and postpartum women, and infants and children up to the age of five, who are low-income and at nutritional risk, as determined by a health professional. The WIC Program serves as an adjunct to good health care during critical periods of growth and development (1). WIC regulations require that all pregnant participants be encouraged to breastfeed unless contraindicated for health reasons (1,2). Because WIC provides services to over 1 million women, two-thirds of whom are pregnant, a unique opportunity exists to influence decisions on infant feeding.

The nutritional and immunologic components of human milk and the physiological, psychosocial, hygienic and economic benefits of breastfeeding make it the optimal way to nurture infants (2,3). Human milk contains the ideal balance and form of nutrients for infants and breastfeeding affords a unique occasion for mother-infant interaction and bonding (4). Lactation can enhance self-esteem (5) and facilitates the mother's physiologic return to the pre-pregnant state. Beyond these positive health benefits, breastfeeding offers economic advantages such as lowering WIC food costs through decreased infant formula expenditures and minimizing health care costs by improving health and decreasing morbidity in the pediatric population (6). From the standpoint of sanitation, breastfeeding should be recommended even more strongly in situations where facilities in the home for preparation, storage, refrigeration, and cleanliness of infant formula are questionable. There are also environmental advantages to breastfeeding. For example, no containers to wash, heat, or dispose of with breastmilk.

Many major professional organizations have position papers and/or statements which recommend breastfeeding as the preferred method of infant feeding, including: the American Academy of Pediatrics, the American Dietetic Association, the American College of Obstetrics and Gynecology, etc. (7,8,9,10,11,12). The United States Department of Health and Human Services has identified breastfeeding promotion as a high-priority health objective for the nation, with a goal set for 2000 of increasing to at least 75% the proportion of women who

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breastfeed their babies in the early postpartum period and to 50% the proportion who continue breastfeeding until their babies are five to six months old (13). To work toward these goals, the WIC Program must serve as an advocate for breastfeeding, ensuring that women have the ability to make informed decisions about infant feeding, and supporting their decision.

NAWD Position on Breastfeeding Promotion in the WIC Program

An Overview of Breastfeeding in the WIC Program

In the United States, the incidence of breastfeeding at hospital discharge declined to 25% in 1971 and gradually increased to 61.9% in 1982; there has been a gradual downward trend since 1982. The most recent national data show that 52.2% of women in the United States are breastfeeding at hospital discharge and only 18.1% of women were still breastfeeding when their infants were 5-6 months of age (14). The breastfeeding rate among WIC participants in 1987 was 37.3% in the early postpartum period and 11.5% at 5-6 months postpartum, compared to the non-WIC population rates of 64.9% and 27.2% respectively (14). Many socio-economic characteristics common to the WIC population are associated with lower rates of breastfeeding and may contribute to this discrepancy (14,15). These include race (specifically Black), age (younger than 20 years), family income (less than $7,000 per year) and education (grade school level) (14).

Numerous barriers to breastfeeding have been identified, such as: (16,17,18)

- Lack of knowledge about breastfeeding among health care professionals and the population in general.
- Lack of consistent and accurate information about breastfeeding.
- Hospital practices which are oriented toward bottle feeding.
- Lack of a support network during the critical postpartum period.
- Psychosocial barriers including misconceptions, negative attitudes, low self-esteem, and lack of flexibility in the work place.
- Cultural barriers including sexual connotations associated with the breast and/or lack of role models or family support.
- The ready availability and conspicuous display of infant formula and formula advertising in hospitals and public health programs.

Despite these and other barriers to breastfeeding, reports indicate that special targeting and promotion initiatives have increased the rates of breastfeeding among low-income participants. In WIC, a variety of approaches such as peer support counselors, special incentives, prenatal classes, toll-free telephone lines, and health professional training sessions have been successful in both prenatal and postpartum support programs (17,18,19,20,21,22,23).

A number of state WIC agencies support breastfeeding via food package tailoring policies. This involves adjusting the amount and/or type of infant formula provided for the breastfed infant in proportion to the frequency of breastfeeding. Several state WIC Programs have implemented innovative clinical and administrative approaches. Other states have used designated formula rebate dollars to fund local breastfeeding activities. Many states have developed breastfeeding policy statements, lactation training centers, statewide breastfeeding task forces, lactation resource kits for professionals, breast pump loan programs and peer counselor programs, etc.

The federal government historically has supported breastfeeding promotion initiatives in state and local programs as well as in collaboration with the private sector. Specifically, the United States Department of Agriculture (USDA) has promoted breastfeeding through WIC Program regulations, technical assistance publications, cooperative efforts with the National Health Mothers, Healthy Babies Coalition and the Department of Health and Human Services (DHHS), and through breastfeeding promotion research (19,23). Other federal breastfeeding promotion initiatives targeting low-income mothers are supported by DHHS through the Maternal and Child Health Services Block Grant. These include provision of leadership through development of policies and guidelines, consultation and technical assistance, research studies, education of health professionals, demonstration projects, and breastfeeding support services integrated into state and local health programs (24). The WIC Program can be most effective in breastfeeding promotion and education by working with other relevant organizations and agencies.

USDA has supported regional breastfeeding conferences and has new incentive demonstration projects in place. They have established an interdisciplinary Breastfeeding Consortium which is working to develop a national breastfeeding promotion media campaign. USDA recently announced their intent to enhance the food package for exclusively breastfeeding women. USDA-Food and Nutrition Services has also established policies supporting breastfeeding in the workplace.

Public Law 101-147, passed in November 1989, contained a number of breastfeeding provisions that have put the WIC Program in a better position to establish and maintain breastfeeding promotion and support programs. Based on the legislation, new regulations mandated the establishment of a standard definition of breastfeeding, earmarked monies for breastfeeding promotion and support, required designation of state and local agency breastfeeding coordinators, required an annual evaluation of breastfeeding programs, developed standards for training and orientation of staff, required plans to be in place assuring all women have access to breastfeeding promotion and support activities during the prenatal and postpartum periods, and added a lactation expert to the National Advisory Council for WIC.

Both USDA and NAWD participated in the Maternal and Child Health Inter-Organizational Nutrition Group (MCHING). MCHING recently published a number of nutrition recommendations including breastfeeding promotion and support. In an effort to help WIC Programs better promote breastfeeding, NAWD published and distributed "Guidelines for Promoting Breastfeeding in the WIC Program" in 1990.

In summary, establishing breastfeeding as the norm for infant feeding continues to be a major priority in the WIC Program. All WIC personnel have a role in promoting and providing support for the successful initiation and continuation of breastfeeding.

Recommendations

Role of NAWD/USDA

1. Encourage the reporting of optional Breastfeeding data in the WIC Minimum Data Set.
2. Develop a standardized national definition for exclusive and partial breastfeeding to improve the data collection and make state data comparable.
3. Support the establishment of a clearinghouse to distribute and disseminate information on breastfeeding promotion and support projects, programs, and products.
4. Encourage support for breastfeeding women in the worksite at all levels.
5. Designate a portion of the research funds from the Office of Analysis and Evaluation for conducting Food and Nutrition Service studies and technical assistance in the area of breastfeeding.
6. Continue to support and monitor monies earmarked for breastfeeding promotion and support programs.

Role of State Staff

1. Adopt and implement the "Guidelines for Promoting Breastfeeding in the WIC Program."

Role of Local Staff

1. Adopt and implement the "Guidelines for Promoting Breastfeeding in the WIC Program."

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92-003

POSITION PAPER

NATIONAL ASSOCIATION OF WIC DIRECTORS

Cost Allocation Systems
9 October 1992

The Special Supplemental Food Program for Women, Infants and Children (WIC), authorized by Public Law 95-627, as amended, provides supplemental foods, nutrition education, and referrals. The WIC Program serves as an adjunct to good health care during critical periods of growth and development. Those eligible for the Program include pregnant, breastfeeding, and postpartum women, and infants and children up to the age of five, who are low-income and at nutritional risk, as determined by a health professional.

In carrying out its mandate, WIC regulations (246.4 (a) (8)) require that State agencies describe how they plan to coordinate program operations with special counseling services and other programs, including, but not limited to, the Expanded Food and Nutrition Education Program (EFNEP), the Food Stamp Program, the Early Periodic Screening, Diagnosis and Treatment (EPSDT) Program, the Aid to Families with Dependent Children (AFDC) Program, the Maternal and Child Health (MCH) Program, the Medicaid Program, Family Planning, immunizations, prenatal care, alcohol and drug abuse counseling, and child abuse counseling. At the Federal level, there has recently been an increased effort to promote further coordination and integration of Program services. Federal regulations have been amended to require very specific efforts concerning Program coordination. In addition, there are other initiatives underway to determine the best methods for insuring coordination of service delivery.

The National Association of WIC Directors (NAWD) believes that WIC plays an important role in preventive health services and is encouraged to see coordination initiatives underway. However, NAWD also feels that there are inherent barriers within and between Programs concerning allocation of resources that must be addressed in order to meet the intent of Congress for individual Programs and to insure that each Program's integrity is protected. Many Federal Programs have evolved so that regulations may be in conflict or lack uniformity or consistency. In addition, there is a lack of common guidance and significant disparity in financial resources between Programs.

In association with the Department of Agriculture, Department of Health and Human Services, and Office of Inspector General, the NAWD wishes to participate in the development and enhancement of procedures that will guide and fairly allocate costs within and between Federal Programs. The guidelines developed should include as part of its basic precepts the following:

> **Rules must be clear, concise and common to all Federal programs.** The present problem in adhering to current rules seems to be due to differing interpretations of terminology, language and what is acceptable in those rules. Rather than creating new rules, the existing rules, such as those found in OMB Circular A-87, should be reexamined with the goal that fiscal guidance be consistently applied to all Programs.

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Training and policy guidance regarding cost allocation and accountability must be provided to all Federal Programs. The guidance should be as simple and understandable as possible and address the needs of varying health delivery systems. For example, the WIC Program operates in both separate and integrated health care delivery systems. The regulations should be such that they are interpreted in a consistent, uniform and standard manner, so costs can be fairly shared regardless of the delivery system in place at the State and Local level.

Written guidance must meet audit standards. NAWD realizes that written guidance for accountability and allowability must meet audit standards. However, auditing agencies should not be setting Program standards and policy as to allowability of cost. The primary objective from the audit standpoint should be to eliminate as many "judgement calls" as possible. Auditing is not always definitive, therefore, great care must be taken to ensure that cost allowability rules are interpreted and consistently applied in the same manner to all Programs by auditors.

Shared costs must be based upon a sound consistent method. In order to avoid duplication of services, mutually benefiting Programs must pay a fair and equitable allocation of costs. However, each Program's integrity must be protected so it can remain within its intended specific Congressional mandate.

Prioritization of services must be considered in order to meet each Program's Congressional intent. Congressional intent of a specific Program must be the highest priority before integration of other services can occur. The concept of shared costs should not be defined as one Program's funds substituted for another's shortfall. Rather funding for shared costs needs to be treated as an augmentation with equitable contributions from all sources.

A system to allocate and document costs must be in place. Resources used in establishing and maintaining a cost allocation system cannot outweigh the benefits received. A system to allocate and document costs that is labor intensive and burdensome defeats the purpose for which it was created. Any cost allocation system developed must be as clear and concise as possible to both the user and reviewer.

Summary

NAWD recommends that a partnership between USDA, HHS, and representatives of other programs be formed to cooperatively coordinate and integrate related services to meet mutual needs and fairly allocate costs. It is incumbent upon the Federal agencies to develop regulations and procedures that are consistently interpreted and applied across all Programs at all levels and to insure that the intent of Congress is carried forth and Program integrity remains intact. Without application of uniform and specific cost allocation guidance, Program integration, coordination and services will be impeded. If State and Local Programs are to achieve the goal of effective Program coordination and integration, they require clear and concise guidance and technical assistance from the Federal agencies in order to comply with audit standards. In turn, auditors, should have direction so interpretation of regulations leads to the same conclusion for all Federal Programs.

92-004

POSITION PAPER

NATIONAL ASSOCIATION OF WIC DIRECTORS

Vendor Management in the WIC Program
9 October 1992

The National Association of WIC Directors (NAWD) supports the development and maintenance of efficient and effective vendor management systems that prevent error and abuse and focus on improving vendor management outcomes. NAWD encourages the United States Department of Agriculture's (USDA) support of state efforts in developing innovative approaches to vendor management which encompass the elements of accountability and adaptability.

Key to the design of an effective vendor management system are the following considerations:

- Vendor management is an inclusive, evolutionary process and there is no single system beyond which there can be no progress.
- Cooperative efforts between the federal and state governments represent the most productive approach to the advancement of vendor management.
- USDA should hold states accountable for results rather than require adherence to a prescribed set of activities.
- The majority of vendors operate reputable businesses, and vendors should serve as a resource for food delivery system planning and development.
- The most cost-effective way to control error and abuse is through a preventive approach.
- WIC staff at all levels can contribute to the success of food delivery systems, and USDA staff should become specialized in vendor management.
- State agencies should regularly exchange information on technical and procedural advances in vendor management.
- USDA should continue to provide incentive funding for the enhancement of vendor management and avoid policies that create disincentives.
- The strength of a system's design should be validated through a review of the individual state's performance.

Historical Perspective

WIC is unique in that program resources must be committed to both direct client health and social services and to the establishment of a comprehensive food delivery system encompassing a large number of private, for-profit vendors. It is necessary when operating a food delivery system to establish internal controls that prevent error and limit opportunities for abuse.

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USDA's primary focus in the area of vendor management has been on abuse detection, investigation and sanctions. NAWD believes that while it is necessary to have the ability to monitor the success of any vendor management system, the most cost-effective way to control abuse is through a preventive approach.

In recent years, many state agencies have made significant progress in designing and implementing improved automated systems for certification, check issuance, and reconciliation. The loss of program funds through identification of vendor abuse has been significantly reduced based on stronger pre-payment edits and variable limits being placed on check redemption values. It is recognized that the objectives of food delivery system enhancements are:

- improved client access to services and foods;
- reduced food costs;
- increased efficiency;
- maximal use of existing resources;
- minimal levels of fraud, abuse, and waste.

Standards for Vendor Management

USDA and state agencies share the common goals of efficient and cost-effective vendor management systems. NAWD supports cooperative efforts between the states and USDA and recognizes the most effective and desirable systems use abuse prevention through program design rather than relying solely on punitive methods after a loss or misuse of program funds has occurred.

In 1985, the USDA and NAWD began work on the Focus on Management (FOM) project and produced standards for vendor management and a self-assessment tool for state agencies. The general goals of the FOM Vendor Management Standards were to ensure that states would have (1) a manageable number of vendors, (2) compliant vendors, (3) compliant participants, and (4) reasonable food costs.

The FOM Vendor Management Standards called for goal-oriented rather than process-oriented systems. The standards served to foster dialogue between the states and Food and Nutrition Services. For each key component of vendor management, from authorization to sanctions, state agencies were challenged to identify potential weaknesses and to develop implementation strategies for enhancements in consultation with FNS. The standards were also described as having an underlying statement of values. NAWD and USDA reached agreement on the values that should shape management decisions, such as exhibiting good management of the food grant through the practices governing vendor selection, performance, and sanctions. NAWD and USDA worked closely together to identify essential standards and to assist states with the development of effective vendor management systems.

The USDA Inspector General's Office (OIG) has made recommendations that are very similar to the FOM vendor management standards, such as:

- enhanced FNS role in providing reviews and guidance
- development of basic criteria for the identification of high-risk vendors

- o requirement for monitoring vendor prices and prevent overcharges
- o requirement to perform compliance purchases and sanctions for abuse on identified high-risk vendors

A resurrection of the highly regarded FOM methodology of cooperative effort between State and Federal agencies is recommended as a means of effecting good vendor management practices.

Measuring Achievement

States should be held accountable for results rather than adherence to a prescribed set of activities which may or may not be cost-effective. It is undeniable that when USDA dictates the exact manner in which limited funds are to be used, state agencies are constricted in their ability to enhance food delivery and vendor management systems through alternative designs.

In promulgating regulations, USDA should describe desirable outcomes rather than essential processes. NAWD is concerned that statistical comparisons can be misleading and that a state agency's initiatives to prevent error and abuse (such as tight authorization criteria) may be overshadowed by another state's emphasis on investigating abuse after the fact. Emphasis should not be placed on investigations at the expense of other important vendor management activities, such as routine monitoring. The fact that one state has reported a higher number of sanctions than another state is meaningless in determining which systems are cost-effective abuse prevention systems. NAWD believes a more realistic approach for measuring effective vendor management centers on preventive systems that are implemented and evaluated on a comparative basis across state agencies.

The strength of a system's design should be validated through a review of its results. The State Plan of Program Operations and Administration provides the mechanism for USDA to evaluate the vendor management program which is being developed and implemented in each state agency with regard to vendor issues. Beyond this, on-site management evaluations and data provided to USDA in a variety of areas, ranging from food costs to vendor review activities, provide extensive opportunity for USDA to exercise its authority over states which fail to meet basic vendor management principles and requirements. NAWD encourages USDA in its continued utilization of these review mechanisms.

Funding for Vendor Management

Vendor management, as a component of a state's food delivery system, is an area that requires extensive preventive controls if the objectives of a food delivery system are to be met. However, state agencies cannot be expected to design and implement innovative systems for vendor management without adequate financial and technical assistance from USDA. NAWD believes it is the responsibility of USDA to provide state agencies with the supportive environment which allows and encourages effective vendor management systems to evolve.

In the absence of increased funding, multiple program components increasingly compete for available resources. Increases in federal requirements (i.e., drug abuse education and referral, new mandates for providing services for homeless individuals, working persons, and the rural

poor) without additional funding have resulted in the various program components competing for the same dollars. These conflicting priorities result in food delivery systems that have been designed using remnants of resources after other administrative obligations have been met. NAWD encourages USDA to make the funding and ideological commitment necessary for state agencies to implement long-term vendor abuse prevention systems.

It must be universally recognized that all funding resources should not be committed to achieving only process-oriented federally mandated activities. USDA should continue to provide incentive funds for the enhancement of vendor management. NAWD opposes any federal policies that would discourage state agencies from advancing or sustaining vendor management efforts. An enormous potential exists at this time for NAWD and USDA to advance the science of vendor management as proponents of preventive systems that allow states agencies to exert maximum authority and control over vendor abuse.

Need for Technical Assistance

State agencies need to provide each other with technical assistance on vendor management. NAWD supports regional and multi-regional meetings as forums for the exchange of information and experience. NAWD is willing to work with USDA to establish guidelines for effective vendor management practices and to provide technical assistance to any state or group of states that is attempting to develop a more effective system.

State agencies and USDA have jointly participated in national and regional meetings for vendor specialists. These examples of cooperative efforts between federal and state government represent the most productive approach to the advancement of vendor management. The cooperation and exchange of information which occurs at these meetings and between state agencies on their own initiative exemplifies the approach NAWD endorses as necessary to effect good vendor management.

WIC Program staff at all levels can make a contribution to successful food delivery. Due to the growth in program funding and the need to remain accountable for these funds, NAWD encourages specialization of USDA staff at the regional as well as the national level in order to promote effective vendor management and to facilitate technology transfer among the state agencies.

Vendor Participation in Program Planning and Development

NAWD believes that the majority of vendors operate reputable businesses and that most vendors can be expected to make a reasonable effort to comply with program rules. These vendors are essential to the successful outcome of WIC Program objectives and represent an untapped resource. NAWD recommends that vendors be utilized as a resource in the development of future error and abuse prevention systems. In this vein, USDA and state agencies should avoid any actions which would create antagonistic relationships with "mainstream" vendors as currently would exist with a "sanction" centered vendor management system.

NAWD endorses the participation of vendors in focus groups, planning and policy formation, and the development of preventive measures over process-oriented investigations and sanctions. This proposal to include vendors in future system development to enable more effective state agency vendor management and oversight.

NAWD recommends reorientation of current USDA philosophy from one of "sanction" to one of "error and abuse prevention" is necessary in order to accomplish this cooperative interaction. A vendor management system which has as its only component investigations and sanctions is, by its very nature, adversarial and counterproductive to inducing vendor support of accountability objectives.

System Design and Further Development

Vendor management is an evolutionary process. Those changes that are regarded as enhancements today may be regarded as elementary in the future. NAWD believes that there is no single system beyond which there can be no progress. Fundamentals have been described, although changing times and circumstances are making some of the older precepts unstable. The basic elements of effective vendor management, however, will continue to include processes for vendor selection, training, monitoring, and sanctions. There may be a need for USDA to support contracts between selected state agencies (representing a variety of types, sizes, problems and strengths) and outside consultants who could develop core (rather than "model") systems, identify the essential resources for successful operation of the system, and provide documentation for other states to examine. "Core" systems should lend themselves to modification and adaptation.

NAWD recognizes that prevention of vendor abuse involves more than vendor monitoring activities; vendor management is interrelated with other program components, and vendor management cannot be examined outside the context of the whole food delivery system. Food instrument design, data processing, payment services, and participant education, notification and sanctioning all have a role in the prevention and detection of abuse and, as such, NAWD supports their integration into future vendor management systems.

Summary

It is NAWD's position that accountable, adaptable, vendor management systems, designed to prevent vendor error and abuse, will safeguard the integrity of the WIC Program. Effective vendor management systems in the present and in the future must be innovative, flexible, and interrelated to all areas of WIC program management in order to respond to and oversee an ever-changing vendor environment.

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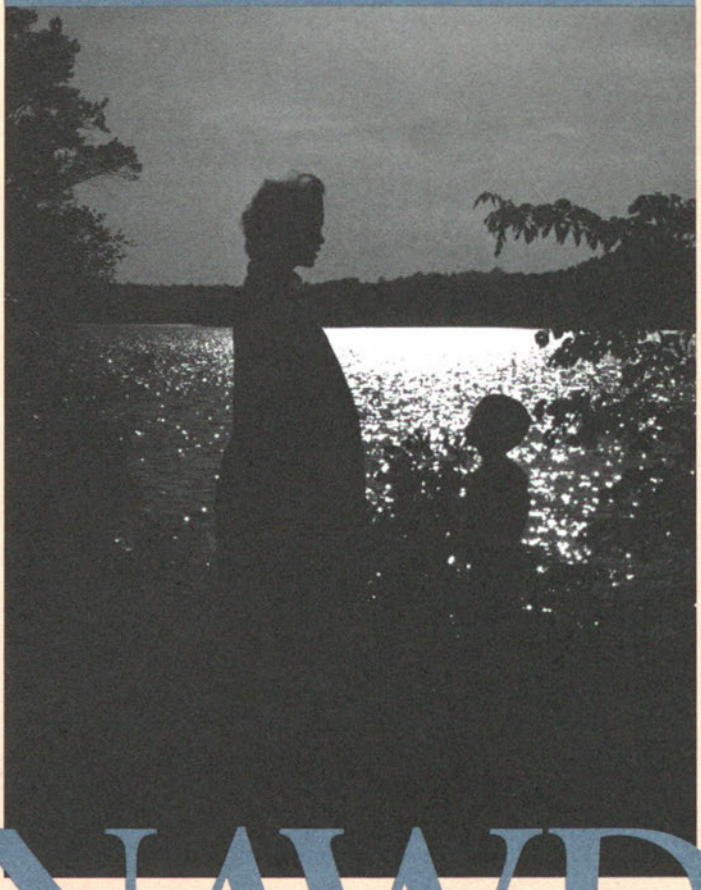

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NAWD focus

NATIONAL ASSOCIATION OF WIC DIRECTORS

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Number 1

CELEBRATING A DECADE OF DIVERSITY

NAWD's Tenth Annual Conference

Over 600 participants attended this year's annual NAWD conference, **"Celebrating a Decade of Diversity,"** held in Washington, DC, February 7-10. The first evening's Awards Banquet set the tone for the celebration with a tribute to John Barr, NAWD's departing President, by the Native American WIC directors carrying the flags of their nations. The Native American drummers and singers led by Bea Carson and Pat Ocumma were highlights of the evening.

Plenary speakers also built on the theme of "Diversity," with William "Sonny" Walker from the National Alliance of Business and Dr. Maxine Hays of the Washington State Department of Health sharing the podium to discuss the benefits of cultural diversity in a session titled "Appreciating the Value of Diversity." While participants enjoyed the stories shared by Walker, his talk focused on the need to recognize the contributions made by various cultural groups in the work environment. Hays gave participants a means for determining cultural competency in the workplace.

Marian Wright Edelman, Director of the Children's Defense Fund, was the featured speaker at the conference's luncheon on February 8. Edelman received a standing ovation from conference attendees for her moving call to "Leave No Child Behind," which included statistics illustrating the extent of child poverty and neglect in the United States with an outline for ways of addressing these problems.

Nutrition issues were also featured at the conference. Ellyn

Dave Thomas, 1992 NAWD Treasurer and Montana State WIC Director, presents 1993 NAWD Leadership Award to Dennis Bach, NAWD Past President and Iowa State WIC Director

Debra Stabeno, Southwest Regional Board Representative, presents NAWD Leadership Award for WIC Volunteer Mildred Robinson to Texas County WIC Program Representative

Jill Leppert, Local Agency Section Board Representative, presents NAWD Leadership Award for the Dade County WIC Program Staff to Denise West, Program Director

Indian and Native American Coalition Chair Bea Carson, Mississippi Choctaw State WIC Director and Pat Ocumma, Coalition Member and Eastern Band of Cherokee Director, present NAWD Leadership Award to 1992 NAWD President John Barr

FY'93 LEGISLATIVE AGENDA

NATIONAL ASSOCIATION OF WIC DIRECTORS

Three Percent Versus One Percent Carry-Forward/Spend-Back

Change Section 17, (i), (3)(A)(i) and (ii), page 39 of the Child Nutrition Act of 1966, dated August 17, 1992.

NAWD's proposal would allow states to carry-forward or spend-back three (3) percent of the total federal grant payment versus the current allowable limit of 1 percent. The current carry-forward/spend-back provision does not include rebates. The NAWD proposal also does not include rebates.

The proposed change to three (3) percent would serve as an excellent management tool, enhancing states' abilities to more effectively manage and stabilize caseload at maximum levels. This, in turn, would reduce the possibility of drastic caseload increases or reductions. When drastic changes occur, participants may have to be removed from the program in the summer only to be put back on the program in October when more funds are available. This is a disservice to the women, infants and children we serve.

Often, young children are removed from the program mid-way through their certification to satisfy budgetary constraints. A more flexible carry-forward/spend-back provision would not force WIC managers to use children as pawns to balance program budgets. Because inflation is erratic, the current one (1) percent carry-forward/spend-back provision does not provide sufficient management flexibility to effectively and efficiently manage the program. The carry-forward/spend-back provision applies to federal funds only. States may receive as much as one-third of WIC funds from infant formula rebates. This results in a carry-forward of less than one percent of the total WIC funding in any given year.

Most federal programs have a multi-year grant expenditure. The NAWD proposal would place the WIC program more in line with other grant programs managed by state agencies.

NAWD's proposed change would not have any bearing on the current regulatory provision which allows five (5) percent for the first year of cost containment implementation and three (3) percent for the second year.

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Carry-Forward/Spend-Back When There is a Significant Reduction in Rebate

Change the language in paragraph (D), page 39, Section 17, Child Nutrition Act of 1966.

NAWD's proposal would allow states to carry-forward/spend-back five (5) percent of the total federal food grant during the first year if there is a significant reduction in the amount of rebate revenues. Current language allows only for increases in rebate revenues. The current United States Department of Agriculture working definition of significant increase is fifteen (15) percent or more in rebate revenues. This definition should also apply to a decrease in rebate revenues.

Grants for Special Projects

Change paragraph (g)(5), page 33, Section 17, of the Child Nutrition Act of 1966 dated August 17, 1992.

NAWD proposes that at least $2 million of those funds which are available to the Secretary for the purpose of program evaluation (currently one half of one percent, not to exceed $5 million) be made available to states in the form of special projects grants. These grants would be available on a competitive basis to all states for special projects of up to two years in duration. Qualifying projects would have regional or national significance and be directed toward improving the services of the WIC Program. Under this proposal, states should have a minimum of two years to expend grant resources and complete approved projects.

Full Funding Versus Entitlement

NAWD continues to advocate for the five year full-funding plan the Association presented to Congress in 1991. This plan stressed the need for incremental funding increases for the program in order to reach full funding (serving 85 percent of the in-need or eligible population) by 1996.

NAWD urges Congress and the Administration to consider mechanisms for fully funding the program. These might include increased domestic discretionary resource commitments, legislation which would provide for mandatory funding commitments, or entitlement grants to the states. NAWD is opposed to converting the WIC Program to an entitlement program for individuals. Alternative funding mechanisms which focus on commitments to the states rather than the individuals would:

1. Maintain the program's focus on nutrition.
2. Maintain program quality. NAWD's full-funding plan is a practical approach to incrementally add caseload without placing an undue burden on WIC clinics and undue hardship on participants. It would avoid service delays and potentially long waiting periods.
3. Maintain targeting and tailoring. Under entitlement programs directed toward individuals, state's lose flexibility and management control. The WIC Program's documented accomplishments demonstrate its high level of success. The Program is proud of its record of accountability. Full-funding mechanisms will maintain the integrity of the Program and the quality services it delivers to participants.
4. NAWD urges Congress and the Administration to exempt WIC from all budget balancing legislation or agreements.

Option for States to Use Food Dollars for Purchase of Breast Pumps

In keeping with a recommendation from the WIC National Advisory Committee, NAWD urges Congress and the Administration to authorize states the option to use food dollars to buy manual or electric (with disposable accessories) breast pumps.

Breast pumps are a clear benefit for participants. They assist breast-feeding mothers to continue providing healthy mother's milk for their infants in spite of timing constraints or logistical considerations caused by employment, school or other considerations. Breast milk is considered the healthiest and best source of nutrition for infants.

This proposal would exclude the purchase of shells, pads, or similar devices. Electric pumps would be loaned to participants.

Program Name Change

In an effort to maintain the Congressionally mandated focus of the WIC Program, NAWD urges that the Program's name be changed from the "Special Supplemental Food Program for Women, Infants, and Children" to the "Special Nutrition Program for Women, Infants, and Children".

Issue of Concern

The Cash Management Improvement Act's objective or goal is to prevent the federal government and state governments from having to pay interest to each other through the mechanism of a zero balance. NAWD is concerned that the Cash Management Improvement Act has failed to consider the uniqueness of the WIC Program's income. For example, the Act has not considered income from infant formula rebates; nor has it taken into consideration other program incomes, such as monies collected from vendors for overcharges, civil money penalties on vendors, and collections from participants for obtaining unauthorized benefits. NAWD recommends that the Cash Management Improvement Act exempt these two categories of funds received by the WIC Program.

While it is reasonable to expect that states anticipate expenditures on a daily basis and draw down federal funds accordingly - so that there would not be a balance for which states would be responsible for paying interest - it is unreasonable to expect states to expend one to three million dollars in lump sum rebate payments within one day of receiving the rebate check. If the check amount is not spent in a day, the state must pay interest. States should not be expected to pay interest to the federal government on these funds. The same logic applies to other program funds, such as civil money penalties, collection of overcharges from vendors, and collection from participants.

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OPENING STATEMENT
Dick Gregory, Activist and Entrepreneur
Hunger forum: Agenda for the Future
June 17, 1993

Good Morning. I am pleased to be here this morning to focus attention on this critical issue. We will articulate the effects hunger has on our nation, hear from experts on what the causes of hunger are, and seek concrete solutions on what should be done to eradicate this problem. The panel that I'm on; Extent and Consequences of Hunger: Connections to Poverty, Agriculture, Health, Education and Community Development will cover a broad range of topics. I will necessarily have to concentrate on a few highlights in this brief statement.

I will begin by stating that over 30 million people are going hungry in our nation and more than 12 million are children. I am here today not to be involved in another committee on hunger, but to say that its time to end hunger. We have an opportunity to transcend the differences of politics and nations, and religions and ideologies by finally working together to address the most fundamental need of all - the need for nutritious food. We have an opportunity to make our lives matter, to recognize our own personal power and responsibility for our nation, to perceive what needs to be done and do it.

Many people believe that hunger exists because there's not enough food to go around. The real cause of hunger is a scarcity of justice, not a scarcity of food. Hunger is really a social disease caused by the unjust, inefficient and wasteful control of food.

If you look at poor folks down through the years it seems that nobody has come up with programs for their benefit - there's always some motive behind it. Hunger and poverty are frequently associated with malnutrition and other forms of ill-health. The most basic and widespread manifestation of hunger today - and the least recognized - is chronic undernutrition. Another "invisible" form that hunger can take is malnutrition, a condition that occurs when an individual's diet has a relative deficiency or excess of specific nutrients vital to good health. If we are to gain the trust of poor folks we need to also undertake the more serious and far-reaching policies to eliminate the poverty which underlies hunger. We also must expand our educational efforts to teach people the importance of eating for nutrition and not for taste.

One of the most important things that we can do to start turning this around is to look at the sad plight of our farmers. They are losing their land to banks and large corporations, losing their health through toxic chemical exposure and stress; and their way of life is vanishing. In a personal sense, I feel sorry for anyone who falls on hard times and suffers economic injustice in this land of plenty. However, when I see the American farmer losing his land today, I realize that he actually lost it a long time ago. We all reap what we sow.

The American farmer began to lose his land the first time he trusted the plant instead of the soil. He lost it the first time he poisoned his land for short-term profit.

No serious investigation into hunger can be made without a thorough knowledge of the principles of soil health and its relationship to the food produced. Yet not one in a thousand nutritionists or dieticians has ever

studied the soil and plant relationship. No civilization has ever lived beyondthe health of its soil.

I favor methods of agriculture that improve the long-term profitability of agriculture, such as crop diversification, conservation tillage methods, and low-cost integrated pest management systems that are safer, organic, and sustainable over the long term.

Agriculture has drifted away from natural rhythms and processes that support soil fertility and crop production and that sustain the life of the farmer and the nation. Chemical fertilizers and pesticides pose increasing problems to farmers. They add to the operating expenses of the farmer, yet are becoming less effective by breeding increasingly resistant strains of weeds and insects. Agricultural chemicals are a major source of pollution to ground and surface water. Heavy reliance on chemical fertilizers may be depleting the natural life and fertility of the soil and may pose a serious hazard to future generations.

To support agricultural prices, the federal government has put millions of acres into the conservation reserve and other set-aside programs, paying farmers not to produce. Thus an artificial economic imbalance is created in the U.S. agricultural economy while people in other parts of the world starve.

Traditions of rural American farm communities and small towns are eroding - yet federal policies are not helping to sustain the small farmers and their way of life.

I also favor locally grown and marketed foods, and I support the re-institution of local farmer's markets. I would like to see a program to train the homeless and veterans in organic farming methods. We could also set up a foreign farmers corps and give farmers training in soil health and nutrition and send them around the world - wherever nations would accept them - to grow food for the people. It's one thing to deal with hunger and malnutrition and it's another thing to liberate nations from hunger, which is the only way it can be liberated.

A policy of favoring diversified, sustainable agriculture will make the nation's farmers more economically stable by reducing the impact of price fluctuations, and will eliminate the threat of widespread erosion, soil depletion, and health problems due to build-up of toxic chemicals in the food chain and in the environment. The savings to the nation from these policies over the long term will be incalculably great; the risk to future generations of not adopting them is equally great. These policies of favoring natural, diversified, efficient agriculture will help to preserve the American farm as a fundamental institution of the vital life line in our nation. In order to move our nation along this direction, I would call upon the Honorable Michael Epsy, Secretary of Agriculture, to reinstitute the funding for The National Organic Production Program and The National Organic Standards Board. The lack of funding has raised strong questions about the commitment of Congress and the U.S.D.A. to organic agriculture.

As an individual I have run from Los Angeles to New York City, a total of 3,300 miles, averaging 50 miles every day to focus attention upon hunger and malnutrition. In 1981, for 54 days and 54 nights, I starved myself for science. To the amazement of scientists and technicians who monitored my 54 day water fast at New Orlean's Flint-Goodridge Hospital, I demonstrated my physical fitness by walking and jogging from New Orleans to the state capital of Baton Rouge, a distance of some 100 miles eight days after the completion of my water fast. During the eight day period I took only juices and a mixture of vitamins, minerals, and herbs to show that the body can recover quickly when provided with the proper energy substrate of nutrients. I didn't do this to prove that I'm a superhuman. I did this to let doctors know what happens during the starvation process.

In 1985, in collaboration with Dr. David Allen, Ralston Purina and their division, Pro-

tein Technologies, I used a modification of my Bahamian Diet (soybean formula with 4-X) to do a clinical trial in Ethiopia under Dr. Demmissie Habte, who is now the Director of the International Center for Diarrheal Diseases Research (ICDDR), in Bangladesh. The modified Bahamian Diet reversed the clinical and biochemical features in the children with Kwashiorkor or marasmus, despite the fact that the majority had associated complicating conditions such as infections. Infections are known to increase the energy and protein requirements in a child. The success in dietary rehabilitation is related to the quality of nutritional food consumed.

We know that our Feeding Mixture can be produced cheaper than milk-based weaning foods. By the way, one of the main reasons for the famine in East Africa today is lack of topsoil brought about by massive deforestation. At the turn of the century, 90 percent of Ethiopia's land was covered by forests. Less than a century later, not 5 percent of that forest remains. How did this occur? With the trees cut down for easy profit, the rainwater - instead of soaking into the topsoil - rushed down the hillsides, flooded the valleys, and carried the earth off with it. The trees had shaded the soil, and the roots had acted as pumps, drawing water up near the surface of the ground, keeping the water table high. But now they were gone. Without tree roots to keep the water table high, the soil was exposed to sun, wind, and rain. It was baked dry, washed away into streams, rivers, and oceans, or simply blown away. Without soil in which to grow plants to feed animals and humans, mass starvation soon resulted. Care of our forests cannot be overstressed. This is because the destruction of any kind of forest causes great imbalance in the planet's ecosystem.

I believe that hunger and related ill-health have no place in a democratic society, especially one with the resources of the United States. I am pleased that we are addressing this issue today. Hunger must be dealt with in the political and public policy area. I call upon our political leaders to be responsible for ending hunger.

Finally, I would like to end by stating the following facts:

* Nearly 40 percent of the world's grain and nearly 70 percent of U.S. grain are fed to livestock.

* Almost half the energy used in American agriculture goes into livestock production. It takes the equivalent of 50 gallons of gasoline to produce the red meat and poultry eaten by the typical American each year - and twice that much to process, package, transport, sell, store and cook it.

* Half of the continental United States is used for feedstock, pasture and range. Half of U.S. cropland grows animal feed and hay. This land is eroding quickly. For each pound of red meat, poultry, eggs and milk, farm yeilds lose five pounds of prime topsoil

* 270 million acres of public land in the western United States are leased to ranchers for grazing. Ten percent of this land has already been turned into desert by livestock; 70 percent is severely degraded.

* Livestock produce 158 million tons of waste a year, some of which contaminates underwater tables with nitrates. Animal waste and feed fertilizers account for 40 percent of the nitrogen and 35 percent of the phosphorus released into American rivers, lakes and streams.

* Sixty million people will starve to death this year. Sixty million people could be adequately fed by the grain saved if Americans reduced their intake of meat by 10%.

TRH, REVERSE T_3, AND LEUENKEPHALIN LEVELS AND OTHER PHYSIOLOGICAL CHANGES IN A MALE ADULT DURING PROLONGED FASTING

James P. Carter, MD, DrPH, and Joseph Allain, MD
New Orleans, Louisiana

In spite of numerous studies of short-term (less than 30 days) fasts, current knowledge of prolonged fasting, the mechanisms of adaptation, and the causes of death are limited.

A healthy 48-year-old man fasted voluntarily, on water only, for 54 days, during which time he offered himself as an experimental subject. Numerous metabolic parameters were measured, and his mental state was evaluated. Those parameters not generally measured in previously published fasts are thyrotropin-releasing hormone levels (TRH), reverse T_3, and leuenkephalin levels.

Without experiencing any major difficulties, the subject completed a 20-mile jog and a 60-mile walk eight days after the completion of his water fast, during which time he "weaned" himself on juices and a mixture of vitamins, minerals, and herbs.

The human body has a remarkable capacity for surviving without food for long periods. In 1912, Benedict[1] conducted and reported a classic study on a normal man who fasted voluntarily for 31 days, during which time his only intake was 900 mL of water daily. As his fast progressed, it was noted that fat provided more than 75 percent of the calories utilized after the first few days of food deprivation. A progressive decrease in the daily urinary nitrogen excretion suggested an increasing conservation of body protein.

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Normally, during the first five days in such a fast, the body's primary need is for glucose to supply energy for the brain, as glucose is as essential as oxygen. A rapid drop in blood sugar level can bring about behavioral changes, confusion, convulsions, coma, and possibly death. In the body, at rest, the brain consumes about two thirds of the total circulating glucose supply. Most of the remaining third goes to the skeletal muscles and red blood cells.

During the initial stages of fasting, earlier studies have demonstrated a rise in the blood levels of amino acids (especially alanine) released from muscle cells.[2] As fasting continues, the basal metabolic rate declines, and the body's need for calories is further reduced by a loss of metabolically active tissue.

In prolonged fasting, the body takes steps to control its loss of protein. The skeletal muscle cells reduce their release of alanine, and gluconeogenesis in the liver declines.[3] By the fifth or sixth week of an adult fast, gluconeogenesis drops to the point where the liver and kidney produce only 24 g of glucose per day, which is used almost exclusively by the brain.[4] For the brain and the rest of the body to make up for the deficit, ketone bodies produced from adipose tissue are utilized as energy sources.

CASE REPORT

On July 21, 1981, a healthy, nonobese, 48-year-old black male subject was admitted to Flint Goodridge Memorial Hospital, New Orleans, where he undertook a voluntary fast that lasted for 54 days. One week prior to the onset of the fast, the subject consumed his own formula known as

TABLE 1. BASAL METABOLIC RATE STUDIES

Day	Surface Area M^2	O_2 Consumption L/min	CO_2 Production	Basal Expenditure (calories)	Basal Metabolic Rate	Respiratory Quotient
6	1.82	0.22	0.20	36.0	−12	0.9
13	1.78	0.17	0.13	27.7	−32	0.77
20	1.74	0.16	0.13	27.0	−34	0.80
27	1.72	0.17	0.13	29.0	−29	0.77
34	1.71	0.15	0.16	25.9	−30	1.05
41	1.67	0.12	0.10	20.1	−45	0.82
49	1.64	0.18	0.17	32.0	−15	0.92
55	1.60	0.12	0.09	22.0	−41	0.72
62	1.59	0.15	0.13	27.5	−27	0.87
69	1.56	0.18	0.22	34.0	−10	1.19

Basal metabolic rate declined within the first 55 days of the fast. Between day 62 and day 69 the subject was breaking the fast and BMR values increased within that week.

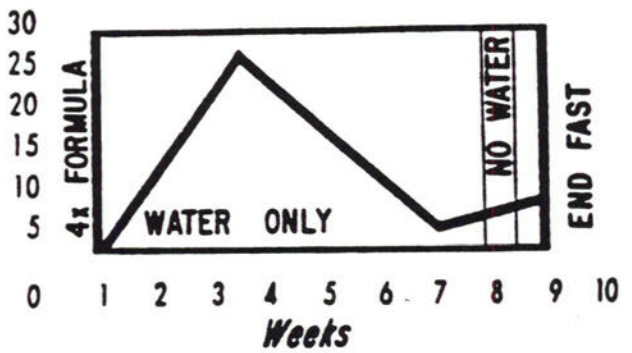

Figure 1. Beta-hydroxybutyrate levels (μmol)

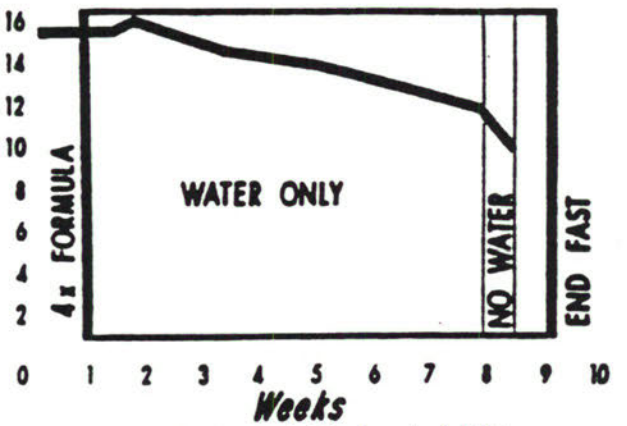

Figure 2. Hemoglobin levels (g/dL)

the "4X formula" (a mixture of vitamins, herbs, and aquatic plants) and a combination of fruit juices, fresh vegetables, and grains totaling approximately 1,500 kcal per day. The subject fasted on 1.5 to 2.5 gal of water per day for the next 48 days. For the next four days (days 49 to 52), the subject fasted completely without water, and for the next two days (days 53 and 54), he fasted with water. On day 55 the subject broke the fast with Welch's grape juice (20 oz), and on the second day postfast, he added orange juice to his diet, followed later by fresh peach juice, V-8 juice, and a little olive oil. Gradually, fresh carrot and cucumber juices were added.

One week later, the subject began a jog-walk to Baton Rouge, 80 miles away. The subject had gained 4 lb since ending the fast, and had increased his caloric intake to 1,800 kcal.

While in the hospital, the subject was given a complete nutritional assessment[5] weekly from day 1. This assessment included the following parameters: height, weight, triceps skinfold, mid-arm circumference, mid-arm muscle circumference, percent body fat, Body Mass Index, serum albumin, total lymphocyte count, total iron-binding capacity, and creatinine/height index.

In addition, basal metabolic rate, basal oxygen consumption, carbon dioxide production, and respiratory quotient were measured once weekly (Table 1). Beta-hydroxybutyrate levels were also measured on three occasions during the fast to confirm that the subject was indeed fasting; the results are plotted in Figure 1.

In addition, a hematological examination was performed on the subject at the start of the study and every week thereafter. Parameters measured

TABLE 2. SERUM VITAMIN LEVELS

Day	Vitamin A μg/dL (Normal = 20-80 μg/dL)	Carotene μg/dL (Normal = 50-300 μg/dL)	Vitamin C mg/dL (Normal = 0.4-1.0 mg/dL)	Serum Folate ng/mL (Normal = 7-16 ng/mL	RBC Folate ng/mL RBC (Normal = 126-600 ng/mL)
10	64.4	80	0.76	8.1	403
24	65.4	56	0.63	22.0	537

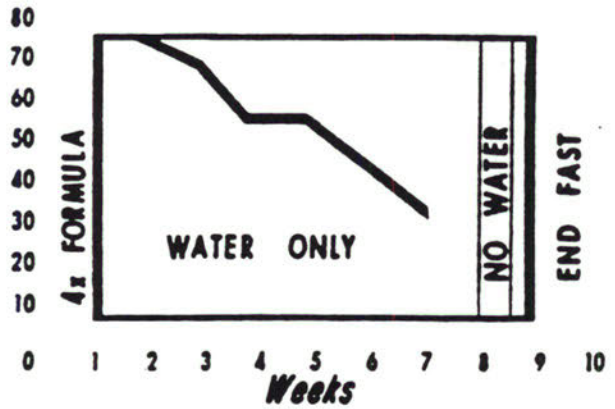

Figure 3. TRH levels (pg/mL)

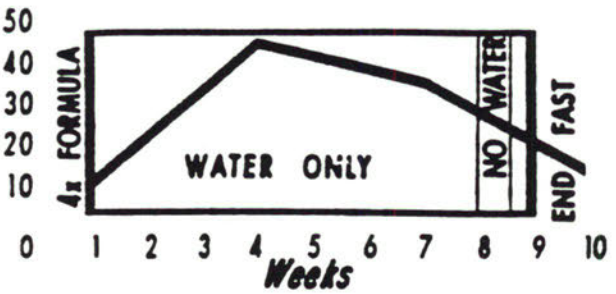

Figure 4. Reverse T_3 levels (ng/dL)

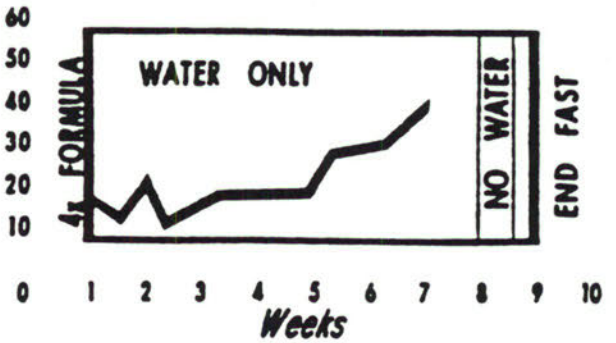

Figure 5. Leuenkephalin levels (pmol/mL)

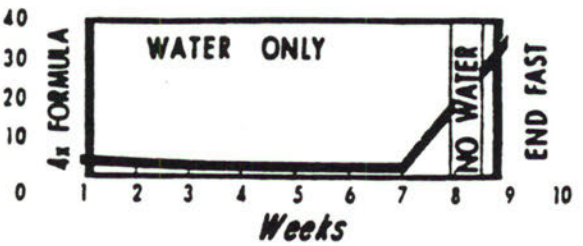

Figure 6. Growth hormone levels (ng/mL)

included hemoglobin, hematocrit, RBC, RBC indices, and reticulocyte count. The hemoglobin level fell gradually, steadily, and slightly throughout the study, and the cause was felt to be iatrogenic (Figure 2). Levels of vitamins A and C, carotene, serum folate, and RBC folate were also measured, as well as amino acid levels and serum electrolytes. The levels of carotene and vitamin C decreased but these levels never fell into the deficiency ranges (Table 2).

Thyroid regulation, control, and function were also evaluated by examining levels of thyrotropin-releasing hormone (TRH), serum T_3, serum T_4, and reverse T_3. Serum T_3 and serum T_4 levels were normal. The changes in the levels of TRH and reverse T_3 are illustrated in Figures 3 and 4. Levels of leuenkephalin and growth hormone were also measured (Figures 5 and 6). There is a rise in leuenkephalin levels, but it is not statistically significant. There was a sharp rise in growth hormone levels when the subject began to train for his jog-walk to Baton Rouge.

The subject's psychological status was evaluated by reports from two psychologists and one psychiatrist. They made observations during the fast and interpreted data obtained on a multiple-adjective list for assessment of mood and levels of

TABLE 3. RESULTS OF MULTIPLE-ADJECTIVE CHECKLIST ASSESSING MOOD

Day	Anxiety	Depression	Hostility
15	0	0	0
17	0	0	0
21	1	1	1
29	0	1	3
31	0	0	1
35	0	0	1
38	0	0	2
42	0	0	2
45	0	0	6
49	2	0	4
52	3	2	4
61	0	1	4

anxiety, depression, and hostility. All results of the mood-assessment test were normal (Table 3). The subject was generally cooperative with the attending staff throughout the study and was determined to endure the fast, even when the physicians recommended against it.

DISCUSSION

The subject achieved a weight loss of 19 kg (27 percent of his body weight) during the "water only" part of the fast (through day 48). Six days later (4 days nothing by mouth, 2 days water only), the subject lost an additional 1.6 kg. Thus, after 54 days of going completely without food and only drinking water, the subject had lost 20.6 kg (29.4 percent of his body weight). Similar results were obtained by Benedict in 1912 during a 31-day fast. The subject in this study lost 21.3 percent of his weight.[1]

The patient's body fat decreased from 18 to 4 percent (the limits of detection and/or measurement with the range of skinfold calipers and Pollack's nomogram) throughout the fast, although the most rapid fat loss occurred within the first 30 days. Body protein declined 29 percent during the fast. The literature states that a 30 to 50 percent loss of lean body mass, ie, protein, is incompatible with life.

Changes in body fat in fasting subjects have recently been suggested to be associated with a prognosis or probability of death. According to the report by Marliss[6] concerning the ten Irish hunger strikers, it appears that they reached their fatal stages when their body fat was completely exhausted. It was found that death occurred when approximately 19 percent of the body protein and about 70 to 94 percent of the body fat stores were diminished.[7]

Throughout the fasting period the subject's plasma amino acid levels remained within normal limits, with a general tendency to an early slight increase. The normal levels of plasma amino acids could relate to the timing of the drawing of blood specimens. A decline in alanine after the first week may have been missed. The importance of elucidating the mechanisms, other than insulin, for controlling amino acid catabolism in fasting is essential to improving understanding of the metabolic derangements responsible for the severe protein wasting of uncontrolled diabetes, sepsis, and trauma, and for an understanding of the ammoniation of keto-acids and the metabolism of urea, both of which are thought to occur in hibernation and may add to our knowledge concerning the management of uremia.

Although serum albumin remained normal throughout the fast, serum transferrin declined from 240 mg/dL at the beginning of the fast to 175 mg/dL at the end of the fast. The total iron-binding capacity, likewise, declined from 379 μ/mL on day 13 to 272 μ/mL at the end of the fast. The total lymphocyte count also dropped from 3,068 at the beginning of the fast to 1,770 on day 41. These results reflect a depletion of visceral protein; this is also observed in the delayed hypersensitivity skin tests performed on the subject. Three out of five skin tests were positive on admission, and complete anergy developed by day 49 (of the total fast). Nevertheless, the subject showed no signs of infection throughout the fast.

The fall in hemoglobin from 15.5 g to 10 g is greater than would be expected in fasting. Usually fasting subjects demonstrate a mild normocytic normochromic anemia.[8] The 5.5-g drop may be iatrogenic as a result of the amounts of blood taken from the subject biweekly throughout the study.

Evidence of vitamin deficiencies sometimes seen in fasting studies beyond 30 days was not present in this study. The decline in metabolic rate, however, would diminish the need for some of the vitamins, particularly those whose requirements are linked to caloric intake, eg, B-complex. Since the subject had access to vitamins during the fast, the

possibility of vitamin ingestion cannot be ruled out; however, it seems extremely unlikely because of the subject's commitment to the experiment.

Thyrotropin-releasing hormone from the hypothalamus and elsewhere in the body decreases progressively as fasting advances. The subject's TRH was significantly decreased by the first week of fasting, with the rate of decrease accelerating between days 32 and 42. It is assumed that this is the principal mechanism of the body to lower metabolic rate, conserve fuel stores, and prolong vital organ function. However, only 5 percent of the circulating thyrotropin-releasing hormone (TRH) can be identified as coming from the pituitary portal circulation. The source of the rest is not known. Does it possibly come from elsewhere in the brain or from the periphery? In the absence of evidence to the contrary, one can assume that there is, however, a relationship between blood levels and brain levels.[9]

Inactive thyroid hormone, reverse T_3 (an isomer of T_3), was produced by the subject, peaking at day 20 and declining subsequently.

Other studies have shown that fasting, malnutrition, and anorexia nervosa are associated with low serum T_3 levels in man.[10-12] This reduction in serum T_3 appears to be due to decreased peripheral conversion of T_4 to T_3 rather than to a diminution in thyroid secretion. Thus, there is little or no decrease in total serum T_4 concentration in fasting.[10,11] A routine thyroid profile (T_3 uptake, T_4, and T_7) was normal in the subject on two occasions.

Serum concentrations of reverse T_3 have been found by others to increase during caloric deprivation.[13-15] Since peripheral metabolism of T_4 is the major source of reverse T_3,[12] it has been suggested that during caloric deprivation, there is a shift in the metabolism of T_4 away from production of T_3, toward reverse T_3.

The subject's basal metabolic rate (BMR) dropped progressively during the first 34 days; its lowest point was 45 on day 54 of the water-only fast. Because the BMR is, at best, a crude measurement, influenced by stress, climate, mood, excitement, or infection, some of the values obtained were erratic and showed moderate fluctuations from one week to the next. The basal oxygen consumption, which correlates well with heat production, was lowest on days 34 and 48. These changes correlate well with the thyroid hormone changes and represent an attempt by the body to retard metabolic processes and thus conserve energy and preserve vital organ systems and their functions.

Insulin levels were reported to be consistently low (too low to measure) throughout the fast. It is believed that low levels of insulin do not modulate glucose, since glucose turnover studies indicate that most of the glucose produced is probably utilized by tissues not sensitive to insulin, eg, the brain.[16,17] Therefore, the role of insulin during fasting appears to regulate the inflow of glucose into the blood. In addition, it may be indirectly responsible for the release of free fatty acids from adipose tissue and in triggering the metabolism of amino acids from proteins and subsequent gluconeogenesis.[17] B-hydroxybutyrate levels rose to a peak on day 24 (of the water-only fast), and were returning toward normal on day 49, when next measured.

Leuenkephalin levels remained within normal limits, for the most part, during the fast, with a general trend of increase from 17.2 pg/mL on day 7 to 37.6 pg/mL on day 49. Leuenkephalins are endogenous opiates that are found primarily in the limbic system, gastrointestinal tract, and gonads. They have been known to stimulate food intake upon intraventricular administration to mice.[18] In the authors' study, there was no correlation between the subject's moods or feelings, as noted from comments written in the progress notes, and leuenkephalin values. Leuenkephalin values were reported to be at their lowest on day 9, when the subject appeared to be euphoric, and conversely, at their highest on day 41, when he was lethargic.

A rise in the subject's norepinephrine level on days 15 and 42 was observed; however, no changes in pulse, blood pressure, or respiratory rate were associated with this rise. The subject meditated every morning. It is not known whether the high levels of norepinephrine observed on the days in question bore any relationship to glucogenesis or to the subject's meditation practices.

Throughout the fast, no significant changes were observed in terms of depression, hostility, or affect in the subject. No signs of thought disturbances or of difficulties in maintaining good reality contact were noted. In the opinion of the two psychologists and the psychiatrist in charge, these results were unusual for an individual who was undergoing prolonged stress such as that expected during a much-publicized fast.

CONCLUSIONS

The ability of even a healthy subject to endure such an extensive fast without any major medical complications, and then to successfully complete an 80-mile jog-walk, only days after ending his fast with juices and a mixture (4X) of vitamins, minerals, and herbs, suggests that the body can recover quickly when provided with energy substrate and does not need additional time to replete so-called protein reserves.

A normal, nonobese subject might safely fast for as long as the Bible states that Jesus did, "forty days and forty nights." An experienced faster, such as the subject (normal, nonobese, and in good health), can fast for a longer time, following "internal cues" that tell him when to quit. He cannot, however, go beyond 55 to 60 days without running the very great risk of running out of fat.

The authors agree with Marliss that in the absence of stress, infection, and trauma, the critical life-threatening metabolic event in a prolonged water-only fast is running out of body fat. Brain death is apt to occur before protein deficiency impairs the function of the diaphragm, setting the stage for a hypostatic pneumonia. Of course, a cardiac arrhythmia, leading to ventricular tachycardia, can theoretically, and occasionally does, result in death at any time.[20]

Since this study was done on only one subject, the authors cannot generalize about the results obtained. Future similar studies involving more than one volunteer would be useful.

In situations in which fasting has been utilized appropriately, such as in treating obesity, beneficial therapeutic results have been shown. This therapeutic approach will probably gain more acceptance as more studies are done to show how fasting affects the physiological and biochemical status both in normal and in diseased human subjects. Making fasting safer, using various nutrients to maintain a weight-losing subject in relatively good nutritional status, and exploring how the risk of cardiac arrhythmia can be minimized or eliminated are important areas for research prior to recommending prolonged fasting without qualification.

Acknowledgments

The authors acknowledge the assistance of the following, without whose help this research would not have been possible: Mr. Dick Gregory, for volunteering; Mr. Al Chapman and Mr. John Levy, for financial support; Dr. Candace Pert, for leuenkephalin analysis; Dr. Jack Wilber, for TRH analysis; Dr. Kenneth D. Burman, for reverse T_3 analyses; Dr. Ralph Snyderman, for growth hormone and B-hydroxybutyrate analysis; the nursing staff at Flint Goodridge Hospital; and Winnie Mpanju, MD, and Lori Silver, MPH, research assistants.

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The Provisional Military Government of Socialist Ethiopia

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May 28, 1985

Mr. Dick Gregory
Tower Hill Farm
Independence Rd.
P.O. Box 3266
Plymouth, MA 02361

Dear Dick,

I have at long last written the results of the small study on the use of a modified Dick Gregory 4X Nutritional Formula in severely malnourished children. I sincerely apologize for the long delay.

As stated in the report, the modified formula was successfully used to rehabilitate the 3 children with kwashiorkor as gauged by clinical and objective laboratory tests. I am tempted to reduce the volume of milk and see if the efficacy is still maintained. I intend to do that in a few patients.

The next phase will be to embark on a larger comparative trial. For this I will need a room in the hospital to accommodate 4 patients and a 24 hour nursing coverage. As agreed I will utilize the money that you kindly donated.

One of the interesting side effects of the study was the 'accidental' discovery by a few friends of the other use of your Bahamian slimsafe diet. A friend who chanced to read the brochure in my home begged to have a tin to try it on. You recall that you brought a few of the Bahamian slimsafe tins at your first visit. He tried it and lost weight. He was amazed at how the drink quenched his appetite, maintained his energy and resulted in significant weight loss. This news spread around and I now have a large clientele of obese and otherwise unfigurly bodied characters whom I hide from!! So it appears that your wonder mixture has hit 2 birds with one stone!!

I hope this letter finds you before you leave for Ethiopia. My daughter plans to leave the U.S. on 6 June 1985 and arrive here on the 8th June.

Warmest regards to you and your family, and greetings to Dr. David Allen.

Yours sincerely,

Demissie Habte

DIETARY REHABILITATION OF CHILDREN WITH KWASHIORKOR USING A MODIFIED DICK GREGORY 4^X NUTRITIONAL FORMULA

(Seleshi Lulseged, M.D. and Demissie Habte, M.D.,
Ethio-Swedish Children's Hospital)

May 1985

INTRODUCTION

Kwashiorkar is endemic amongst pre-school children in Ethiopia, but the magnitude of the problem has scaled new heights following the drought that has affected a large portion of the country. Dietary management has traditionally been based on milk or other foods fortified with milk. The cost of such treatment is generally outside the reach of most rural and urban/periurban slum communities, and indeed may be considerable to governments during large outbreaks of famine.

Dick Gregory's nutritional formula is based on cheap natural foods containing energy, protein, all vitamines, minerals and trace elements. The formula does not contain food from animal sources (Appendix I).

The formula can be produced at an exceedingly low cost. This fact persuaded us to try a modified Dick's formula on a few children with kwashiorkor on a pre-pilot basis.

DICK GREGORY MODIFIED NUTRITIONAL FORMULA

The constituents of the modified mixture is shown below.

Dick's 4^X Nutritional Formula	-	90 gms
Vegetable	-	100 ml
Cane sugar	-	15 gm
Whole cow's milk	-	200 ml
Water	-	to make 1000 ml
Approximate energy per 100 ml of mixture (cals)	-	140 K.
Approximate protein per 100 ml of mixture (gm)	-	5

Preparation of the Mixture: All ingredients were first dissolved in a small amount of water. While stirring more water was added to make the required volume. On standing there was a tendency for the oil to float but a homogenuous consistency could be restored readily with shaking. The mixture has a muddy brownish colour and had no strong odour.

PATIENTS & METHODS

Three patients, who met the criteria for the diagnosis of kwashiorkor or marasmic kwashiorkor according to the welcome classification, were enrolled in the study as they became available in the out-patient department. One patient had kwashiorkor with pneumonia and anemia (Table I).

Detailed medical, dietary and social history was taken and a complete physical examination performed on admission. Subsequently complete blood count, urine and stool analysis, total serum protein were determined and a chest X-ray taken.

All patients were admitted to the regular infant ward and observed closely with daily weights and total serum protein and hemoglobin concentrations every other day. Other investigations were done as indicated and antibiotics and other supportive medications were offered.

Patients were initially provided with 120 Cals and 4 gms of protien per Kg body weight. Naso-gastric tube feeding was initiated in all patients on admission and maintained as necessary. Patients were weaned to regular diet for age before discharge.

A separate group of patients without gastro-enterological disorders were fed on the formula to test acceptability and tolerance.

RESULTS

Acceptability & Tolerance: All the 3 children with kwashiorkor were reluctant to drink the mixture voluntarily even after significant clinical improvement had ensued and appetite had returned to normal.

By contrast a group of children without malnutrition and gastro-enterological problems readily drank the mixture and appeared to enjoy it.

The formula was tolerated by all. Vomiting was not a common feature.

Clinical & Biochemical Response: Clinical improvement with progressive well-being as manifested by euphoria, interest in the surrounding and attentiveness was observed to occur rapidly in the 2 patients, and less so in the other patient whose course was marred by an episode of diarrhea (? nosocomial). All were successfully rehabilitated and discharged in satisfactory condition.

Table 2 summarizes some of the parameters used to gauge outcome (Table 2).

DISCUSSION

The findings in this pre-pilot study provide confidence to initiate a larger study comparing modified Dick's formula with formulas used traditionally in the hospital. The composition of the Mixture may also require change to reduce the energy and protein content to match the standard hospital diet. However in the patients studied, Dick's modified mixture was clearly efficacious in reversing clinical and biochemical

abnormalities of kwashiorkor. The poor acceptability by the malnurished children may partly be due to colour and taste. A larger trial is now in order to confirm this positive finding.

TABLE 1

Admission Clinical Data of Children with Severe Malnutrition

Patient Code	A	B	C
Age (mos)	12	15	24
Diagnosis	Marasmic kwashiorkor	Marasmic kwashiorkor	Kwashiorkor
Weight (gm)	5,100	6,400	8,000
Total serum protein gm/1ml	3.5	4.6	5.4

TABLE 2

Summary of Clinical Response of Children with Malnutrition Given Modified Dick's Formula

Patient Code	A	B	C
Total hospital stay (day)	16	17	15
No. of days to attain minimum weight	4	9	7
Rate of weight gain, gm/day*	45	42	430+
Rate of rise of serum protein, gm/day**	0.2	0.2	0.2

*Calculated from minimum wgt and discharge wgt.

**Calculated from admission and discharge values

+Minimum wgt. aggained and subsequent weight gained modified by diarrhoea.

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ቀን Date January 12, 1985

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DEAN'S OFFICE, FACULTY OF MEDICINE

Mr. Dick Gregory
P.O. Box 3266
Plymouth, Mass. 02361
U.S.A.

Dear Mr. Gregory,

It was a pleasure to meet with you and discuss the possibilities of using your food mixture for dietary rehabilitation of malnourished children in Ethiopia. As you know, the search for a cheap and efficacious food for use in severely malnourished children will continue until we find one that has the right biologic and economic mix. Your food mixture based on seeweeds and sesame offers a very bright prospect. It is because of this fact that I will be happy to collaborate with you and your scientific staff in trying it in children with severe protein-energy malnutrition.

After an initial trial in 2-3 children, we will embark on a comparative trial of a diet based on your mixture (with milk added) with the regular diet in use in hospital. I will send you the protocol in due time.

I was greatly impressed by your concern for the starving in Ethiopia and by your depth of knowledge in nutrition.

I look forward to a long and fruitful collaboration.

Yours sincerely,

Demissie

Demissie Eabte
Dean & Professor of
Pediatrics

PERMANENT MISSION OF ETHIOPIA
TO THE UNITED NATIONS
866 UNITED NATIONS PLAZA
NEW YORK, N. Y. 10017

15 April 1985

Mr. Dick Gregory
39 South La Salle Street, Suite 825
Chicago, Illinois 60603

Dear Mr. Gregory,

We urgently request 100 cases of the Dick Gregory 4x nutritional formula for malnourished children in our Ethiopian hospitals. We also request 100 cases of the 4x nutritional food bar, if available.

Yours sincerely,

Berhane Deressa
Deputy Commissioner
Relief and Rehabilitation Commission
of Ethiopia

Use of Modified 'Dick Gregory's' Formula in the Management of Kwashiorkor

Sileshi Lulseged, M.D.

and

Demissie Habte, M.D.

Introduction

Advanced protein-energy malnutrition occurs fairly commonly in children between the age of 1 to 5 years. In Ethiopia, it is estimated that under normal circumstances about 10% of children in this age group are affected. Kwashiorkor and marasmic kwashiorkor constitute about half of these cases being higher in rural areas. The most important management is provision of energy, protein and other nutrients in a food mixture that is easily digestible, available and acceptable. The commonest food mixture in use employs cow's milk to which is added extra source of protein (usually cow's milk protein concentrate), energy (vegetable oil) and other nutrients (particularly potassium and magnesium).

Various food mixtures have been tried and all have some drawbacks such as cost, availability, quality of nutrients, etc. In times of famine, the number of cases with advanced protein-energy manutrition dramatically increases and cost becomes an important factor. 'Dick-Gregory's modified formula' (see appendix for composition) is a food mixture that possesses the advantage that it is potentially very cheap and can therefore be available to a much larger population groups.

In this study we report the results of dietary rehabilitation using modified Dick-Gregory's formula in children with kwashiorkor.

Material and Methods

Children fulfilling the 'Welcome' criteria for the diagnosis of kwashiorkor and marasmic kwashiorkor were subjects of this study. Nine patients entered the study of which 7 had other complicating medical conditions.

On admission detailed medical, dietary and social history was taken and a complete physical examination performed. Complete blood count, urine and stool examinations, Mantoux skin test, chest x-ray and total serum protein ditermination were done in all at admission. Blood sugar, VDRL test, peripheral blood morphology, Blood Urea Nitrogen and cultures of blood, urine and cerebrospinal fluid were done when obviated by clinical condition of patients either at admission or during hospital stay.

Table 1 - Admission clinical data of patients (with mean values and range)

Total Number	9
Age (months)	19.2(12-30)
Sex distribution	
Male	3
Female	6
Type of malnutrition	
Kwashiorkor	6
Marasmic-kwashiorkor	3
Serum protein (gm/dl)	4.9(3.5-6.5)
Hematocrit(%)	29(25-36)
Number with evidence of infection at admission	7

Patients were observed closely. Daily weight and total serum protein and hematocrit were determined everyother day. Investigations were repeated and antibiotic and supportive therapy provided whenever indicated.

The feeding mixture was prepared as described in table 2.

Table 2: Dick's formula preparation (modified)

*Dick's formula	Amount	Cal	Protein
(Scoop, each 22.4 gm)	3	270	33
Vegetable oil (ml)	100	900	-
Table sugar (gm)	15	30	-
Whole cow's milk (ml)	200	140	6
Water (ml)	700	-	-
	1000ml	1300	39

All ingredients were mixed and thoroughly stirred. On standing there was a tendency for the oil to float but a homogeneous consistency could be restored readily with shaking.

Patients were initially provided with 100 cal, 3.9 grams of protein and 70ml of water per kg of ideal weight for age and increased in accordance with their tolerance.

Results

Acceptability

Nasogastric tube feeding was instituted because of anorexia or refusal to take feeds in seven patients. Patients were noted to take it from cup or bottle a few days before discharge or before shift to "regular" diet had to be arranged.

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*Contains adequate amount of electrolytes, trace elements and vitamins according to information from producer.

Clinical and biochemical response

One patient expired a weak after trial was started. This was a 1 9/12 old child admitted for kwashiorkor and septic features and sepsis seemed to have responded to therapy. As evidenced by assessment a day prior to her death edema had started resolving and protein had increased from 4.5 to 4.8 grams%.

Clinical improvement with progressive well being was generally noted. Three patients showed uncomplicated clinical course and progressive and dramatic biochemical improvement. One patient, despite good response, developed generalized muscular twitchings which were emperically but successful treated with calcium and magnesium. The rest of the patients' course was complicated with either diarrhoea (infections) or nosocermial systemic infections despite which rise in total serum protein documented except in one where both weight and rise in serum protein failed to occur.

Table 3 - Summary of treatment on surviving patients (means values and ranges)

*Total hospital stay(days)	27.1(15-49)
+Number of days to attain minimum weight	7.6(6-10)
≠Rate of weight gain while on formula(gm/d)	42.3(0-80)
⊖Rate of rise of serum protein (gm/d)	0.12(0.05-0.17)

*Admission to discharge though most patients had protracted stay because of their serious illnesses.

+Admission weight and nadir weight used for calculation.

≠Nadir weiht to discontinuation of formula used for calculation.

⊖Calculated from readings at admission and either initial peak reading or reading at discontinuation of formula.

Discussion

One of the means of testing the nutritional quality of a food mixture is to see the extent to which it succeeds in reversing the clinical and biochemical disorders of children with kwashiorkor. The success in dietary rehabilitation is related to the quality of food consumed.

Modified Dick Gregory's formula was able to reverse the clinical and biochemical disorders in all the ninechildren with kwashiorkor/ marasmic kwashiorkor despite the fact that the majority has complicating associated findings such as infections. Infection is recognized to increase the energy and protein requirements in a child.

Although it is difficult to compare the performance of different diets, it appears that this mixture is as good as the standard kwash mixture used made up of cow's milk, calcium caseinate and oil.

However, one will have to study a ~~longer~~ larger number of cases to draw definitive conclusions.

Anorexia is a common features of children with severe kwashiorkor, and nasogastric tube feeding is a standard practice in hospitalized patients to ensure adequate intake. All our patients required nasogastric tub feeding.

The results of this pilot study indicate that modified Dick-Gregory's formula has a place for use in management of children with kwashiorkor. Its low cost is ought to enable its widespread use thus ensuring adequate coverage of children with kwashiorkor.