

Cooking Up A Storm:
Shared food services in the
health care sector

CUPE Research Branch
November 1995
Updated March 1996

TABLE OF CONTENTS

Page No.

I.	INTRODUCTION AND EXECUTIVE SUMMARY	1
 <i>PART ONE: DESCRIPTION AND ANALYSIS</i>		
II.	DESCRIPTION OF FOOD PRODUCTION METHODS	3
III.	CAPITAL AND OPERATING COSTS	5
	Cook-Chill	5
	Fixed Assets	6
	Repair and Replacement	6
	Wasted Food	7
	Cook-Freeze	7
	Conventional (Cook-Hot-Hold)	8
	Assemble-Serve	8
	Commissary	8
	Packaging	9
	Labour Costs	9
	Shared Food Service Proposals Turned Down	11
IV.	PRIVATIZATION	13
	High Price Tag of Privatization	13
	Private Sector Subsidies	16
	Loss of Public Control	17
	Broader Social and Economic Costs	18
V.	QUALITY OF FOOD	19
	Health Risks	19
	Nutrition and Appeal	19
	Cook-Freeze	20
	Menu Limitations	20
	Reheating Methods	20
	Quality Control	21
	Food is Central to Health Care	22
	Special Dietary Needs and Ethnic Diversity	23
	Maintain In-house Kitchens	23

TABLE OF CONTENTS

	Page No.
VI. ORGANIZATION OF WORK	24
Lost Jobs, Lower Wages and Inferior Conditions	25
Polarization of Work: Skills	26
Polarization of Work: Duties and Scheduling	27
Commissary Production: Impact on Work	28
Commissary Production: Impact on Care	28
Health and Safety	28
VII. BIASED RESEARCH, POOR PLANNING	29
VIII. CONCLUSION	32
 <i>PART TWO: PROVINCIAL OVERVIEW OF SHARED FOOD SERVICE ARRANGEMENTS</i>	
British Columbia	34
Alberta	35
Saskatchewan	39
Manitoba	39
Ontario	41
Quebec	46
New Brunswick	47
Nova Scotia	48
Prince Edward Island	49
Newfoundland	49
 APPENDIX "A": IMPACT OF VARIOUS FOOD PRODUCTION SYSTEMS ON FOOD QUALITY	 50

I. INTRODUCTION AND EXECUTIVE SUMMARY

Health care workers across the country are facing a new threat to their job security and the quality of service they provide, in the form of shared, or centralized services. It is partly an outgrowth of regionalization and cost constraints where hospitals are being forced to merge and amalgamate a range of services. It is also being encouraged by private firms and consultants promoting the benefits of privatization, consolidation and ultimately new business opportunities for themselves.

Current initiatives for shared hospital services include the central production and delivery of food, the establishment of central warehouses with "just in time" delivery of supplies (materials management), as well as the merger of administrative and payroll functions, biomedical waste disposal, sterilization of medical and surgical instruments, lab services, laundry services, cleaning and more.

This paper focuses on shared food services. It raises a number of questions which need to be thoroughly considered in the assessment of shared service proposals. The evidence presented here disputes the claims of huge cost savings from centralizing, and often privatizing, hospital services. Critical concerns about the impact on the quality of service are identified. Questions about public control over decision making and the impact on the local economy are raised by the move to shared services, especially when accompanied by privatization or a public-private sector partnership.

Acute and long-term care hospitals in a number of jurisdictions across Canada have rejected shared food service proposals and privatization of dietary services because they require massive investment without promising significant reward. The production methods and operating systems associated with shared food service projects require a sizable capital investment in new facilities, renovation, equipment, training, and labour adjustment. The technology has a short life span (generally ten years) and involves high maintenance and replacement costs. Wasted food along with high packaging and transportation costs present additional costs in the shared food service system.

Altogether the costs of moving to shared food services represents a sizeable investment for cash-starved health care institutions. Few have the money to cover the capital investment and ongoing operating expenses.

This situation opens the door to private sector involvement. With the resources to finance large centralized food operations, the private sector is able to create and capture a new market. In this way, the move to shared food services contributes to the commercialization and privatization of yet another segment of our health care system. It threatens the future of quality food services, as well as public control over our health care system.

The hidden costs of commercial involvement in food service operations are revealed in this

paper: higher escalated prices, inadequate variety and quality for health care users, job reduction and reduced revenue for local economies, and the loss of public control over an essential health service. Partnerships with private sector firms to establish shared food services are paving the way for private sector subsidies. Frequently, contract terms allow the private sector to reap benefits during the profitable years of a shared food service operation. Centralized food facilities then become the responsibility of the public sector when equipment is worn out and must be replaced, requiring a new infusion of money.

Ensuring safe food production in the shared service model requires stringent quality control safeguards and sophisticated technology. Yet nowhere in Canada are there adequate regulations to ensure food safety and quality standards in health care facilities – regulations which were seen as essential in Britain as early as 1980. Obtaining high quality food which is nutritious, appealing and safe is critical for patients recovering from acute illness and injury as well as residents in chronic and long-term care facilities.

Minimizing health risks and protecting food quality requires more than safety standards. Health care facilities must maintain kitchen capacity in-house in order to produce fresh food and to address special health conditions and ethnic diets. Facilities which have implemented new technology or shared food service arrangements have maintained some capacity to produce food on-site using conventional methods. The preservation of kitchens is especially critical when food production is contracted-out to the private sector. Without kitchens, health care facilities would be entirely dependent on the pricing and quality decisions of the contractor.

Long before considering implementation issues, administrators and consultants planning food service reorganization should thoroughly examine various options and facilitate open discussion with community members, workers, and dietary experts. In Britain, health care facilities which achieved overall benefits using new food service methods had completed exhaustive feasibility studies carefully considering the costs, training requirements, technology needs, nutritional quality and related issues. They relied on information from a wide variety of sources, including the government, consultants, manufacturers, providers, clients and academics. By contrast, unsuccessful facilities relied exclusively on data supplied by consultants and manufacturers and had a narrow focus on cost reduction. These findings underscore the need for thorough and balanced investigation of new food production methods – a process to which this paper is one contribution.

This paper is divided into two main parts. The first main section analyses the probable impacts of the move to shared food services and commercial involvement. The second section provides a national overview of shared food service projects in each province.

PART ONE: DESCRIPTION AND ANALYSIS

II. DESCRIPTION OF FOOD PRODUCTION METHODS

In this paper a number of specialized terms are used to describe different production methods and models of organizing health care food services¹. An explanation of these follows.

The food production method utilized in most Canadian health care facilities is the *conventional system* - also called *cook-hot-hold*. In the conventional system, fresh raw food materials are prepared and cooked a few hours in advance using standard cooking equipment. Prepared foods are held at high temperatures (to prevent the growth of micro-organisms) until consumption. Conventional production relies on the low-tech traditional kitchen setup and utensils.

In contrast, *ready-prepared* production is the method most commonly associated with shared food service arrangements in the health care sector and is also used by catering and food retail industries for producing large quantities of food. Essentially, *ready-prepared* production is a food preservation technique. It utilises the principles of pasteurization, rapid chilling/freezing and chilled/frozen storage to preserve food-stuffs prior to reheating and consumption.

In the *ready-prepared* method, food is prepared and cooked using the conventional techniques and then rapidly refrigerated (*cook-chill*) or frozen (*cook-freeze*) using specialized equipment. The characteristic which sets *cook-chill* and *cook-freeze* apart is that production is separated from service (meal delivery to patients or residents) by the introduction of a preservation step or 'time buffer': chilling or freezing. Food is then stored at pre-determined and carefully controlled temperatures in specialized units. Food can be divided into bulk or individual meal portions either before or after refrigeration/freezing. There are also two options for reheating (also called rethermalization or regeneration): bulk reheating or individual tray reheating.

The process of cook-chill is comprised of six basic elements: preparation, cooking, rapid chilling, chilled storage, reheating, and service to patients and residents. The intermediate steps of chilling, storage and reheating add a new dimension - the time buffer - that allows for a separation in terms of time and location between production and services.²

¹ This overview is informed primarily by two documents: Denise Ouellet, *Révue de la littérature: Impact sur la qualité des aliments des modes de production et de distribution des services alimentaires hospitaliers* (Québec: Laval University, 1994). Financed by the Confédération des Syndicats Nationaux (CSN).

² Nicholas Light and Anne Walker, *Cook-Chill Catering: Technology and Management* (London: Elsevier Science, 1990) p. 69.

Sous-vide is a particular version of cook-chill production where food is vacuum packed before cooking. This packaging method allows for shorter chilling time and a longer storage period. The *sous-vide* method is not used extensively in Canadian health care facilities.

The *commissary* system is the term coined for multi-facility food production arrangements. Food is prepared, cooked and stored in a central kitchen using a variety of food production methods. Cook-chill is the most popular choice. The chilled product is transported in a constant chilled state to satellite kitchens for reheating. The production centre may be connected to a satellite kitchen or may be located at a distance.

Assemble-serve production does not involve any direct preparation or cooking of food products. So-called convenience products (ie. pre-cooked frozen or chilled foods, dried goods, canned items) are purchased and assembled into meal trays.

The following table summarizes the essential characteristics of the major foodservice production and management systems.

DESCRIPTION OF FOOD PRODUCTION METHODS

Conventional System	Meals are prepared a few hours in advance and held at the desired temperature. Also called cook-hot-hold .
Ready-prepared	Food is prepared then refrigerated (cook-chill) or frozen (cook-freeze). Portioning can take place before or after refrigeration/freezing. Typically, trays are prepared with the refrigerated/frozen portions and reheated (or rethermalized) before serving.
Sous-vide cook chill	A particular type of cook-chill where food is vacuum packaged before cooking. It requires a very short chilling time (under 2 hours).
Assemble-serve	Food is purchased refrigerated or frozen. The food service merely assembles trays (with hot, refrigerated or frozen food).
Commissary	A central kitchen prepares all meals (hot, refrigerated or frozen) and delivers them to user institutions. Transportation must maintain the appropriate food temperature.

Sources: Denise Ouellet, *Revue de la littérature: Impact sur la qualité des aliments des modes de production et de distribution des services alimentaires hospitaliers* (Québec: Laval University, 1994). Financed by the Confédération des Syndicats Nationaux; Nicholas Light and Anne Walker, *Cook-Chill Catering: Technology and Management* (London: Elsevier Science, 1990).

In this section, we have provided a descriptive overview of the major food service production methods and organizational systems. Our central purpose in developing this paper was to provide an in-depth analysis of the shared food service model in order to prompt open and informed debate in the various provinces where proposals have emerged. The remainder of this paper is dedicated to examining the impact of centralized food production arrangements.

The following assessment of the shared food service model focuses on the cook-chill method and the commissary system - two features commonly associated with centralized food production and distribution setups in the health sector. The cook-freeze method closely resembles the cook-chill system and its impacts on health care are similar.

III. CAPITAL AND OPERATING COSTS

One of the glaring drawbacks of shared food service projects is the enormous capital investment required to establish a centralized food production and distribution operation. The food preparation method (cook-chill, cook-freeze or assemble-serve) and the shared service production system (commissary) require major expenses both at the level of the centralized operation and within each separate health care facility.

Cook-Chill

There is a significant body of literature on the subject of food production technology. Denise Ouellet is a nutritionist at Laval University and a leading researcher in the area of quality management in health care dietetics. In 1994, Ouellet carried out an exhaustive review of the literature on hospital food service production and distribution methods. Her paper presents the major research findings regarding the impact of various production and distribution methods on the quality of food and as well as the cost of setup and operation.

After a comprehensive review of the literature on food production technology, Professor Ouellet comes to the conclusion that "the economic advantages of new technologies remain to be proven".³

³ Denise Ouellet, 1994, p. 36

Fixed Assets

According to the literature, cook-chill requires significant fixed assets in terms of production equipment, fast-chilling units, refrigerated storage space, refrigerated assembly area, and a reheating system.⁴ The most expensive and fragile of the equipment is the rethermalization cart. One tray (including the value of the tray and the cart) costs on average \$1,500 and lasts about ten years. This figure does not include maintenance costs, which are frequent and expensive. Compare this with the cost of a standard insulated tray used in the conventional cooking system which is worth \$120 and lasts for two years (hence \$600 over ten years).⁵

Repair and Replacement

The cook-chill equipment on the market today has a rapid deterioration rate. On average, the lifespan is ten years and the equipment requires constant maintenance during that period.⁶ Facilities which have implemented cook-chill point to equipment breakdowns and repair costs as a major problem, with rethermalization carts being the most fragile and costly component.

The food service department at Jonquière Hospital in Quebec reported frustration with constant breakdowns of the rethermalization carts, including failure of the automated start-up function, degeneration of the thermal walls, and mechanical problems with the hot plates and connecting boxes. Patients registered complaints about stained trays and chipped dishes as well as general dissatisfaction with meals being late or unevenly heated.⁷

Not only was equipment faulty, but the manufacturer of the Restoral cook-chill system at Jonquière Hospital had a poor servicing record. The company did not provide prompt or adequate repair service, and the cost of maintenance was considerable. The food service manager estimated that maintenance and energy costs alone accounted for \$1.00 out of a total \$22.00 per meal day expense in 1992-93.⁸

Burnaby and Lions Gate are two BC Lower Mainland hospitals which have been experiencing similar problems with the cook-chill system. During the last year, Lions Gate closed down its

⁴ For detailed descriptions of cook-chill equipment, see Light and Walker, 1990, p. 78.

⁵ Interview with Denise Ouellet, Professor in the Department of Human Nutrition and Consumer Studies at Laval University, November 8 1995.

⁶ Alain Marchand et Denise Bettez, *Cook Chill: Myths and Reality* (Jonquiere Hospital Centre: Dietary Services Department, October 1994), p. 16.

⁷ Ibid, p. 12.

⁸ Ibid, p. 16.

kitchen and began receiving meals from the new cook-chill kitchen at Burnaby hospital. Already there has been considerable leakage, and several rethermalization carts have needed repair at both hospitals. The project is already one-third over budget. There is concern that these costs could escalate once the one-year warranty runs out on the equipment and the hospitals are required to pay the full repair and replacement costs on this equipment.⁹

Two other hospitals in B.C. - Penticton Hospital and Riverview Forensic Unit - reverted to conventional food production methods after experiencing serious problems with cook-chill technology. The Forensic Unit in Riverview was faced with mounting complaints from patients about poor quality and limited quantity of food in the cook-chill system. When the hospital switched back to conventional technology, it saved \$70,000 in the first year alone.¹⁰

Wasted Food

Another factor which drives up costs in the cook-chill system is wasted food. Researchers Greathouse, Gregoire and Spears found from their analysis of different foodservice systems in American hospitals that food costs were considerably higher in the cook-chill system compared to the conventional method.¹¹ Food costs are elevated in the cook-chill system because production volumes must be set longer in advance, leading to greater surplus food being discarded.¹²

Cook-Freeze

The cook-freeze method appears to have the highest fixed asset expenses.¹³ Cook-freeze requires identical equipment to cook-chill with the addition of a fast-freezing unit and freezer space. In comparison with conventional hot meal preparation, Glew and Armstrong found that cook-freeze required 30 percent greater fixed asset costs and 75 percent more supervision

⁹ Interview between Marcy Cohen, Researcher with the Hospital Employees Union, and HEU dietary workers at Burnaby and Lions Gate, November 8 1995.

¹⁰ Letter from Peter Carver, officer at the Ombudsman Office, to Mr. Michael Quinn, Forensic Psychiatric Institute, September 8, 1995. Information also obtained through an interview between March Cohen, Researcher with the Hospital Employees Union, and HEU dietary workers at Penticton and Riverview Forensic Unit.

¹¹ K. Greathouse, M. Gregoire, M. Spears et al, "Comparison of Conventional, Cook-chill and cook-freeze foodservice systems" (*Journal of American Dietetic Association*: 1989): pp 1608-1611.

¹² Denise Ouellet, 1994, p. 27.

¹³ Denise Ouellet, 1994, p. 27; M. Hertz and J. Souder, "Food service: Preparation systems have significant effect on costs" (*Hospitals*: 1979), 53(3):89.

time.¹⁴ Their study also found that cook-freeze requires more packaging and higher disposal costs. On the other hand, food costs are slightly lower in cook-freeze than cook-chill since food can be stored for longer periods and used in a subsequent menu cycle.¹⁵

Conventional (Cook-Hot-Hold)

The technology required for the conventional system (cook-hot-hold) is, by contrast, fairly modest. The technology involved is cooking equipment, heating elements (heaters and hot tables) and heat retention equipment (insulated and domed trays). Compared to cook-chill or cook-freeze, the conventional system requires moderate investment in terms of fixed assets and ongoing maintenance.¹⁶ There is also less food wasted because production is based on the actual quantity of meals ordered that day. Without the demands of transportation or complicated reheating technology, less packaging is required and less garbage is produced.

Assemble-Serve

In an assemble-serve system, food is purchased "ready to serve" so that production is eliminated. This method requires significant refrigerator and freezer storage space and all cook-chill meal service equipment - overall, moderate fixed assets. Food costs are much higher, however, because processed rather than raw food is being purchased.¹⁷

Commissary

Beyond the process of preparing the food, there is also the cost of setting up the entire production system of a multi-facility food service arrangement. The central kitchen requires equipment for rapid cooking and chilling. Assembly equipment may be located alongside the central kitchen, in another building, or in each separate health care facility. Storage space must be doubled and additional packaging and transportation costs are involved.¹⁸ The cost of building alterations at satellite kitchens must also be factored in.

¹⁴ G. Glew and J. Armstrong cited by Denise Ouellet, 1994, p. 30.

¹⁵ Greathouse, Gregoire, Spears et al., 1989, p. 1610.

¹⁶ Denise Ouellet, 1994, p. 25.

¹⁷ Ibid, p. 27.

¹⁸ Denise Ouellet, 1994, p. 28. See also Light and Walker, 1990, p. 109.

Apart from calculating the cost of equipment, transportation and material, food service managers must consider the fact that all production systems have efficiency limits. Researchers who studied dietary departments in Quebec hospitals discovered that the advantage gained from high production volume declines considerably once the number of meal-days per year exceeds 15,000, which is the production rate of institutions with 45-50 beds.¹⁹ If the threshold for maximum efficiency in food production is achieved in medium-size hospital kitchens, mass production in a multi-facility system may not produce adequate savings to recoup the high capital investment.

Packaging

Packaging is another expense item which is important to consider. In order to protect hygiene and maintain safe temperatures, transportation of food from the central facility to satellite kitchens requires sanitation packaging. Food must be securely sealed in order to prevent contamination. Most of this packaging is not reusable and produces considerable garbage.²⁰

Disposable packaging on the scale necessitated by large shared food service operations represents a social cost in terms of landfill waste and environmental degradation. This soon could become a major financial cost as well, as more and more municipalities consider charging fees for collection and disposal of garbage.

Labour Costs

There is no consensus in the literature regarding the labour costs associated with new food production technology and centralized operations. Some argue that cook-chill rationalizes labour costs because production occurs on a five-day schedule and food is produced in advance. On the other hand, a number of hospitals which switched to cook-chill without state-of-the-art technology faced increased labour costs.

Researchers who compared foodservice systems at 66 American hospitals found that labour costs were slightly higher in the cook-chill kitchens compared to the convention kitchens – in part because the cook-chill meals were reheated plate by plate in the microwave.²¹ Another

¹⁹ Léo-Paul Lauzon and Martin Poirier, *Socio-Economic Analysis: Streamlining of Food Services in the Quebec Hospital System* (Montreal: Accounting Department of the University of Quebec, 1995), p. 13. One meal day is the unit measure commonly used to compare food service departments. It represents the food provided in the health care institution to one patient over one day.

²⁰ Interview with Denise Ouellet, November 8 1995. Also see Glew and Armstrong cited in Denise Ouellet, 1994, p. 30.

²¹ Greathouse, Gregoire, Spears et al., 1989, pp. 1608-1609.

evaluation of cook-chill in American hospitals found that actual costs far exceeded projected costs. In comparison with other systems, cook-chill required more full-time equivalents; overall, food and labour costs were 36 percent higher with cook-chill than the conventional system.²²

There is contradictory evidence from Britain, where the majority of cook-chill operations did reduce their workforce (on average 20%).²³

Training is an important consideration in food service reorganization. In a survey of British cook-chill catering units, researchers Light and Walker found that successful operations provided extensive training to staff in all aspects of the cook-chill method. In operations graded as unsuccessful, little or no training was supplied - an omission which Light and Walker suggest could seriously compromise hygiene and quality maintenance.²⁴ These findings confirm that proper training must be factored into shared food service implementation plans and budgets.

Labour adjustment is another important factor in the feasibility of food service reorganization. In Montreal, shared food service plans have been put on the back burner because administrators are already facing the challenge of absorbing workers displaced by hospital bed closures.²⁵ Shared food service arrangements would cause more disruption in the region's health care system without offering reliable advantages in terms of costs or quality.

Labour adjustment issues have been given only token recognition in the shared food services proposal for the Lower Mainland and Fraser Valley of BC. In its proposal, Marrack Watts claims that "manpower training" and a "comprehensive labour adjustment strategy" are essential for a smooth transition.²⁶ Yet their financial estimates completely overlook the substantial costs of human resource planning and a comprehensive labour adjustment strategy.

Our concern is that if labour costs are reduced by shifting to shared food service operations, it could be at the expense of proper training or downgrading in the skill level and conditions of work - issues which will be explored in a later section on the organization of work.

²² D. Moorshead, *An Empirical Investigation of the Reliability and Validity of the USDA Model to Determine the Least Cost Hospital Foodservice System* (Virginia Polytechnic Institute and State University, 1982: Unpublished Master Thesis).

²³ Light and Walker, 1990, p. 296.

²⁴ Light and Walker, 1990, pp. 186, 239.

²⁵ Interview with Claude Turcotte, CUPE Quebec, October 1995.

²⁶ Marrack Watts Inc, *Final Report Volume 1: Shared Food Services Systems Study - A Directional Document* (Vancouver: May 30, 1995), p. 63.

Shared Food Service Proposals Turned Down

The evidence so far uncovered with respect to existing shared food service operations in Canada suggest that cost reductions are not easily achieved. The same conclusion has been reached by a number of committees and consultants investigating shared food service setups.

The Hospital Food Services facility which has supplied prepared bulk food to six Ottawa area hospitals for 16 years has only recently managed to recuperate enough money to be self-sustaining (primarily due to high distribution costs, under-utilization of equipment, and inefficient technology).²⁷ In an evaluation of food service reorganization options two years ago, the Notre-Dame Hospital in Montreal found that purchasing Ottawa commissary food would cost \$21.95 per meal-day (compared to the hospital's in-house cost of \$20.45). Purchasing food from the commercial caterer, Cara, would have cost \$22.72 back in 1993.²⁸

Last year, Marrack Watts recommended extending the Ottawa shared food service system - now limited to bulk food production - to include a central tray assembly and washing facility. According to a Quarterly Report of the Ottawa Hospital Shared Services Corporation, the proposal was turned down by participating hospitals because of its "heavy capital requirement with limited payback potential".²⁹

Between the Marrack Watts feasibility study and its assessment by Ottawa hospitals, overall volume of patient trays in the region had decreased by 20%, putting volume "below the threshold for an efficient central plant".³⁰ Financial pressures had also spurred cost reductions in the foodservice departments of member institutions, making them more efficient than the centralized model. These factors prompted Ottawa hospitals to declare that "the concept of a central assembly facility, while elegant in its conception, is simply no longer financially attractive."³¹ Presumably the impending bed closures have made the concept even less elegant for Cara Foods, the company which earlier had expressed interest in the Ottawa commissary.

Hospitals in Toronto recently rejected a similar model of shared food services. Nineteen

²⁷ Lauzon and Poirier, 1995, p. 53.

²⁸ Corporation professionnelle des diététistes du Québec, *Compte rendu: Journée d'information, Rationalisation des couts dans le secteur de l'alimentation* (Montréal: 25 March 1995), p. 16.

²⁹ Hospital Shared Services Corporation, *Quarterly Activity Report* (Ottawa: January 1995), p.1.

³⁰ Ibid, p. 1.

³¹ Ibid, p. 1.

hospitals in Metro Toronto created the Shared Food Services Group to examine the feasibility of centralized kitchen operations. Last November, French-based multinational catering firm Sodexo Corporation submitted a detailed business plan to implement centralized food production and distribution facilities for Toronto hospitals. Each hospital then studied the business plan in light of their own budget capacity and service requirements. The hospitals concluded that capital costs would outweigh any benefits, and the project was abandoned.

On February 13, 1996, the Steering Committee of the Toronto project recommended that the Shared Food Services Group formally dissolve itself because the majority of participating hospitals had withdrawn from the project. Official correspondence stated that "the most common reason for opting out was that the pay-back was insufficient to warrant the required capital expenditure".³²

In other locations across Canada, health care planners are turning back proposals for shared food services because there are too many unanswered questions and too little evidence of benefits. The most advanced plan for shared food services in the Quebec health care sector is in the region of Mauricie-Bois-Francs around the city of Shawinigan. Following a negative community response to a report last spring which advocated centralizing food services, the regional health board set up a committee with representation from administrators, users, unionized food service staff, and academics with expertise in nutrition and economics. Twelve acute and long-term care facilities were involved.

The committee examined the existing distribution of food service capacity, the different methods of food production and technology involved, and the feasibility of having a centralized facility. It concluded that one of the hospitals with extra capacity should assume responsibility for producing some standardized meals for the other facilities. Each facility would maintain a separate kitchen with at least one cook and the capacity to produce hot meals - in particular to meet individual requests and special diets of patients and residents.³³ Using a meat casserole as the example, the central kitchen would do the pre-preparation work by cooking the beef and the potatoes. Each individual kitchen would purée the potatoes, add the beef and corn, and cook the final dish on-site.

The committee rejected the option of developing a new shared food service facility as unfeasible and exceedingly costly. It concluded that at this point in time it is more economical to utilize the full potential of an existing hospital rather than construct an entirely separate centre to supply meals to all facilities. There were too many unknowns around the technology,

³² Letter from R.G. Shaw, Chair of the Human Resources Task Force group of the Toronto Shared Food Services Group, to Michael Hurley, President of the Ontario Council of Hospital Unions and Ted Roscoe, President of the Service Employees International Union Local 204, February 20, 1996.

³³ Maurice-Bois-Francs Regional Health and Social Services Board, *Rapport du comité ad hoc portant sur les services alimentaires: premier volet* (Shawinigan: 25 July 1995), pp. 1-18.

costs and quality of service.

IV. PRIVATIZATION

Corporate sponsorship is a common feature of shared food service proposals as with other reorganization schemes introduced to the health care sector. In health care facilities across Canada, plans are underway for massive re-engineering in the production and delivery of food services, lab services, sterilization of medical and surgical instruments, and materials management. In the majority of cases, private for-profit firms are involved. Given this context, it is crucial to look at the particular elements of privatization as they impact on food services in health care institutions.

There are a number of different forms of privatization, ranging from the contracting out of management services and overflow work to the complete privatization of entire departments. What is taking place in medicare is "commercialization" - whereby public services are transferred to for-profit agencies - though privatization is the popular generic term.

In the case of emerging shared food service arrangements, privatization is taking the form of large scale contracting out whereby portions of food service production, or entire departments, will be transferred to private companies. The central production centre may be connected to an existing facility, in which case work is performed within the physical plant of the hospital. In larger projects, separate regional food service facilities would be constructed with employees working off-site in a physical plant operated by the contractor.

High Price Tag of Privatization

Experiments with privatization by hospital food service departments have demonstrated that commercial management and production are costly ventures. In most cases, private for-profit companies have been contracted by individual hospitals to manage and operate on-site dietary departments.

Two economists from the University of Quebec in Montreal, Léo-Paul Lauzon and Martin Poirier, recently completed a study of privatization of hospital food services across Quebec. In order to measure the cost associated with food services privatization, the researchers compared 5 hospital food service departments which were privatized with 23 comparable departments managed by the hospitals. Their statistical analysis revealed that the cost per unit of meals in the privatized food service departments is, on average, \$2.25 higher than the cost per unit in hospital-run departments. This amount represents an increase of 13% over the *average* food production cost in the Quebec hospital system.³⁴

³⁴ Lauzon and Poirier, 1995, p. viii. The meal-day cost (or unit cost) represents the cost of supplies, labour and

The Lauzon and Poirier study also looked at the average meal-day before and after privatization in six establishments. Only one hospital managed to reduce its costs after privatization. The average increase in unit cost for the remaining five hospital food service departments was \$1.16 following privatization.³⁵

One of the factors behind rising costs is that private firms are often both manager and supplier under hospital food service contracts. Obviously this monopoly situation gives the company an incentive to pad its pockets by increasing the prices of supplies. It also creates a conflict of interest which serves to impede efficiency. As observed in the Lauzon and Poirier study, "the private firm is not going to worry about inefficient use of supplies because it benefits from increased sales of those products."³⁶

The phenomenon of costs rising when the contractor is both manager and supplier is documented in the Lauzon and Poirier case study of the Magog Hospital. After the hospital turned over the management of its food services department to Sodexo, the company which also supplied many of the food products, the prices of products were hiked by about 31% each year. When the hospital took back control of its food service department, it managed to reduce costs by 57% over two years.³⁷ The volume of meal production remained relatively constant during this period. Lauzon and Poirier conclude from their research that when the company is both manager and supplier, an increase in prices is practically inevitable.

Privatization of public services such as health care food production also increases overhead costs. Right at the outset, the conversion from a public to a commercial service requires the legal and administrative expenses of tendering a contract.³⁸

Another factor which leads to escalating costs is the corporate strategy of underestimating start-up bids. It is common practice for companies wanting to make inroads in the public sector to low-ball initial bids in order to get a foot in the door.³⁹ Once the service is privatized and the

service which goes into serving three meals to one patient in a day.

³⁵ Ibid, p. viii.

³⁶ Ibid, p. ix.

³⁷ Ibid, p. 26.

³⁸ Tendering costs include design work in drafting specifications and performance criteria, charges for advertising the tender and reviewing bids, and legal charges for drafting the contract. See CUPE Research, *False Savings and Hidden Costs* (Ottawa: 1995), p. 17. See also Ian McKenna et al., *A Study on the Effects of Contracting Out Ancillary Services by the Chinook Regional Health Authority* (Lethbridge, Alberta: Centre for Management Solutions: 1995), p. 23.

³⁹ CUPE Research Department, *False Savings, Hidden Costs: Calculating the Costs of Contracting Out and*

company has a monopoly as in the case of Magog, it can use its leverage to increase charges. In some cases, the company will demand to renegotiate the original contract; in others, it will absorb the original loss, but jack up rates in subsequent years. The hospital may be forced to choose between paying higher charges or risking an expensive legal battle to break the contract.

Consider as well the added cost in terms of monitoring and enforcement of the food services contract. Ensuring that the supplier fulfils the terms of the contract may involve paying for additional supervisory staff to monitor performance, assess standards and handle disputes with contractors. Whereas public facilities which produce food in-house can monitor both inputs (staff, material and equipment) and outputs (meals served), once a private firm supplies food items or entire meals, generally only the output dimension can be measured.⁴⁰ The monitoring of compliance in dietary contracts is of particular importance in health care facilities because of the serious consequences of inadequate hygiene or food quality.

Disputes regarding a contractor's performance may also involve additional legal fees.⁴¹ Liability insurance is another cost which is tied to contractor performance and the need to repair damage or correct sub-standard work.

A related problem is that once services are reorganized under corporate control, it is often complicated and costly for health care facilities to reclaim the service. This situation is a major concern if shared food service projects lead to the elimination of in-house kitchens in participating facilities. Without the capacity to produce meals or portions of the menu from inside the institution without major renovations and investment, food service managers are particularly vulnerable to the decisions of private contractors.

Where food services are contracted out to an external commercial operation, there are also losses on public investments. Commercialization of foodservice operations may leave the public with capital assets - such as kitchen facilities, equipment, and storage space - which are no longer required. In this situation, taxpayers pay twice: first for the original capital investment and then for the use of the contractor's facility.⁴²

The most expensive scenario for shared food service operations is the assemble-serve system whereby prepared food products are purchased and assembled into meal trays. The assembly functions may take place in a public commissary or a commercial operation. This system

Privatization (Ottawa: CUPE, 1995), p. 19.

⁴⁰ Jeff Borland cited by Ian McKenna et al., 1995, p. 21.

⁴¹ CUPE Research Department, *False Savings: Hidden Costs* (Ottawa: 1995), p. 19.

⁴² CUPE Research, *False Savings: Hidden Costs* (Ottawa: 1995), p. 16.

relies heavily on the private sector to supply ready-made food products. The reality is that Canada's private food service industry is not equipped to meet the demands of health care institutions.

In many locations in Canada, the population base is small and the private sector is not equipped to supply the variety or volume of pre-cooked food products required by health care facilities. Selection is limited because Canada has few companies in the business of supplying cook-chill products and those companies offer little menu choice. Large airline catering companies may offer five menu options. The Quebec Dietetic Association recommends a minimum two week menu cycle for acute care facilities and rotation of menu every three weeks in long-term care centres - always with at least two meal choices.⁴³ Even if the private sector were prepared to supply this variety, the price of commercial food products remains excessive.

A committee on shared food services in Shawinigan, Quebec looked at the capacity of the private sector to supply food to health care facilities in the region. It sent out a questionnaire to twenty-three private food suppliers asking if they could provide particular prepared meal products in specified quantities. What they found was that the private sector is not equipped at this time to supply the variety of meals required by the health care facilities. The companies surveyed could not cover even regular menu items on a three-week cycle, not to mention special dietary products.⁴⁴ The Shawinigan example illustrates that it is essential to measure accurately the existing and anticipated supply when assessing the viability of shared food service projects.

Private Sector Subsidies

It must be made clear that the transfer of food services to corporate management and delivery represents a fundamental erosion of medicare. Consultants from the commercial sector have labelled health care food production as an "ancillary service" in order to justify privatization. This strategy must be challenged and recognition must be given to the centrality of food services to the care process.

Health care planners should invest in improving the efficiency and responsiveness of dietary services for the benefit of our public health care system rather than offering business to the private sector. In essence, the shared food service proposals being considered by health care administrators amount to a plan for public subsidy of private industry.

In the Toronto scenario, health care facilities would enter into a partnership with a for-profit

⁴³ Ordre professionnel des diététistes du Québec, *Le devis de service: Un outil d'assurance qualité* (Montréal: 1995), p. 14.

⁴⁴ Mauricie-Bois-Francs Regional Health and Social Services Board, *Rapport du comité ad hoc portant sur les services alimentaires: premier volet* (Shawinigan: 25 July 1995), p. 8.

firm to run a regional food service operation. Sodexho, the "industry partner", proposed to return all centralized food service facilities and equipment to the hospitals after 10-15 years. As pointed out earlier, food production technology of the sort involved in cook-chill commissaries requires replacement after approximately 10 years. Under the Sodexho scenario, the private company would offload aging equipment on the public sector after squeezing as much profit as possible during the good years.

Companies with their eye on hospital food services are also exercising their entrepreneurial imagination by proposing that centralized facilities allow extra capacity to supply food for profit to other sectors. Sodexho viewed the Toronto hospital shared food service project as an avenue to expand its business in the public sector. The food factories would not only have supplied meals to twenty hospitals in Toronto, they would have been designed with extra capacity to produce food for schools, long-term care facilities, prisons, psychiatric facilities and other public institutions throughout southwestern Ontario.⁴⁵ In this way, taxpayers' medicare funding would be used to subsidize the business expansion of a huge multinational corporation.

In the shared food service proposal for the BC Lower Mainland and Fraser Valley, privatization by stealth appears to be the strategy. At present, 60% of the food production is carried out in the public health care facilities. With the full implementation of the Marrack Watts proposal, only 20% of food would be produced in the public sector while the rest would be purchased from private purveyors.⁴⁶ The likely end result is that private companies would capture the most profitable elements of the market leaving the less profitable and more complex health care food requirements to the public sector.

Loss of Public Control

Growing corporate interest in health care food services calls attention to the governance structures, or the ownership and management systems, by which shared food service projects would be directed. The governance models being advanced for centralized facilities raises serious questions about the influence of private companies and the accountability of service providers to health care users and taxpayers as a whole.

The typical governance structure of emerging shared service arrangements consists of regional facilities owned and operated by non-profit corporations that are separate legal entities from the hospitals they service. The boards of directors of these central facilities usually consist of representatives from the participating hospitals with some form of contractual link to the

⁴⁵ CUPE Research Department, *Brief on Sodexho: Shared Food Services* (Toronto: 1995), p. 1.

⁴⁶ Marrack Watts Inc, *Final Report Volume I: Shared Food Services Systems Study - A Directional Document* (Vancouver: May 30 1995), p. 59.

corporate "partner".

Sodexo had proposed a model of ownership and management for the Toronto shared food service project which is called a "limited partnership". This management structure would allow Sodexo representation on a joint body with participating hospitals. Sodexo would finance the construction, implementation and operation of regional food production facilities in return for steady purchases over the term of the contract. Apart from guaranteed business from the hospitals, a substantial incentive for Sodexo's investment is the opportunity for growth elsewhere in the public sector.

In the Marrack Watts proposal for the Lower Mainland and Fraser Valley of BC, a separate non-profit corporation would be established to operate the food facilities and act as the employer. This corporation would purchase food from both its own production facilities and the private sector. Over time, an increasing proportion of health care food would be supplied by the private sector.

It is important to critically examine the governance structure of proposed service merger arrangements to determine the degree of influence exercised by corporate sponsors. In many cases, the contract will bind hospitals to purchasing arrangements with the corporate supplier and place strict limits on the authority of individual public institutions. Health care administrators may have official status as project administrators, but the bread-and-butter management decisions are often made by the corporation.

The prospect of private companies having decision-making power in the governance system of shared food service projects raises serious questions about public accountability. Allowing private corporations greater influence in health care food service operations means that citizens and government agencies have less control over the quality of medicare.

Broader Social and Economic Costs

Shared food service projects present a significant threat to local economies in terms of job loss, wage reduction, and outsourcing to food and equipment suppliers external to the area. In this broader context, commercialization usually costs the taxpayer more in the long run.

Contracting out of food service production would have substantial human costs in terms of the displacement of employees and the reduced demand for local area businesses. The local economy will also suffer if the service is contracted out to a company which is based elsewhere, or which sources a high proportion of food supplies and equipment outside the area. The impact on local businesses can result in reduced tax revenues for all levels of government. If businesses in turn fail or layoff staff, social assistance costs may increase.⁴⁷

⁴⁷ CUPE Research Department, *False Savings and Hidden Costs* (Ottawa: 1995), p. 20.

Typically, the profits of corporate catering firms such as Versa and Marriott are not spent in the same communities where they are generated. In contrast, most of the income of public sector workers and small business owners is reinvested in the local economy. By these measures, privatization leads to a downward spiral of local community income. As health care facilities are publicly funded institutions, it is entirely legitimate to consider broader policy issues of local economic sustainability.

V. QUALITY OF FOOD

One of the fundamental questions which needs to be considered in assessing the value of centralized food services in the health sector is the impact on quality of service. Service quality can be measured in terms of the quality of food - its nutritional value, sensory characteristics, and health risk - as well as the quality of overall service delivery in the health care facility.

It may be useful to further define what we are measuring in terms of food quality. The usual indicators of nutritional value are thermosensitive vitamins: thiamin (for meats and starchy food) and ascorbic acid (for vegetables). Sensory characteristics are more dependent on consumer judgement with respect to a range of factors: appearance, flavour, texture, temperature and other characteristics. The third measure of food quality is the degree of safety in terms of food poisoning risk.

Health Risks

When cook-chill was initiated in the early 1970s, the refrigeration period of several days raised many questions about food safety.⁴⁸ As a result, a substantial amount of research has been conducted on the safety of cook-chill.

According to the research on cook-chill, adequate refrigeration and reheating are crucial to control bacterial contamination. Food must be chilled rapidly and held just above the freezing point in special refrigeration units. Research shows that most food can be chilled for five days and still be safe to eat, though three days is a more realistic limit to preserve its taste and appeal.⁴⁹

⁴⁸ For more background information on the evolution of cook-chill catering operations in Britain, see Light and Walker, 1990, pp. 16-17.

⁴⁹ Interview with Denise Ouellet, November 8, 1995.

Nutrition and Appeal

Food quality is also measured in terms of nutritional content and appeal to the consumer. The nutritional loss in most food reheated after cook-chill is comparable to similar losses in other methods, though vitamin C appears to be most affected by the cooling duration. The sensory characteristics vary considerably depending on the food involved, the duration of chilling and the reheating method. For example, meat dishes are unacceptable after seven days of refrigeration and vegetable dishes after four days.⁵⁰

Cook-Freeze

Cook-freeze is another variation which has similar results. Freezing guarantees microbiological safety as long as the food is thawed in a cold room and served within 24 hours of thawing. However, freezing does alter the texture and other sensory characteristics of foods.⁵¹

Menu Limitations

New technologies require modifications in recipes and food preparation techniques. Cook-chill and cook-freeze methods limit menu options because they do not work with all food dishes; for example, steaks, fried food, eggs, and pastries do not adapt well to cook-chill and cook-freeze.⁵² Cook-chill works best if food is contained in a sauce; for example, gravy for meat and broth for vegetable dishes. If meals are reheated in trays, however, the broth will sink to the bottom and leave the top of the dish dried out. Reheating in bulk seems to work better.

Reheating Methods

British researchers Light and Walker concluded from their study of 80 hospital food service departments that a range of heating methods - including microwave, steam oven, and fryer - must be used in order for cook-chill to work. They also point out that bulk reheating is much more effective than reheating individual meal portions. Reheating individual trays can lead to loss of crispness, over-cooking and under-cooking of certain components, cold spots, tough meat, dried edges, and thick sauces. At this point in time, the technology for tray reheating remains inadequate.⁵³

⁵⁰ R. Zaccharias cited in Ouellet, 1994, p. 20.

⁵¹ Ouellet, 1994, pp. 23-24.

⁵² Light and Walker, 1990, pp. 23-42.

⁵³ Light and Walker, 1990, pp. 92-115. See also Ad Hoc Committee of the Mauricie-Bois-Francs Regional Health

Professor of nutrition Denise Ouellet cautions that using cook-chill with bulk reheating can in fact produce the worst of two systems.⁵⁴ The main problem with the conventional system is that food quality declines the longer it is maintained hot while the primary advantage is that food is prepared fresh each meal time. With cook-chill, the food is stored in the fridge for days. If it is then reheated in bulk, it should be kept hot for a very short time in order to avoid further nutritional deterioration. Monitoring food safety is especially important in this combination system of cook-chill production and bulk reheating because of the risks associated with extended periods of refrigeration and reheating.

Quality Control

Ensuring safe food production using cook-chill requires close management and tight quality control, including regular biological sampling. Great Britain and other European countries have standardized quality control mechanisms. In the US, guidelines are issued by the Food and Drug Administration.

The British Department of Health developed regulations in 1980 - revised in 1983 and again in 1989 - to deal with new food service technology such as cook-chill and cook-freeze. According to British cook-chill standards, food must be completely cooked and then chilled rapidly and held (for a maximum of five days) just above the freezing point (0-3° C). Immediately upon removal from chilled conditions and shortly before consumption, the food must be reheated to a minimum core temperature of 70° C. In addition, the British standards require regular testing of all food, with samples taken immediately prior to meal delivery.⁵⁵

In Canada, there is no regulation despite the fact that cook-chill is widely used. The Quebec government is carrying out consultations to determine standards of practice such as minimum menu cycles in acute and long-term care facilities. However, no Canadian jurisdiction comes close to the strict food quality controls in place in British health care facilities.

Essentially, with good management, adequate pre-installation planning, and proper safety monitoring, cook-chill can produce food which is equal in quality to food produced by the conventional method of cook-hot-hold. The key is that cook-chill production requires stringent safeguards and appropriate technology - through the stages of cooking, chilling, storage, assembly, transportation and reheating - in order to ensure high quality food which is

and Social Services Board, 1995, p. 9.

⁵⁴ Interview with Denise Ouellet, November 8, 1995.

⁵⁵ Denise Ouellet, 1994, p. 14. See also Light and Walker, 1990, pp. 83-84 and pp. 348-349.

nutritious, appealing and safe.

The need for sophisticated technology, quality control mechanisms, and strict safeguards highlights again the major costs associated with cook-chill production. Safety issues also point out the necessity of maintaining public administration of health care food services rather than shifting operations to the commercial sector which is not directly accountable to patients.

Food is Central to Health Care

When considering the impact of different production techniques on the quality of food in health care settings, it is important to remember that nutrition is central to the healing process. The nutritional value of food is essential for both the sick and the elderly who rely on health care providers. These groups also face a higher risk of contracting food-borne diseases.

The companies which are lobbying to take over food production for health care facilities - along with the government agents, administrators and planning authorities who support privatization - always draw a line between medical services and the so-called "ancillary" or "hotel" services such as food, laundry and housekeeping. They argue that food is a support service which is secondary to medical treatment and thus should be supplied by the private sector. In reality, food is a critical element of care.

Anyone who has been ill can attest to the fact that food serves a therapeutic purpose. Proper nutrition is essential for patients recovering from acute illness and injury as well as residents in long-term care facilities. Particular attention must be paid to the taste and sensory appeal of food in health care facilities so that patients and residents develop healthy appetites. For these reasons, dietary experts and front-line food service workers alike are urging health care administrators to thoroughly study different production techniques to make sure that patients are not put at risk by compromised food quality.

The significance of dietary services in the continuum of health services is confirmed by a recent report from dieticians in Quebec.⁵⁶ The Professional Association of Quebec Dieticians (OPDQ) is calling attention to malnutrition as a critical health problem which is exacerbated by hospital cutbacks, early discharge, ambulatory care, and inadequate coordination of services for patients recovering at home.

Quebec dieticians estimate that the provincial government could save 577,477 hospital days per year if malnutrition was addressed in a preventive manner by health care facilities. Malnutrition is leading to many post-operative complications, requiring longer hospital stays

⁵⁶ News release titled "Health care reform: Dieticians' concerned about the quality of food services" from l'Ordre professionnel des diététistes du Québec (OPDQ), February 21, 1996.

and in turn lengthening waiting lists. It is also causing unanticipated complications and readmissions to hospitals. Studies in North America and Europe reveal that over one-third of adults in acute care hospitals are at risk of malnutrition.⁵⁷

The OPDQ is calling on the Quebec Health Ministry to develop a new nutrition policy, one which reflects the new reality that patients are being returned home earlier without always adequate resources to maintain a nutritious diet. It is vital, dieticians argue, that hospitals maintain high quality food services in order to prevent complications following surgery and treatment and to ensure that shortened lengths of stay do not compromise patients' recovery.

Special Dietary Needs and Ethnic Diversity

It is also important to consider the capacity of food production systems to respond to special health and ethnic diet needs of clients. Because of the limitations cook-chill imposes on menu options, it is difficult to adapt all recipes to this method. Certain specialized diets and ethnic food requirements would be difficult to accommodate because the cook-chill reheating method compromises the quality of many menu items. Limited menu choice is a particular concern for residents in extended care facilities, particularly those from minority ethnic communities.

Since November, food has been shipped in big plastic bags from the Public Service Center to the royal Alexandra, where it is either reheated in bulk or assembled onto trays and reheated in microwaves. The rethermalization carts will not be in operation until April 9, yet the hospital has gutted the kitchen and discontinued all in-house food preparation. The Edmonton food service operation is an example of putting the commissary before the cart, implementing centralized food production before establishing the appropriate technology. The result has been inedible food and wasted time on labour-intensive reheating methods.

Maintain In-house Kitchens

One of the questionable features of many current food service restructuring plans is the "kitchen-less" facility. The vision is that new or renovated health care facilities will be designed without a full kitchen. In the Marrack Watts proposal for southern BC, planned capital expenditures to up-grade existing hospital kitchens would be invested instead in centralized food production, warehousing and computer applications.⁵⁸

Creating facilities without kitchens would create a complete dependence on outside providers -

⁵⁷ Ibid

⁵⁸ Marrack Watts Inc, *Final Report Volume I: Shared Food Services Systems Study - A Directional Document* (Vancouver: May 30 1995), p. 74.

a situation which is most problematic when the supplier is a private firm whose primary goal is profit maximization and not patient care. Eliminating in-house kitchens would also seriously compromise the overall quality of food produced.

Facilities need to maintain their own kitchens to produce fresh food as well as to address special health conditions and the needs of diverse ethnic communities. In Britain, health care administrators recognize the need for complementary food production technology and hence use cook-chill to produce only about half of their food.⁵⁹ Canadian facilities which attempted to go kitchen-less have had to re-install their kitchens because they could not rely completely on contractors or on a commissary for special diet and fresh food products.⁶⁰

The Calgary long-term care facilities which receive cook-freeze products from the Carewest commissary continue to operate their own kitchens with cooks and dieticians on-site. The central kitchen supplies standard menu items while the individual kitchens prepare most cold products - fruit, vegetable salad, sandwiches and the like - as well as special orders from residents.⁶¹

It is also important to emphasize that without independent food preparation capacity, health care facilities become entirely dependent on the central commissary. If facilities are renovated or constructed without kitchens, they have no alternate means of producing food for their clients. Complete reliance on the central commissary becomes a major problem when private corporations have significant influence. Being in a monopoly position, the company can jack up prices and neglect quality more easily knowing that facilities are entirely dependent on its products. Health care facilities would have to re-construct their kitchens or establish another commissary in order to get out of a bad deal.

VI. ORGANIZATION OF WORK

The impact of shared food service projects on employment and conditions of work will vary depending on the scope of the project, collective agreements in place (especially job security and technological change provisions), and provincial legislation regarding employment standards, health and safety, and labour relations. Due to this variation, the considerations presented in this section will apply to different degrees in different provinces.

It should also be noted that working conditions, training requirements, and other aspects of

⁵⁹ Light and Walker, 1990, p. 18.

⁶⁰ Interview with Denise Ouellet, November 8, 1995.

⁶¹ Interview with Timon Azmier, CUPE National Servicing Representative in Alberta, October 27, 1995.

work reorganization in food service projects have received limited attention up to this point in time. Where research has been conducted, there is conflicting evidence on the impact of food service technology and management systems on labour costs and on health care workers. Clearly there is a need for more research and analysis on labour issues in the context of health care food service reorganization.

Lost Jobs, Lower Wages and Inferior Conditions

According to the literature, a central aim of the cook-chill system is workforce reduction by operating on a 5-day instead of a 7-day weekly schedule.⁶² The cook-chill method permits a separation between food production and meal consumption in terms of time and, in the commissary system, in terms of physical location. In this way, food can be prepared in advance and stored in refrigeration units until delivery.

The overriding objective of food service reorganization is to cut labour costs by reducing the workforce and intensifying job functions for those who remain. Health care employers and commercial consultants refer to goals of "enhanced productivity" and "increased efficiency", but these concepts translate on the ground to fewer jobs and downgraded jobs. There is no doubt that the large scale technological change involved in cook-chill commissaries will have a major impact on the workforce.

While there is no conclusive evidence that shared food service projects lead to reduced labour costs, there is certainly an expectation of savings. Shared food service proposals which have emerged in various locations across Canada in the past few years have targeted labour costs as a major area for cutting back. The same motivation has been driving food service reorganization in Britain.⁶³ If centralized food production systems are designed with the expectation of significant reductions in labour costs, those savings may be realized at the expense of safe working conditions, job security, and ultimately the quality of food provided to patients and residents.

One of the consequences of centralizing health care food services could be that employees are pitted against food service workers in the private sector. Shifting food services from health care facilities to food factories in effect removes production from the public eye and reinforces the false notion that food is a functional rather than a therapeutic service. It also means that food commissaries – even if they continue to be operated by public facilities – would be set up in competition with private (mainly non-unionized) food manufacturers. The result would be downward pressure on wages and working conditions – a trend which could jeopardize the quality and safety of food delivered to patients, residents and their families in health care institutions.

In provinces where contracting-out restrictions, employment security, or central bargaining are limited, it would be difficult for even the most organized union to ensure similar terms and

⁶² Denise Ouellet, 1994, p. 27.

⁶³ Light and Walker, 1990, pp. 296-297.

conditions of employment for dietary workers transferred to the commissary. Centralization of hospital laundry services across Ontario during the 1970s resulted in job loss, wage slashing and inferior conditions of employment for workers transferred to the eleven regional facilities. In bargaining, the employers have insisted on comparing their terms of employment with those in private sector laundry operations, many of whom are non-unionized. Fragmenting food services from the hospital setting to isolated food factories would risk this downward spiral of competition for lower labour costs, likely at the expense of food quality and safety.

Polarization of Work: Skills

Apart from job loss and deterioration in terms of wages and benefits, there is the issue of how work is reorganized for the remaining employees. There is concern that cook-chill technology and centralized assembly-line methods require less specialization and will lower the overall skill level required of food service staff.

On the issue of work reorganization, it is important to distinguish between two distinct components of the food service process: production and distribution (including assembly, delivery, and washing functions). In a typical Quebec hospital, one-fifth of kitchen staff are involved in preparing and cooking the food while two-thirds work in tray assembly, delivery, and washing.⁶⁴ These two groups of workers will be affected differently by food service reorganization.

In a conventional food service operation, one of the main requirements of skilled staff is in the choice and preparation of raw food materials. In cook-chill, these skilled positions may become redundant. The head cook, manager or purchasing officer may establish the specifications for raw materials and select the food. Because the emphasis in cook-chill is on the manufacture of a set of standard menu items in bulk, a substantial proportion of raw materials may be purchased as pre-prepared goods. In that case, much of the preparation work of the conventional kitchen would be eliminated.⁶⁵

The introduction of cook-chill production often shifts emphasis from a cook's individual skills and creativity in producing menu items to standardized production allowing for less personal influence. It has also been suggested that technological changes associated with commissary and cook-chill will sharpen the separation between workers according to their skill level. This may happen because workers with manual skills are vulnerable to technological change while those with advanced technical skills often benefit from new technologies. For example, the cooks in a central kitchen may develop additional skills in temperature and microbiological

⁶⁴ Denise Ouellet, 1994, p. 25.

⁶⁵ Light and Walker, 1990, p. 93.

control while those at satellite kitchens become machine operators and lose the opportunity to contribute their traditional skills.⁶⁶

Polarization of Work: Duties and Scheduling

Workers in the central and satellite kitchens may also be affected differently in terms of scheduling and work duties in the cook-chill system. In conventional food production, departments normally operate with one full shift from early morning to noon when breakfast and lunch are prepared and another half shift in the afternoon when supper is prepared.

If a facility implementing cook-chill can afford to purchase and upkeep a double quantity of trays, food can be produced on a single shift each day. In the morning shift, lunch is prepared and trays are cleaned. Then supper and breakfast are prepared and chilled in the afternoon shift. Storing two meals at once requires double the number of trays. This system of food production would avoid the split shift and the pressure of peak demands.

Individual workers at the production site may prefer the five-day production schedule of cook-chill, no longer having to do evening and weekend work. At the Bois-Francs Hospital where cook-chill has been used for 19 years, production staff cite another advantage of cooking in advance: work is no longer geared to the pressure of rush-hour production.⁶⁷

While production staff may enjoy some advantages in the cook-chill system, the majority of food service staff - those employed in assembly, delivery and washing - may find their jobs downgraded. Workers who assemble the meals often have to stand for hours doing repetitive tasks at a rapid pace. At the other end, washing cook-chill dishes is extremely difficult because rethermalization leaves stains and crusted-on food. Supper dishes are usually left overnight and washed the next morning.

Not only is the work itself more monotonous and physically demanding, these workers do not enjoy any improvement in scheduling with cook-chill. Kitchen staff responsible for distribution and washing still work on a seven day weekly schedule in the cook-chill system. So for the majority of dietary staff, cook-chill production is not a welcome change.

The experiences of dietary staff with various food production technology has received limited attention, though a significant US study raises similar questions about employee satisfaction with cook-chill. In their study of 66 American hospital foodservice systems, Greathouse, Gregoire and Spears examined the relationship between production methods and work

⁶⁶ Ibid, p. 294.

⁶⁷ Mauricie-Bois-Francs Regional Health and Social Services Board, 1995, Appendix F.

performance. Their research revealed that cook-chill did not improve productivity, continuity of staff (measured in terms of absenteeism and turnover), or worker morale.⁶⁸ While the direct impact of cook-chill technology on work tasks was not explored in depth, it appears that new food production technology has not led to improvements for assembly, delivery and washing staff.

⁶⁸ Greathouse, Gregoire, Spears et al., 1989, pp. 1608-1609.

Commissary Production: Impact on Work

Work organization would be even more repetitive in a commissary system because menus are standardized and the production, assembly and cleaning procedures are more automated. Mass production of the scale proposed in Toronto and BC Lower Mainland would entail assembly-line work resembling the operations in the food manufacturing industry.

In the course of this research project, we were unable to uncover documentation on the work process in food commissaries. To begin with, Canada does not have large health care food factories using the tray assembly technology proposed in the Toronto and BC Lower Mainland projects. Another limitation is that hospital food commissary staff are either unorganized or represented by weak unions, making access to information on working conditions extremely difficult.

Commissary Production: Impact on Care

The centralization of food services, by removing staff from individual facilities and intensifying the work of those who remain, would ultimately compromise the quality of care delivered to patients and residents. It should be recognized that front-line food service staff perform a range of duties which include interaction with patients and consultation with nurses - duties which contribute to the therapeutic process in a health care setting. If most dietary staff are shifted to central production facilities, workers who remain will likely have more narrowly defined tasks which do not include the extra care now provided by food service workers to patients and residents.

Removing food service production from health care facilities could also lead to increased workload and stress levels for nursing and portering employees to compensate for lost staff. The SEIU's Canada Nurse Survey conducted last year revealed that nurses are required to perform more non-nursing duties (including housekeeping, portering, and food service tasks) just as cutbacks increase pressure on their medical skills.⁶⁹ Complaints about increased workload by non-dietary staff would also require increased supervisory time.

Health and Safety

While documentation on labour experiences in food commissaries is sparse, our interviews with foodservice workers revealed several health and safety problems associated with cook-chill production and the commissary system. As mentioned earlier, the repetitious work of rapid assembly production is a health concern for kitchen staff with these responsibilities

⁶⁹ Ian McKenna et al., 1995, p. 26.

because it increases the risk of repetitive strain injuries.

Another health and safety issue for workers dealing with cook-chill is the heavy weight and awkward shape of bulk food packages and rethermalization carts. Injuries caused by slippery floors in the freezer section at the production site are also reported.⁷⁰

The dietary staff at Burnaby Hospital in Vancouver have registered serious health and safety complaints about the recently implemented cook-chill system. In its first year of operation, the injury rate in the dietary department increased on average 28 percent per month (averaged over the entire year).⁷¹ While the most disturbing effect of such appalling injury rates is the personal trauma to workers, health care administrators should also be conscious of the financial impact in terms of replacement and benefit costs.

While it cannot be said that all health and safety problems in cook-chill operations arise from new food service technology, it is common for new production methods to be implemented without appropriate consideration of safety measures. On top of this, staffing levels are being cut and workloads increased for dietary workers as in all hospital departments. When production and delivery methods are transformed without proper planning and in the midst of severe staffing cutbacks, working conditions are invariably going to suffer.

This section on the organization of work under cook-chill and commissary operations has touched on a number of potential problems at the level of job security, wages and benefits, skill levels, and working conditions. In raising these concerns, we are not opposing technological innovations. We are simply arguing that technological change should be introduced with proper planning and safety precautions and that work should be organized to maximize the skills and aspirations of workers. New equipment and methods should be used to facilitate the work process and improve the quality of public health care services, and not be geared exclusively to reducing labour costs.

VII. BIASED RESEARCH, POOR PLANNING

The shared food service proposals which are being developed in various regions across Canada are notably weak in terms of background research and data. The Price Waterhouse report in Quebec, for example, makes broad statements on the cost effectiveness of shared food service operations with virtually no evidence to support their claims.⁷² The scant quantitative data

⁷⁰ Interview with Timon Azmier, CUPE National Servicing Representative in Alberta, October 27 1995.

⁷¹ Interview between Marcy Cohen, Researcher with the Hospital Employees Union, and HEU dietary workers at Burnaby Hospital, November 8, 1995.

⁷² Lauzon and Poirier, 1995, p. 41; Suzanne Leduc, *Analyse de l'étude de rationalisation des services alimentaires du réseau sociosanitaire québécois* (Montreal: Confédération des Syndicats Nationaux, 1995), p. 45.

which is supplied comes from the commercial food service firm Marrack Watts, with no explanation of methodology or reliability and no additional figures to corroborate their estimates. The document simply reproduces Marrack Watt's data without any reference to empirical methods or data sources - serious methodological flaws which according to economists Lauzon and Poirier "lend little credibility to the arguments of Price Waterhouse".⁷³

Likewise in British Columbia, Marrack Watts state that "there are several examples across Canada where centralized food production has now proven to be very successful both on a qualitative and financial basis".⁷⁴ Yet the consultants fail to identify the examples in any significant detail or analyze the comparative advantages of different existing models.

Considering the huge scope and expense of the proposed shared food service projects, one would expect at minimum a literature review and reference to case studies where cook-chill and centralized production have been implemented. Our research has turned up a number of reliable evaluation studies on food service systems. Certainly, the proponents of multi-million dollar food service restructuring projects should have the resources to conduct adequate research on the risks and benefits of the available food service technology and organizational systems.

It is common for proponents of shared food services to argue that major cost savings will result from economies of scale and increased productivity. Nowhere is there substantive proof that centralizing food production will result in considerable savings in the long run. Barbara Markham and Jonathan Lomas, researchers at the Centre for Health Economics and Policy Analysis at McMaster University, recently conducted a review of literature on multi-hospital arrangements. According to their report, "the evidence for increased efficiency from Canadian mergers, and other multi-hospital arrangements, is almost all anecdotal."⁷⁵ Argument by anecdote appears to be the norm among advocates of shared services, particularly those consultants coming from the private sector.

It is no surprise that corporate consulting agencies which are commissioned to evaluate public services are recommending that health care facilities privatize their operations piece by piece. For-profit consulting firms such as Marrack Watts, which specializes in the management of food services, have a long history of advising health care planners to contract-out. When health care administrators and governments turn to the private sector - to firms which have a financial stake in the industry - for advice on reorganization, normally the research is one-sided,

⁷³ Lauzon and Poirier, 1995, p. 42.

⁷⁴ Marrack Watts Inc., 1995, p.6.

⁷⁵ Barbara Markham and Jonathan Lomas, *Review of the Multi-Hospital Arrangements Literature: Benefits, Disadvantages, and Lessons for Implementation* (Hamilton, Ontario: Centre for Health Economics and Policy Analysis, 1995), p. 11

consultations with users and workers are limited, and the ultimate recommendation is rapid privatization.

On the issue of research and consultation, it is useful to note the investigations of Nicholas Light and Anne Walker regarding hospital food service operations in Britain. Light and Walker examined the cook-chill catering systems used by 80 health care facilities in the UK. They grouped the facilities as either "successful" or "unsuccessful" in implementing cook-chill by looking at the following measures: utilisation or rejection of cook-chill, level of utilisation, achievement of original objectives, capacity to resolve problems, temperature control, nutritional value, cost, client and employee satisfaction, and future plans.

Using the above criteria, Walker and Light found that facilities which achieved overall benefits with the cook-chill system had followed an exhaustive process of feasibility research, consultation with clients and staff, and strategic planning. Their feasibility studies carefully considered the costs, training requirements, impact on personnel, financial requirements, technology needs, nutritional quality, and other aspects of food service production methods. By contrast, the facilities which eventually failed in the implementation of cook-chill conducted only limited feasibility research with a narrow focus on reducing operating costs.⁷⁶

Also noteworthy is the fact that successful projects utilized data from a wide variety of sources, including the British Department of Health, consultants, manufacturers, conferences, client surveys, and academic literature. The unsuccessful group relied exclusively on information supplied by consultants and manufacturers.⁷⁷

Another finding which stands out is that successful facilities initiated cook-chill methods with a range of objectives - improved food quality, workforce optimization, reduced operating costs - whereas the unsuccessful facilities were motivated almost exclusively by cost reduction goals. Before going ahead with cook-chill, the successful facilities carried out extensive planning such as testing and adapting recipes in advance to ensure high food quality. They also prepared by adapting technology to local conditions and providing adequate training to employees. The unsuccessful facilities launched cook-chill without proper planning and ended up responding to crises as the problems emerged.⁷⁸

An additional distinction between the two groups in the British study related to staff and client participation. Not surprisingly, the successful group involved employees from the outset and sought client input through a variety of means: surveys, discussion groups, conferences. The facilities which eventually rejected cook-chill failed to consult with staff, preferring instead to

⁷⁶ Light and Walker, 1990, pp. 215-216.

⁷⁷ Ibid, pp. 222-225.

⁷⁸ Ibid, pp. 217-222.

utilize outside consultants in the feasibility study, planning and implementation stages. In fact, the entire reorganization was manoeuvred in secrecy. Clients were only brought in after problems emerged.⁷⁹

Walker and Light conclude that the principle factors behind failure in food service reorganization are poor planning and inadequate evaluation of impacts. Implementation was characterized by problems at various levels: labour relations, malfunctioning equipment, and dissatisfaction of clients to name but a few.

If we were to apply the indicators from Light and Walker's study to the BC Lower Mainland and Toronto shared food service proposals, it is immediately obvious that health care administrators here are already following the hazardous route familiar to some of their British counterparts. The lack of balanced and reliable research along with the fixation on economic goals which characterize Canadian proposals indicate that shared food service projects risk eventual failure.

VIII. CONCLUSION

This paper has presented some of the current knowledge on food production technology and management systems in an effort to stimulate informed discussion and prompt questions regarding emerging shared food service schemes. Clearly there are areas where research and documentation is abundant (cook-chill methods and food quality for example) while other issues are overlooked or are too new to be evaluated (eg. labour restructuring or commissary production). Whatever the limitations, there is certainly ample evidence to challenge the viability of food service centralization plans put forward in various parts of Canada.

This paper has demonstrated that centralizing food service production in the health care sector entails serious risks in terms of cost escalation, compromised food quality, loss of employment, and inferior working conditions. In the broader social and economic context, it represents a drain on local economies and the erosion of public control over essential health services.

As identified at the outset of this paper, shared service schemes are driven by budgetary pressures and not concern for improving the level of service to patients and residents in health care facilities. More disturbing yet is the incursion of private companies looking for a profit in the health care catering industry. With public cost cutting and private profit making at the heart of shared food service initiatives, medicare users and workers along with their local communities should ask critical questions about the impact on our public health care system.

⁷⁹ Ibid, pp. 303-304.

There is no evidence that centralizing food production and delivery will achieve the cost savings projected in consultants' reports. In fact, the literature and frontline experience signal that massive capital investments, food and packaging waste, transportation requirements, and the cost of maintenance and replacement of new technology would cancel out any savings squeezed from labour reduction and speedups. There is absolutely no justification for uprooting entire health care food service operations – to the point of eliminating in-house kitchens – in order to implement ill-defined and very costly centralized systems.

The cost savings claimed by shared food service proponents have been challenged at several levels. New technology such as cook-chill and cook-freeze have not demonstrated any economic advantages over conventional methods. Nor is there any evidence that centralizing the production, assembly or washing functions will lead to savings. If these components are contracted out to the private sector – for example, purchasing of ready-made commercial products or privatizing entire production facilities – the result will most certainly be escalating costs.

On top of public funds being syphoned off to for-profit firms, privatization would lead to quality of care, workers, and local economies being sacrificed to the bottom line of corporations. The governance structures and contracting out conditions of shared food service plans also threaten the integrity of public administration of our health care system. The primary objective of food service restructuring projects must be improving the quality of care, and any savings must be reinvested in the public health care system.

In their haste to implement vast and ill-defined new models, health care planners usually fail to consider valid options for improving on existing systems. We strongly recommend that shared food service planners examine the feasibility of reorganizing food production within existing public facilities and consolidating food purchasing functions as two concrete steps within the existing framework.

Health care workers are committed to innovations which improve the quality, accessibility and cost-effectiveness of health services. These changes must take place within the framework of a public health care system where quality and equity are top priority.

As a starting point, administrators and consultants should broaden the scope of their research and consultations to utilize the knowledge and skills of experienced researchers and service providers. Health care unions are certainly available to contribute to discussions and strategies for improving food services in the health care sector. It remains to be seen if health care planners will open up the food service reorganization process to democratic involvement and informed debate.

PART TWO: PROVINCIAL OVERVIEW OF SHARED FOOD SERVICE ARRANGEMENTS

A few limitations to this information must be noted. Because the information contained here is drawn from the staff and members of CUPE and the CSN, it is not an exhaustive overview. There may be other developments in hospitals where we do not have members.

Second, it is often difficult for unions to gain access to information prior to it being released publicly. In some cases the information contained here is based on public documents (eg. press releases, consultant reports, etc.). In other cases the only information available to us is anecdotal, based on what our members have heard or believe to be the case. Information presented in this section is footnoted in order to distinguish these sources and therefore, accuracy of the reports.

Third, we are in the midst of major restructuring and change in the health care sector which threatens to make this section outdated by the time it is circulated. Decisions about introducing shared food services and what system to introduce are being discussed and made, often behind closed doors, at this time across the country. This section therefore captures the developments at the time of writing but they may change shortly after.

BRITISH COLUMBIA⁸⁰

In the spring of 1995, a shared food production facility was proposed for the Lower Mainland of British Columbia to serve more than 40 health facilities, from Richmond to Hope. It was prepared by the consulting firm of Marrack Watts, Inc.

It started out in 1994 as a simple effort among a handful of hospitals to develop best practices for shared purchasing of food. It then snowballed into plans for a \$100 million food service mega project that would increasingly consolidate and privatize food production and assembly. In the final phase of the project only 20 per cent of food production would remain in the public sector and more than 500 Hospital Employees Union food service jobs would be cut.

In the initial phases of implementation, the planned capital expenditures to upgrade existing food services facilities would be diverted away from the individual facilities and invested instead in centralized food production, warehousing and computer applications. Over time, bulk frozen food, produced in large centralized facilities or purchased from the private sector, would be shipped to five Assembly and Distribution centres where it would be assembled into specific formats (i.e. meal trays) and distributed to participating hospitals and long term care facilities across the Lower Mainland and Fraser Valley.

⁸⁰ Based on a memo from Marcy Cohen, Researcher with the Hospital Employees Union (HEU), November 19, 1995; HEU Bargaining Bulletin, March 7, 1995, and HEU Backgrounder, March 7, 1995.

ALBERTA

Edmonton

Edmonton is being hit hard by Ralph Klein's cuts to health care. In 1994, Edmonton announced cuts of 950 health care jobs.⁸¹ A further 2,300 health care jobs were put on the chopping block, through restructuring plans announced by the regional health authority in March, 1995.⁸² Edmonton is bearing over half of all health care job cuts throughout the province. The move to shared services is the latest development adding to hospital job losses.

The Capital Health Authority, covering Edmonton, has been moving quickly toward shared services for a number of hospital functions. Since mid-September, 1995, notices to establish shared services have been served almost weekly. Stores, housekeeping, security as well as nutrition and food services have all been earmarked for consolidation.⁸³

On October 19, 1995, the Capital Health Authority gave notice to CUPE that food services would be consolidated (shared) on November 1st. Food services for the Royal Alexandra and University Hospitals have now been transferred to a central food processing and procurement centre known as the Patient Support Centre. The Glenrose Rehabilitation Hospital, whose food services are provided by Versa Foods, is connected to the Royal Alexandra by tunnel and will become part of the shared food service arrangement in August, 1996.

⁸¹ *Leaving Bad News to the Mangers: Globe and Mail, October 11, 1994.*

⁸² *Health Care Restructuring to Cost 2,300 Alberta Jobs: Globe and Mail, March 15, 1993.*

⁸³ Report on the development of shared services (including food services) in Edmonton is based on interviews with Bev Buck, CUPE National Representative, October 26, 1995 and March 1, 1996 (Edmonton Council of Hospital Unions).

Once fully implemented, Edmonton hospitals will have one central food production site at the Patient Support Centre. The University Hospital will have one meal tray assembly and distribution centre while the Royal Alexandra Hospital will have three sites for meal assembly and distribution. Meal tray assembly, warewashing and administration functions for the Glenrose Hospital will be consolidated at the Royal Alexandra Hospital.

Lack of choice has been one of the most criticized features of the new Edmonton shared food setup. For patients in the Royal Alexandra Hospital who are admitted for less than seven days, there is one standard meal. For the rare patient who is kept in the hospital for longer than seven days, there are two meal options. Patients with special dietary needs are given an assigned meal with no choice.

Food Service employees at the Royal Alexandra are members of CUPE. The University and Glenrose Hospitals are organized by the Alberta Union of Public Employees. The unions had previously negotiated a transfer/merger agreement to govern the movement of CUPE and AUPE employees between facilities.

Major staffing changes have occurred as a result of the move to shared food services. Four CUPE dietary members were laid off the day after the announcement. The Royal Alexandra gave layoff notices to 60 more employees in early March, 1996, and have reduced 16 assembly and distribution belt lines to only three. A severance package has been offered to employees. It is likely that 30 dietary positions at the Glenrose will be eliminated. Nineteen new positions have been created at the Public Service Center. Most are part-time positions; some for only two hours per day.

CUPE has had great difficulty getting information from the employer about the new shared food service. Under the technological change clause of the contract, CUPE was provided with a formal notice of change 120 days in advance. But no details were provided. The union complains that to the extent information on planned changes has been provided in advance, it has been misleading or false.

Despite collective agreement language against contracting out, CUPE has been unable to prevent the move to shared services on these grounds. Because the consolidation of services and transfer of employees is occurring within the Capital Health Authority, the employer argues it is not contracting out under the collective agreement.

Calgary

There are no current plans to establish hospital shared food services in Calgary, despite the rush to establish shared food services in Edmonton. An investigation was conducted a few years ago, and the study did recommend establishing a shared food service. The Regional

Health Authority decided against the recommendation because they did not think it would save money.⁸⁴

Long Term Care - Calgary

A central commissary (food production facility) has provided food to long term care facilities in Calgary and Edmonton for almost two decades. Below, a description of this arrangement is provided for the Calgary region.⁸⁵

Carewest is the employer which covers five long-term care facilities in the Calgary region: Fanning Centre (300 beds), Crossbow (120 beds), Boyack (200 beds), Sarsee (120 beds) and Glenmore (150 beds). The food commissary is part of the Fanning Centre and supplies cook-freeze food in bulk for the approximately 1,100 beds at the five facilities. It was built in 1978.

Neither the commissary nor the Fanning Centre have unionized dietary staff. Three of the other four dietary departments are unionized.

The Carewest commissary cooks and freezes (in air-tight bags) bulk food such as soups, casseroles, baked products and meats. It then ships the frozen food to each facility, where it is reheated in the on-site kitchens and distributed to residents by two main methods. Meals may be served from steam tables in the dining rooms on each "pod" (serving approximately 80 residents each). Or the food may be assembled into individual meal trays, delivered in mobile heated/refrigerated trolleys to the residents' floors, and served in areas such as the sunroom, lounge, bedside or hallway.

The commissary employs higher level cooks than in the receiving facilities, as well as dietary specialists. Each receiving facility maintains kitchen staff of Cook 1, attendants and aides, as well as dieticians who monitor patients and communicate their dietary needs to the central facility as well as to the on-site staff.

Kitchen staff in receiving facilities also prepare most cold meals (alternatives to the hot meal offered) and special orders. For example, fruit salads, vegetable salads and sandwiches are prepared on-site. On-site kitchens do additional food preparation on the commissary food, such as mashing or puréing food for residents who cannot chew. Most food consumed by the staff and the public in the cafeteria is prepared in the commissary. It is estimated that about 25 per cent of food production is still done on-site.

One of the interesting points about the Calgary commissary is that food production has been

⁸⁴ Interview with Len Fagnan, President CUPE Local 8 (Calgary Hospital), March 1, 1995.

⁸⁵ Interview with Timon Azmier, CUPE National Representative, Lethbridge Area Office, October 27, 1995.

gradually shifting back from the central kitchen to the satellite kitchens in each facility. The satellite kitchens were originally intended as reheating facilities, but over the years, they have assumed a larger role because they can produce certain food items more efficiently and achieve higher quality than the central kitchen.⁸⁶

⁸⁶ Interview with Len Fagnan, President CUPE Local 8 (Calgary Hospital), October 26, 1995.

Lethbridge

The Marrack Watts consulting proposal on shared food services for the Vancouver area states that they recently completed a shared food service evaluation for Alberta Health at three Lethbridge area hospitals and are now proceeding with implementation.⁸⁷ This is not consistent, however, with information from CUPE staff in the area. This discrepancy suggests either that Marrack Watts is not presenting accurate information, or information on shared food services in the Lethbridge area is being deliberately withheld from CUPE staff and members who will be affected.⁸⁸

Health care in the Lethbridge area is now under the authority of the Chinook Regional Health Authority, which covers about ten hospitals. In the latest round of collective bargaining (1995), the Regional Health Authority threatened CUPE with contracting out of dietary staff unless further wage concessions were made. It was rumoured that Marriott wanted to invest \$2 million to build a free-standing commissary or to renovate the kitchen at Lethbridge Regional Hospital, the largest in the area. The rumour included the guarantee of a 10 year contract for Marriott to proceed with the investment.

Neither the Chinook Regional Health Authority nor any of the member hospitals would provide documentation to CUPE on the rumoured shared food service proposal. They did, however, indicate that centralization of food services would be considered in the future.

The union did agree to make concessions in negotiations. To date, hospitals in the Chinook region continue to have their own kitchens and produce food in the conventional manner. However, the threat of shared food services still hangs over our members' heads since the employer has provided no commitment not to proceed with this, and refuses to provide the union with information. Most purchasing of food has been centralized at the Lethbridge Regional Hospital.

⁸⁷ Marrack Watts Inc. *Proposal of consulting services: Shared Food Services Systems Study* (Vancouver: June 22, 1994), p.4

⁸⁸ Interview with Timon Azmier, CUPE National Representative, Lethbridge Area Office, October 27, 1995.

SASKATCHEWAN⁸⁹

The move toward shared services began in Saskatchewan with the creation of a number of regional laundries in the early seventies. For a number of years health authorities have channelled food purchases through Versa Corporation to achieve discounts through bulk purchasing.

More recently, however, with the advent of regionalization, laundry, housekeeping and food services are being combined to serve hospitals and nursing homes within a region or particular location. It is estimated that this more recent form of shared services is occurring in 15 to 20 locations throughout the province.

Long distances between towns in some parts of the province has led to smaller, shared services or centralized facilities serving only the health facilities in that immediate vicinity. The form this is taking in food services is generally that a larger capability is being built into new facilities or in renovating an existing facility.

Regina, the largest urban centre in the province, has decided not to undertake any shared services, since it was considered too expensive. One of the three Regina hospitals (the Plains) will soon be closing. The remaining two hospitals will each have their own kitchen.

Saskatoon, the other large urban centre with more than one hospital, is represented by the Service Employees International Union. There has been no word of hospital shared food services in Saskatoon.

MANITOBA

On November 24, 1994, Winnipeg's nine urban hospitals announced the creation of a new non-profit organization called the Urban Shared Services Corporation, to pursue opportunities to share four common support services - food services, material management, biomedical waste disposal and laundry. The Corporation is charged with determining the potential for improving efficiency, reducing duplication and increasing buying power in these areas.⁹⁰

The move to shared services is expected to evolve over a six year time frame. The first twelve to eighteen months were to be dedicated to assessment and planning. The nine participating hospitals include Concordia Hospital, Deer Lodge Centre, Grace General Hospital, the Health

⁸⁹ Report on Saskatchewan based on an interview with John Welden, CUPE Saskatchewan Hospital Coordinator, November 2, 1995.

⁹⁰ Winnipeg's Urban Hospitals News Release, *Shared-Services Project to Improve Efficiency, Reduce Duplication and Increase Buying Power for Winnipeg Hospitals*, November 24, 1994.

Sciences Centre, Misericordia General Hospital, Riverview Health Centre, St. Boniface General Hospital, Seven Oaks General Hospital, and Victoria General Hospital.

In the news release announcing this initiative, the hospitals claimed that studies have shown there are potential annual savings as high as \$16 million. Savings would be realized through elimination of duplicated facilities at individual hospitals, from larger volume purchases through the corporation, and from reduced staffing requirements.

Currently, each hospital has its own food preparation facilities, produce purchasing and warehousing. The food production facility could be either a new or an existing one. Some sharing of laundry services and biomedical waste disposal now exists. It is expected that a new biomedical waste facility would be constructed.

At the time of the announcement, 1,500 staff positions existed in Winnipeg hospitals in the four service areas slated for consolidation. 400 positions were expected to be affected. The Provincial Health Care Labour Adjustment Agency is expected to assist in appropriately handling labour adjustment issues.⁹¹

The Urban Shared Services Corporation was initially proposed as a non-profit corporation (similar to Winnipeg Hospital's laundry), owned and run by the member hospitals. The General Manager of the Corporation has been seconded from St. Boniface Hospital where he was an Assistant Vice President. The prospect of the Corporation becoming a commercial entity has since been raised, and the provincial government's decision to freeze capital funding for hospitals positions the private sector as the financial backer for shared service operations. Since the announcement of the creation and scope of the Shared Services Corporation, CUPE has been unable to get any further information on what is being planned. Hospital managers and representatives on the Provincial Labour Adjustment Committee are also frustrated by the lack of information on shared service plans.

⁹¹ Notes from a labour-management meeting between CUPE Local 1550 and Winnipeg Health Sciences Centre, an announcement of Urban Shared Services Corporation, November 24, 1994.

ONTARIO

Toronto

There are two separate initiatives to establish shared food services in the Metropolitan Toronto area. One involves the University hospitals in the downtown core. It is being developed in conjunction with Bitove corporation, a major food supplier which has the contract for food concessions at the Toronto Skydome, as well as the Pearson International Airport. This arrangement has been cloaked in secrecy, with little information being provided to CUPE members who will be affected by it.⁹²

More is known about the second, and much larger, shared food services proposal for Metro Toronto. It would involve nineteen hospitals, five of which are organized by CUPE and ten by SEIU. The remainder are non-unionized facilities. The proposal was to establish a public and private sector partnership between the hospitals and the food industry associate Sodexo Corporation, a French-based multinational.⁹³ The original model was a Limited Partnership, but that did not preclude the possibility of a new shared food service facility becoming fully privatized in the future.⁹⁴

The Sodexo business plan was finalized on November 2, 1995. Over the following three months, participating hospitals reviewed the business plan in light of their facility's budget and food service requirements. Each hospital in turn rejected the shared food service proposal, citing limited returns on the capital investment.

On February 13, 1996, the Steering Committee recommended that the Shared Food Services Group formally dissolve itself because the majority of participating hospitals had withdrawn from the project. Official correspondence stated that "the most common reason for opting out was that the pay-back was insufficient to warrant the required capital expenditure".⁹⁵

The Sodexo Business Case presents two operational models for a shared food service: two large Central Meal Assembly and Distribution facilities (Central A & Ds) or four smaller Central A & Ds. These central facilities would service hospitals determined by their

⁹² Interview with Vanessa Kelly, CUPE Research Representative (Ontario Health Care Restructuring), Toronto, May 26, 1995.

⁹³ *Shared Food Services Project, Sodexo Management Services Business Case* (Toronto: November 2, 1995) p. 15

⁹⁴ Vanessa Kelly, Memo on Toronto Shared Food Services Project, September 25, 1995.

⁹⁵ Letter from R.G. Shaw, Chair of the Human Resources Task Force Group of the Toronto Shared Food Services Group, to Michael Hurley, President of the Ontario Council of Hospital Unions and Ted Roscoe, President of the Service Employees International Union Local 204, February 20, 1996.

proximity. The report indicates an early preference for establishing two Central A & Ds.⁹⁶ In either option the production of hot meal components would be provided by the private sector and assembled in the central facilities.⁹⁷ Sodexo has developed "industry partners" with the catering companies who would supply food, based on an assumption that it is cheaper to buy in bulk than to produce the hot food themselves.⁹⁸ Transportation services to deliver the assembled meals to receiving hospitals would be provided by a third party.⁹⁹

Using cook-chill food production methods, the operational model for the shared food service is described in the Business Case proposal as follows:

"The Central A & Ds would provide fully trayed patient meals to the participating hospitals. Placed in new technology meal re-thermalization carts, the patient meal trays are transported in dedicated carrier trucks, off-loaded at the hospital, stored in a chilled environment (+2°C), modified for any change orders, re-thermalized, and served to patients. Soiled trays, dishes and retherm carts are returned to the Central A & Ds for sanitation."¹⁰⁰

Sodexo presents two options for reheating and delivery of food at each hospital site. The first, more economical option, would be to reheat meals in the existing kitchens.¹⁰¹ The second option (preferred by Sodexo) would be to reheat meals in separate "nutrition centres" on patient floors.¹⁰²

The Sodexo plan also includes conversion to a single, automated management information system to control procurement, patient menu selection analysis, patient diet analysis, patient tray tickets, usage tallies and accounting.¹⁰³

Start-up costs over the first two years were estimated at \$5 million. This does not include \$37.2 million capital investments over the first two years for construction of the central

⁹⁶ Sodexo, 1995, p.4

⁹⁷ Ibid. p. 5.

⁹⁸ Interview with Vanessa Kelly, October 26, 1995.

⁹⁹ Sodexo, 1995, p.20.

¹⁰⁰ Ibid, p. 4.

¹⁰¹ Ibid, p. 3

¹⁰² Ibid, p. 20

¹⁰³ Ibid, p. 13.

facilities, equipment, hospital renovations and hospital meal delivery systems.¹⁰⁴

Sodexo was counting on massive staff reductions to achieve savings in the shared food services model. The business plan recommended cutting 598 staff (in Full Time Equivalents). This represents a 43% reduction, the vast majority being frontline staff rather than management positions. Three hundred and thirty-five to 297 FTEs would be required in the new central Assembly and Distribution facility, depending on whether two or four centres were built.

*Hamilton*¹⁰⁵

Discussions on shared food service plans are also under way in Hamilton. There are four hospitals in the city, excluding the psychiatric hospital (Hamilton Civic, St. Joseph's, Chedoke-McMaster and St. Peter's), all of which are organized by CUPE.

The initiative began with Chedoke-McMaster (the university hospital) coming out with a plan to operate a range of shared services for the region, without having consulted with other hospitals. In response, St. Joseph's and Hamilton Civic hospitals decided to initiate a collaborative process on food services, material management, cleaning, and certain medical services in order to be in a stronger position. The two hospitals set up working groups on the various services to be merged and prepared a report. Regionalized purchasing and storage for all hospital services, including food, is recommended in this report.

The question of where food would be produced is complicated by competition between St. Joseph's and the Hamilton Civic. St. Joseph's has been approved for \$1.7 million to establish a "cold plating" system, including the purchase of rethermalization carts for cook-frozen meals. However, the Henderson wishes to control food production and distribution for St. Joseph's and the General, possibly adding the other hospitals in the city at a later stage. The Henderson has not received any funding approval for shared food production.

The threat of contracting out food production also hangs over the hospitals. Carmen's, a large catering company in Hamilton, has been expanding their food production plant and winning contracts to supply City Hall and golf courses in the area. There is concern that their plans to expand include supplying area hospitals.

The Hamilton Civic and St. Joseph's hospital boards held an "in camera" session on

¹⁰⁴ Ibid, p. 5.

¹⁰⁵ Hamilton report based on interview with Dave Michor, CUPE National Representative (Hamilton), October 24, 1995.

October 30th, 1995 to discuss the collaboration proposal. Unions were refused access to the meeting. As of this point in time, we know only that collaboration is proceeding. The scope, timeline, and anticipated impact on hospital services and employees have been kept secret.

*Ottawa*¹⁰⁶

The first shared food service system in Canada was established in Ottawa in 1979 with the incorporation of the Hospital Food Services (HFS). It involved six Ottawa hospitals: the Civic, General, Elisabeth Bruyere Health Centre, Royal Ottawa Healthcare Group, Queensway Carleton, and Salvation Army Grace hospitals. In 1981 the HFS food commissary was constructed. Bulk chilled and frozen prepared food products were distributed to the six founding hospitals. The HFS now distributes to a range of other health care providers throughout the province, in addition to the original six hospitals.

In January 1992, the Hospital Food Services Board of Directors asked consulting firm Marrack Watts to do a feasibility study centralizing patient meal tray assembly as a means to reduce operating costs for the core hospital customers of HFS. Centralized food tray assembly was seen as a way to cut food production costs, expand the facility and capture a larger market.

The Marrack Watts study concluded that over the next five years, the Ottawa Hospital Food Services could more than double its output if it sought to provide meals to other Ottawa area health care providers.

They recommended:

- the establishment of a new central assembly and distribution (A&D) facility,
- the use of rethermalization of pre-assembled patient meal trays at the hospitals, and
- the elimination of patient meal portioning, tray assembly and warewashing functions at the hospitals.

In January 1993, Marrack Watts was asked to expand their initial feasibility study to include a cost/benefit analysis for two scenarios; one for supplying the core hospitals (at 2,789 beds) and another for supplying long term care facilities as well as the core hospitals (at 3,667 beds).

Marrack Watts recommended supplying long term care facilities also, claiming there would be greater savings with larger sales, more quickly repaying capital costs and by cutting staffing by

¹⁰⁶ Ottawa report based on "Report on the Shared Food Service Proposal for the Ottawa Area" by Caryn Duncan for HEU, May 1995.

137.12 FTEs. The study concluded that the centralized tray assembly of food items would eliminate an afternoon shift, in which dinner is prepared in the conventional system. They claimed that the new assembly system would be completed chilled over a one shift daily period, seven days per week at the new centre.

Five options for financing the physical development of the new plant were proposed, ranging from self-financing to contracting with the private sector.

Meanwhile, in June 1993, the Hospital Shared Services (HSS) Corporation was formed to investigate a range of shared services for the hospitals, including the centralized meal tray assembly project.

This new entity, the HSS, opted for contracting with a private sector firm to develop the new plant. After interviewing several private food service companies, Cara, the airline food company, was chosen. Work began with Cara to develop a Business Case to be presented to the Hospital Shared Services Board in November 1994.

The Hospital Shared Services Board rejected the centralized food services facility proposal on the grounds that the Business Case developed by Cara requires heavy capital investment with limited payback potential for member institutions.

With a 20% drop in patient trays in the region (considered below the threshold for an efficient central plant) and significant cost reductions by food service managers in the member hospitals, the concept of a central assembly facility was considered "no longer financially attractive".¹⁰⁷

Despite rejecting this specific proposal, the Quarterly Report of the HSS Board indicates a desire to further examine a regional approach to the management of food service delivery. CUPE is not aware of the development of any subsequent proposal.

¹⁰⁷ Hospital Shared Services Corporation, *Quarterly Activity Report* (Ottawa: January 1995), p. 1.

QUEBEC

In December 1993, the Quebec Department of Health and Social Services commissioned consulting firm Price Waterhouse to study the state of hospital food services, identify opportunities for streamlining¹⁰⁸ and make recommendations.

The impetus for this study comes from legislative and policy directives. In 1993, Quebec Health and Social Services distributed two plans to achieve staff cutbacks required by Bill 198 (Respecting the Reduction of Personnel in Public Bodies and the Accountability of deputy Ministers and Chief Executive Officers of Public Bodies). Even though Bill 198 was partly repealed in February 1995, the Treasury Board of Quebec has continued the staff cutbacks - a 20% reduction in supervisory staff by 1996 and a 12% reduction in other staff by 1998.¹⁰⁹

Food services in the Quebec hospital system employ some 20,000 employees (12,000 full-time, 8,000 part-time). Food services also account for a large proportion of spending (5% of total hospital spending or \$600 million annually over the past two years). Almost all of the hospitals in Quebec produce and distribute their own meals independently. At this point, shared services in food are limited to several groups which enable hospital food service to obtain discounts on purchases of food and supplies.¹¹⁰

The Price Waterhouse report, released in early 1995 at a cost of \$200,000, recommends that food services be amalgamated in order to produce a high volume of meals and save on production and distribution costs.

The Price Waterhouse report has been criticized for private sector bias, sloppy methodology and providing no independent quantitative data to support its claims.¹¹¹ Instead, it simply reproduces data provided by Marrack Watts (the private consulting firm specializing in the management of food services, also involved in promoting shared food services in the Greater Vancouver area and Ottawa area). Marrack Watts has much to gain from the Price Waterhouse recommendations.

A number of Quebec regional health boards are investigating the possibility of shared food services. Typically, a committee has been established to study various options for sharing food services. The unions in health care (SCFP/CUPE and the CSN) have been quick to raise a range of questions and criticisms and commission independent studies to challenge the move to

¹⁰⁸ Lauzon and Poirier, pp. 4-5.

¹⁰⁹ Ibid, p. 5.

¹¹⁰ Ibid, p. 5.

¹¹¹ Ibid, p. 5.

shared food services.

In Montreal, the regional health board's interest in establishing a shared food service has been overshadowed by the imminent closure of hospitals. The employment security provisions of CUPE hospital workers, which requires the redeployment of displaced workers, may slow down the establishment of a shared food service for the region, which is likely to throw more out of work. However, interest may be reactivated by further budget cuts expected this spring.¹¹²

Despite regional health boards' interest in shared food services in Quebec, decisions to establish new facilities for shared food services have not yet been taken. So far, the trend in Quebec has been to move to more joint purchasing of food to achieve savings in this way.

The Regie Regionale de Mauricie-Bois-Franc, around the city of Shawinigan, has been the most advanced in pursuing a centralized form of shared food services. A report on developments are included in the preceding section of this paper. Essentially, the committee investigating the establishment of a new shared food facility for the region rejected it as unfeasible and exceedingly costly.¹¹³

NEW BRUNSWICK

In New Brunswick, seven regional hospital corporations have been established. Last spring the Board of Region 2 (serving the Saint John area) announced that a "super-kitchen" would be created as a shared food service for the region. Very little information has been forthcoming, but it appears that Hospital 2 Region is contracting with Toronto-based Bitove Corporation and New Brunswick's Baxter Foods to manage and supply hospital food services using primarily cook-chill and cook-freeze products. Food will be shipped from Ontario and various locations around the Maritimes to supply Region 2 health care facilities.

It is unclear exactly what role each company - Bitove and Baxter - will play in the shared food service arrangement. The limited information released by Region 2 states that Bitove will "manage, operate and market" the system while Baxter acts as "master distributor". Despite repeated enquiries by CUPE and the media, neither the Hospital Corporation nor the NB Ministry of Health have provided details on the shared food service plan. The food production process, distribution system, governance framework, capital and operating costs and other aspects of the project remain undefined.

¹¹² Based on interviews with Claude Turcotte, CUPE Québec, November 2, 1995 and Gilles Giguère, Directeur adjoint, Montréal, November 20, 1995.

¹¹³ Interview with Suzanne Leduc, Researcher with the Confédération des Syndicats Nationaux, October 19, 1995.

Without public debate or even minimal communication, Region 2 Hospital Corporation is moving full steam ahead with implementation of shared food services. Forty-six cook positions have been eliminated and all dietary positions reclassified as multi-skilled general service workers. Stoves are being removed from Region 2 facilities, and rethermalization carts are being purchased. The new system will be fully in place by April 1, 1996.

CUPE has launched a public campaign to expose bad business deals such as the contracting-out of food services in Region 2. For a provincial government which boasts of finding "made in New Brunswick solutions", contracting with a Toronto firm to operate hospital kitchens is not an easy plan to peddle. The sales pitch is further complicated by the disclosure that Bitove was forced by the courts to pay \$22 million in rent owed on its airport food franchises. The firm is currently under RCMP investigation involving allegations that Brian Mulroney used his political influence to help John Bitove - a major PC fundraiser - extend his company's monopoly at Pearson Airport. Presumably to camouflage Bitove's poor business record, Region 2 Hospital Corporation is using another name - Alliance Food Systems - to refer to its joint venture with Bitove.

During the first week of March 1996, CUPE received news that Region 3 is also privatizing and merging hospital food services in its ten member hospitals. To our knowledge, Region 3 and Versa Foods (the commercial firm managing hospital food services in the region) have invited bids from four companies: Alladin, Grand Cuisine System, Galand and Burlodge. Allandin is rumoured to be the company supplying rethermalization carts to hospitals in Edmonton.

A major problem in New Brunswick is getting access to reliable information on what is being planned. Members of the Regional Health Boards are appointed by the government and are not providing information on plans to CUPE, the media, or members of the public.

NOVA SCOTIA

CUPE is not aware of any initiatives for shared food services at this time. Regionalization of services has taken place in Nova Scotia, so announcements about shared food services may occur as health care services are expected to be merged and amalgamated. From 1993-95 1,250 hospital beds were cut and approximately 1,000 jobs eliminated. Further cuts of 2,500 jobs are anticipated. The government is reluctant to say how many additional hospital beds will be cut.¹¹⁴

¹¹⁴ Interview with Russ Whitney, CUPE Atlantic Regional Director, November 28, 1995.

PRINCE EDWARD ISLAND¹¹⁵

There have been some small initiatives to consolidate food services for health care in Prince Edward Island, but not on the scale found in some other provinces. For example, the Addiction service in the East Kings area used to do their own cooking, but that was moved over to the hospital when health and social services were combined. In the East Prince Region, food is produced centrally and distributed to facilities in that region.

In Charlottetown, the largest urban centre, shared food services has been a subject of general discussion. To date, however, CUPE is not aware of and has not seen any specific proposal or consultant's study to consolidate food services.

NEWFOUNDLAND¹¹⁶

The move toward regionalization in Newfoundland has sparked discussion about centralizing a range of hospital services. It is being considered for laundry, purchasing, supplies, payroll and food services. The geography and remote location of some communities may lead to smaller initiatives, as in the case of Prince Edward Island. Where consolidation occurs, shared food services are likely to serve both the hospitals and nursing homes in the region.

There is discussion, however, about establishing one "super-kitchen" to serve the St. John's area. CUPE's information on this initiative is limited, since we lost our members here when the Newfoundland Association of Public Employees (NAPE) won the vote to represent health care workers in this region in October 1995.

It appears that Marrack Watts, the consultant for the Vancouver shared food services project, is also involved in St. John's. The Marrack Watts report for Vancouver indicates that they completed an operational review at the General Hospital Corporation in St. John's and developed a master plan for implementation of recommendations.

¹¹⁵ Interview with Bob Crockett, CUPE Health Care Co-ordinator, Charlottetown, PEI, October 19, 1995.

¹¹⁶ Interview with Bob Matthews, CUPE Health Care Co-ordinator, St. John's, Nfld., October 16, 1995.

APPENDIX A: IMPACT OF VARIOUS FOOD PRODUCTION SYSTEMS ON FOOD QUALITY

System	Safety	Nutritive Value	Sensory Characteristics
<p>Conventional System (Cook-Hot-Hold)</p>	<p>Cooking is primary means to ensure food safety. Internal temperatures must reach 74°C. Problems occur when food is held at inadequate temperatures or allowed to cool for too long.</p> <p>Food should be kept heated at over 60°C to reduce bacterial flora.</p>	<ul style="list-style-type: none"> · Significant loss in ascorbic acid for vegetables held hot for 30 minutes (especially potatoes). · Significant Thiamin losses in meat held hot over 90 minutes. 	<ul style="list-style-type: none"> · Varies depending on food. · Better sensory results than cook-chill or cook-freeze when held hot for 60 minutes or less, but loses this advantage if held 120 minutes.
<p>Cook-Chill</p>	<p>Little difference noted in microbacterial levels compared to cook-hot-hold or cook-freeze.</p> <p>Bacterial count increases with duration of refrigeration. Adequate reheating destroys bacteria (but not toxins produced).</p> <p>Cook-chill requires special, rapid refrigeration units. Chilling standards require a drop in temperature from 60°C to 5°C in under four hours.</p> <p>Reheating is crucial and must reach 74°C, according to American FDA standards. Microwave ovens</p>	<ul style="list-style-type: none"> · Nutrient loss similar to losses in other methods. · Vitamin C most affected, primarily depending on cooking duration. 	<ul style="list-style-type: none"> · Varies greatly depending on food involved and duration and temperature of refrigeration. · After 2 days of refrigeration individual meat items have doubtful texture and odour. Prepared dishes such as meatloaf can last up to 9 days of refrigeration. · Refrigerated food

System	Safety	Nutritive Value	Sensory Characteristics
	<p>produce more stable internal temperatures than conduction or convection methods.</p> <p>Tight quality control is required for safety. Slow chilling processes are hazardous. An effective food monitoring system is essential, including regular biological sampling.</p>		<p>should not be held more than 3 days. Meat dishes are unacceptable after 7 days of refrigeration, and vegetable dishes after 4 days.</p>
<p>Sous-Vide Cook-Chill</p>	<p>Psychotropic and anaerobic bacteria can increase in sous-vide storage. The most dangerous are toxins which cause botulism, a serious, even fatal, illness. To minimize this risk, some authorities recommend that sous vide food be completely pre-cooked to high core temperatures (80°C) for approximately 30 minutes. Cooking of this type destroys fragile vitamins.</p> <p>Acceptable safety standards for storage of sous vide food range from 6 to 21 days.</p> <p>Control of hygienic conditions is crucial in this system. Given the safety risks, sous-vide is highly regulated in Europe. In Canada</p>	<p>· Little research has been done on the impact of the sous vide cook-chill method on the nutritive value of food.</p>	<p>· Little research has been done on the impact of the sous vide cook-chill method on the sensory characteristics of food.</p>

System	Safety	Nutritive Value	Sensory Characteristics
	there are no regulations governing its use.		
Cook-Freeze	Freezing provides microbiological safety as long as the food is thawed in a cold room and served within 24 hours of thawing.	· Nutrient loss comes primarily with reheating, as is the case with fresh food.	· Freezing has a considerable effect on the sensory characteristics of food.

Sources: Denise Ouellet, *Revue de la littérature: Impact sur la qualité des aliments des modes de production et de distribution des services alimentaires hospitaliers* (Québec: Laval University, 1994). Financed by the Confédération des Syndicats Nationaux; Nicholas Light and Anne Walker, *Cook-Chill Catering: Technology and Management* (London: Elsevier Science, 1990).