

PREVENTIVE OBSTETRICS AND GYNECOLOGY PROGRAM: PILOT PLAN FOR INTEGRATED MEDICAL CARE¹

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A special screening program established at the university hospital of Campinas (São Paulo, Brazil) detected major gynecological or breast pathologies in nearly a quarter of the female outpatients coming to the hospital for other kinds of complaints. These findings clearly demonstrate that primary care needs to be provided for such patients, and that in the absence of an effective national or local primary care system individual hospitals should be aware of the need to conduct primary care screening before providing specialized consultation.

Introduction

Eleven years ago the State University of Campinas of the State of São Paulo, Brazil, acting through its Department of Obstetrics and Gynecology, organized vertical programs designed to introduce various types of health care at the community level. Some of these programs were very successful, and some (like the cervical cancer control program) have continued to do highly productive work. At present over 60 per cent of the at-risk female population of the area served is covered by the cervical cancer control program, and the program's quantitative and qualitative results (see Figure 1) have improved steadily. Another example, a breast cancer control program utilizing paramedical personnel, has proved a viable model for similar programs elsewhere in Latin America. This program's

pilot project, which has included both in-hospital and community activities, has detected breast cancer in 0.45 per cent of the women screened who were over 35 years of age.

Other vertical community-oriented programs organized by the Department of Obstetrics and Gynecology include a program for prevention of high-risk pregnancies, a family planning program, a program to promote breast-feeding, and a puerperal care program. It had been our opinion for several years that all these programs should be tied together—reorganized horizontally—so as to offer a simple, practical, and inexpensive way of detecting and preventing pathological conditions in a comprehensive and integrated fashion to the women of the lower socioeconomic and cultural strata served. Primary care had not been available to the patient population seen at the university's clinical hospital, because neither the national health system nor (especially) the state health system of São Paulo had become organized to provide it. Consequently, patients with various suspected pathologies but without any prior screening were coming to the clinical hospital merely on the basis of needs they had felt as a result of their symptoms.

Because of this problem, which reflected lack of organization within the health system,

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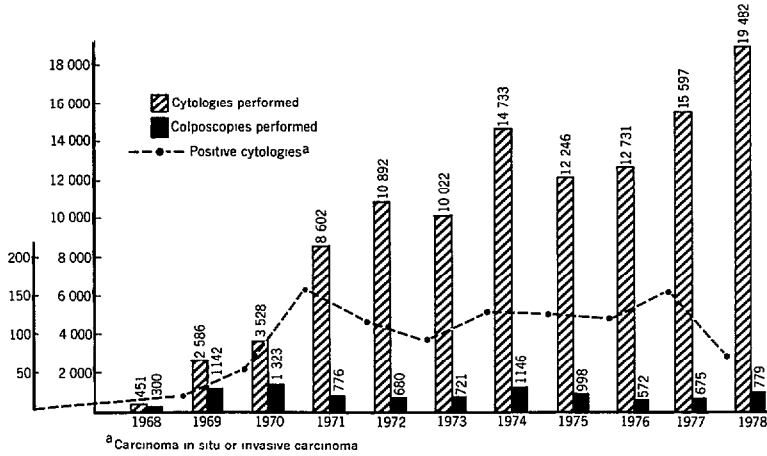
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Figure 1. History of the Campinas cervical cancer control program, 1968-1978.



the clinical hospital was not operating as a referral hospital, thereby wasting scarce resources. Furthermore, a situation was created in which the patients were screened and treated symptomatically, without having been routinely examined previously by the primary care network. As a result, they were often failing to receive the type of care most indicated for whatever actual problems they might have.

In view of the foregoing, when one of the authors became Director of the School of Medical Sciences four years ago, a new screening system was established. All women visiting the university hospital for any non-gynecological complaint—women who would not normally have attended the gynecology outpatient clinic—were routed to an experimental outpatient service. This service, staffed by paramedical personnel and medical students working under physicians' supervision, performed simple gynecological and breast examinations. The aims of this new program were as follows:

- to check for inapparent obstetrical and gynecological pathologies in women whose overt symptoms would not require this kind of examination;
- to try to determine these patients' needs in terms of primary care—care completely different from what they were receiving at the referral hospital level;

- to study the viability of a triage methodology completely distinct from the university hospital's, which could be applied until such time as a primary care system linked to the clinical hospital could be organized.

Materials and Methods

All female patients arriving at the registration desk of the clinical hospital, which is located in the *Santa Casa de Misericórdia de Campinas* building, were directed to the Experimental Preventive Obstetrics and Gynecology Outpatient Unit before consultation. As indicated in Figure 2, advantage was taken of the time interval between patient registration at the hospital (which is done in the morning) and the specialized consultations, which are done in the afternoon. The age distribution of the patients involved is shown in Table 1, and the various steps of the outpatient screening process are shown in Figure 3.

The first of these steps, registration, is accomplished by an attendant. The second step, orientation, consists of a short and basic introductory talk given to small groups of incoming patients by the cancer control program's social worker in the patients' waiting room (see photo) or her own office; she explains why the women were referred for this examination, what they should do, and why the examina-

Figure 2. Patient flow chart for the obstetrics and gynecology program.

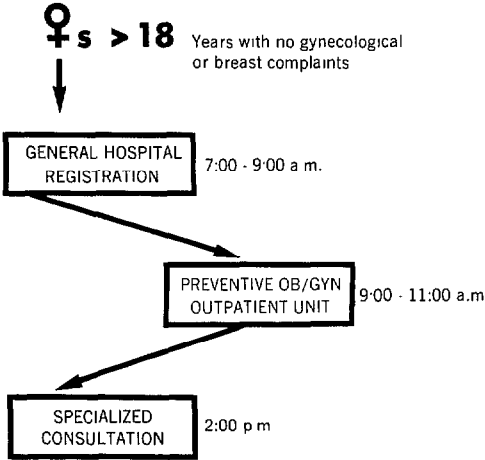
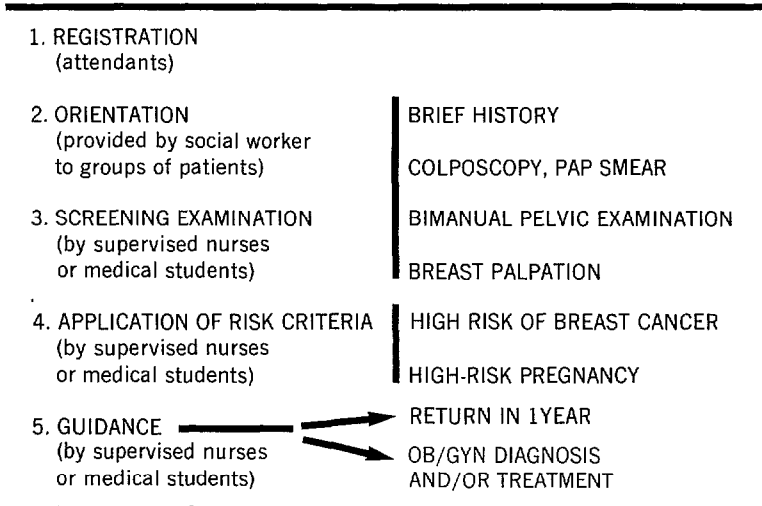


Table 1. Age distribution of the women screened by the Campinas program as of mid-1977.

Age group	No. of patients	% of total
< 20 years	754	10.3
20-29 years	2,112	28.8
30-39 years	1,579	21.6
≥ 40 years	2,875	39.3
Total	7,320	100.0

Figure 3. Steps in the outpatient screening process at the Campinas program's obstetrics and gynecology screening unit.



The patient waiting room, where orientation sessions were conducted. These marginal and cramped quarters did not interfere with program development.



tion should be repeated—preferably annually, but at least once every two years. The screening examination, performed by an especially trained medical student, nurse, or midwife, includes brief review of the patient's genitourinary history; examination with a speculum; collection of material for a Papanicolaou smear (and of discharge specimens if leukorrhea is present);⁷ bimanual pelvic examination; and breast palpation. The form completed during the course of the examination is shown in Figure 4.

The next step is to consider risk factors,

⁷Pap smears are collected, fixed, and sent to the pathologist. When leukorrhea is present a discharge specimen is collected and examined fresh. If the results are positive, treatment is given immediately.

principally those relating to breast cancer and high-risk pregnancy. Finally, after examination the patient receives guidance about treatment of certain simple pathologies, is referred if appropriate to specialized services, and is asked to return if necessary. Records are kept of all pathologies found for purposes of future investigation.

The physical layout of the facilities used has been very rudimentary. There are two rooms, both 2 by 3 meters in size, and a hall about 2 by 5 meters. The hall has been used as the waiting room (see photo) for all patients participating in this program—as well as those receiving care from other outpatient programs for such conditions as high-risk pregnancy, breast pathology, and gynecological cancer.

Figure 4. Patient form used at the Campinas program's

EXPERIMENTAL OUTPATIENT CONTROL OF GYNECOLOGICAL CANCER

Card No. _____ (Pat. Reg. No.) _____ Cytology No. _____ MG^a No. _____

Name _____ Age _____

Street _____ Number _____

District _____ City _____

Race _____ Marital Status _____ Physician _____ Date _____

Name of husband _____ Place of employment _____

Mammary history	Relative with mammary cancer _____
	1st menstruation _____ Years
	Menopause _____ Years
	1st pregnancy _____ Years
	Use of hormones <input type="checkbox"/> Y <input type="checkbox"/> N
Previous history <input type="checkbox"/> Y <input type="checkbox"/> N	

Cervical history	G ^a _____ P ^a _____ A ^a _____ C ^a _____
	Start of sexual activity _____ Years
	Discharge <input type="checkbox"/> Y <input type="checkbox"/> N
	Gynecological surgery <input type="checkbox"/> Y <input type="checkbox"/> N
	Cauterization <input type="checkbox"/> Y <input type="checkbox"/> N

Breast exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	MG ^a	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	TP ^a	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Cervical exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	Colp.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	Cytology	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Ovarian exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P			Bimanual exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Endometrial lavage	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P				
Diag. breasts	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCB		Perform.	_____
Diag. cervix	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCC		Perform.	_____
Diag. ovaries	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCO		Perform.	_____
Diag. endometrium	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCE		Perform.	_____
Observations	_____				

Date _____ Cytology No. _____ MG No. _____

Breast exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	MG	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	TP	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Cervical exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	Colp.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	Cytology	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Ovarian exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P			Bimanual exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Endometrial lavage	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P				
Diag. breasts	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCB ^b		Perform.	_____
Diag. cervix	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCC ^b		Perform.	_____
Diag. ovaries	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCO ^b		Perform.	_____
Diag. endometrium	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCE ^b		Perform.	_____
Observations	_____				

^aMG = mammography; G = No. of pregnancies, P = No. of deliveries; A = No. of abortions; C = No. of cesarean sections; and TP = plate thermography.
^bGARCB = in group at high risk of breast cancer; GARCC = in group at high risk of cervical cancer; GARCO = in group at high risk of ovarian cancer; GARCE = in group at high risk of endometrial cancer.

obstetrics and gynecology screening unit.

Date _____ Cytology No. _____ MG No. _____

Breast exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	MG	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	TP	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Cervical exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	Colp.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	Cytology	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Ovarian exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P			Bimanual exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Endometrial lavage	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P				
Diag. breasts	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCB		Perform.	_____
Diag. cervix	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCC		Perform.	_____
Diag. ovaries	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCO		Perform.	_____
Diag. endometrium	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCE		Perform.	_____

Observations _____

Date _____ Cytology No. _____ MG No. _____

Breast exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	MG	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	TP	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Cervical exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	Colp.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	Cytology	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Ovarian exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P			Bimanual exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Endometrial lavage	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P				
Diag. breasts	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCB		Perform.	_____
Diag. cervix	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCC		Perform.	_____
Diag. ovaries	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCO		Perform.	_____
Diag. endometrium	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCE		Perform.	_____

Observations _____

Date _____ Cytology No. _____ MG No. _____

Breast exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	MG	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	TP	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Cervical exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	Colp.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P	Cytology	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Ovarian exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P			Bimanual exam.	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P
Endometrial lavage	<input type="checkbox"/> NR <input type="checkbox"/> N <input type="checkbox"/> P				
Diag. breasts	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCB		Perform.	_____
Diag. cervix	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCC		Perform.	_____
Diag. ovaries	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCO		Perform.	_____
Diag. endometrium	<input type="checkbox"/> N <input type="checkbox"/> P	<input type="checkbox"/> GARCE		Perform.	_____

Observations _____

Results

In mid-1977, after 7,320 cases had been examined, an analysis was made of the major pathologies detected and their incidence per 1,000 patients screened. The results of that analysis are shown in Table 2.

Conditions classified as "severe genital dystopias" were rectocele, cystocele, perineal rupture (grade 3), and prolapse of the uterus (grades 2 and 3). Conditions classified as "other gynecological pathologies" were pyosalpingitis, leukoplakia vulvae, secondary amenorrhea, Bartholinitis, endometritis, giant cervical cyst, metrorrhoea, severe genital malformations, Gartnerian cyst, and vaginal stenosis. Conditions classified as "other benign breast pathologies" were papillary discharge, cutaneous lesions, mammary cyst,

abscess, ectopic breast, mastalgia, mammary hypertrophy, and supernumerary mammae. The incidence of breast cancer detected among women over 30 years of age was 5.4 cases per 1,000 patients.

As Table 2 shows, among the conditions detected by the screening were unsuspected pregnancies (27 per 1,000), severe genital dystopias (40 per 1,000), and positive oncotic cytology (7.2 per 1,000). The overall prevalence of major gynecological pathologies among the women who came to the outpatient clinic for nongynecological problems was 224 per 1,000.

These findings clearly demonstrate the urgent need to provide primary care for this class of patients—a need, we would venture to say, that is far more urgent than such patients' need for the type of care available at the level

Table 2. Gynecological and breast pathologies and unsuspected pregnancies found in 7,320 women examined at the obstetrics and gynecology outpatient unit through mid-1977. Certain "minor" pathologies, such as trichomoniasis (found in 9.4 per cent of the patients), were not considered.

Condition	No. of cases detected	Incidence per 1,000 patients
Unsuspected pregnancy	199	27.1
Polyyps plus extensive cervicitis	205	28.0
Positive oncotic cytology ^a	53	7.2
Uterine myoma	86	11.7
Severe genital dystopia ^b	296	40.4
Venereal disease	22	3.0
Ovarian tumor	32	4.3
Other gynecological pathologies ^c	27	3.6
High risk of breast cancer	225	30.7
Dysplasia	141	19.2
Fibroadenoma	103	14.0
Other benign breast pathologies ^d	229	31.2
Breast cancer ^e	23	3.1
Total	1,641	224.1

^aCategory III, IV, or V.

^bRectocele, cystocele, perineal rupture (grade 3) and prolapse of the uterus (grades 2 and 3).

^cPyosalpingitis, leukoplakia vulvae, secondary amenorrhea, Bartholinitis, endometritis, giant cervical cyst, metrorrhoea, severe genital malformations, Gartnerian cyst, vaginal stenosis.

^dPapillary discharge, cutaneous lesions, mammary cyst, abscess, ectopic breast, mastalgia, mammary hypertrophy, and supernumerary breast.

^ePrevalence of breast cancer among women over 30 years of age: 5.4 cases per 1,000 patients.

of the university hospital. In many cases, various minor pathologies of slight importance for the patients' general health brought them to the hospital. These included otitis, laryngitis, visual or hearing problems, influenza, colds, and so forth. Most of these problems would have been handled very capably by our excellent specialists. In reality, however, the attention received would have been inadequate, since many patients were suffering from serious gynecological pathologies—including tumors in some cases—that would have been overlooked. This illustrates the point that primary care is not just relevant and important, but it is often more important than the care available at the university hospital level.

Another noteworthy point is that patients from the socioeconomic levels involved here—and probably all socioeconomic levels—are not well-prepared to evaluate the true order of importance of their illnesses, and so they should be helped to do so before receiving any other type of attention. Such help should be offered at the primary care level. However, since primary care services are not appropriately organized in our country, it is important that the clinical or other hospitals receiving patients be aware of the imperative need to provide this kind of attention before caring for the illness recognized by the patient.

It was also found in the course of our program that a large number of patients came to the hospital for very trivial problems that could have been resolved without doing all the necessary paperwork and going through the process of being treated at a referral hospital. We also found that very simple consultations, without recourse to specialists, were able to resolve a large share of these patients' problems at the level of the outpatient unit, dispensing with bureaucracy altogether.

It should be stressed, however, that simplified medicine does not imply low-quality medicine; rather, it implies delivering the care a particular patient needs in a simple and efficient fashion. In this vein, medical students and young physicians should be made aware

that providing precisely the care needed in a simple and efficient manner, without sacrificing quality, is far preferable to providing sophisticated care for the patient's expressed needs—employing complex and expensive equipment and an academic approach without considering the patient's diverse organic aspects as a whole.

It is true that the simplified medical attention provided in some health care areas by paramedical personnel is viewed with certain reservations. This may be due to inadequate understanding of the problem at hand. If so, it is our belief that the results of the study reported here will help to diminish such reservations by showing that when a program and its objectives are well-defined, delegation of functions does not reduce the quality of care.

Conclusions

Our data indicate that women seeking medical care at referral hospitals like ours should first be helped to evaluate their health problems according to those problems' true order of importance—since the problem recognized by the patient is often not the most pressing one involved. At the same time, the high incidence of gynecological pathologies detected by our program signals a need—under the health conditions prevailing in Brazil—for all women seeking care to receive a simple gynecological examination of the kind performed by our unit.

Our findings provide additional evidence of the need to organize a primary care system in our region and possibly throughout Brazil. They also demonstrate that the health system needs to be reorganized in such a way that adequate facilities are made available for referrals and counter-referrals within the system.

Until such time as the health system is appropriately reorganized, it is suggested that hospitals caring for female patients provide the type of care delivered by our program—the results of which demonstrate the organizational and economic feasibility of this proce-

ture. In addition, it may be assumed that comparable health problems also exist among adult males, and so consideration should be

given to developing a similar program to serve them.

SUMMARY

At one time, women coming to the hospital of the School of Medical Sciences of the University of Campinas (in the Brazilian state of São Paulo) were referred to specialized consultations on the basis of the needs they themselves expressed. This procedure, which meant that minor ailments were being treated while major ailments were often overlooked, made the hospital operate as a primary care center and misdirected the attentions of its scarce and expensive specialized resources.

To help cope with this problem, the School of Medical Sciences established a special gynecological screening unit for all female outpatients coming to the hospital with nongynecological complaints. The unit, staffed by physician-supervised paramedical personnel and medical students, performed

simple gynecological and breast examinations in an effort to detect pathological conditions in need of treatment before the patients were referred to specialized consultation. These examinations detected major pathologies in 22.4 per cent of the first 7,320 women screened.

These findings clearly demonstrate an urgent need to provide primary care for the type of patient served by the screening unit. They also indicate that when primary care services are not appropriately organized in the country or area served, then clinical or other hospitals receiving patients should be aware of the imperative necessity of providing this kind of care before tending to the illness recognized by the patient.

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