

Why is it important to monitor intake among hospital patients?

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Hospital malnutrition



35% inpatients have malnutrition risk according the Nutritional risk screening (NRS 2002) in 19 tertiary hosptial,13 cities in 2008.

Only 32.7% patients got nutrition support.

81% malnutritional patients not aware of the problem.



- High prevalence of undernutrition and inadequate nutritional support are common among institutionalised patients in China.
- Influences every organ of the patient's body
 - ◆ Increased morbidity
 - ◆ Enhanced mortality
 - ◆ Reduced quality of life
 - ◆ Extended recovery
 - ◆ Increased health care costs



Nutrition risk screening for elderly patients



Tool	Malnutrition	Nutrition at risk	
NRS 2002	10.07%	46.23%	
MNA-SF	15.13%	50.06%	

10181 ELDERLY PATIENTS IN 30 CITIES FROM 14 CITIES CSPEN 2012



Malnutrition increasing with aging



	NRS 2002		MNA-SF	
	Under nutrition	Nutrition risk	Under nutrition	Nutrition risk
65-	8.91	31.42	10.81	43.29
70-	9.71	50.65	14.27	49.42
80-	13.04	55.47	21.61	57.32
90-	17.53	57.08	33.05	72.10
Avg.	10.07	46.23	15.13	50.06



1,700beds,79,000 inpatients
3,217medical staffs

Zhongshan Hospital



1 Brief history

In 1949

- Nutrition division was established in several big hospitals.

In 1985

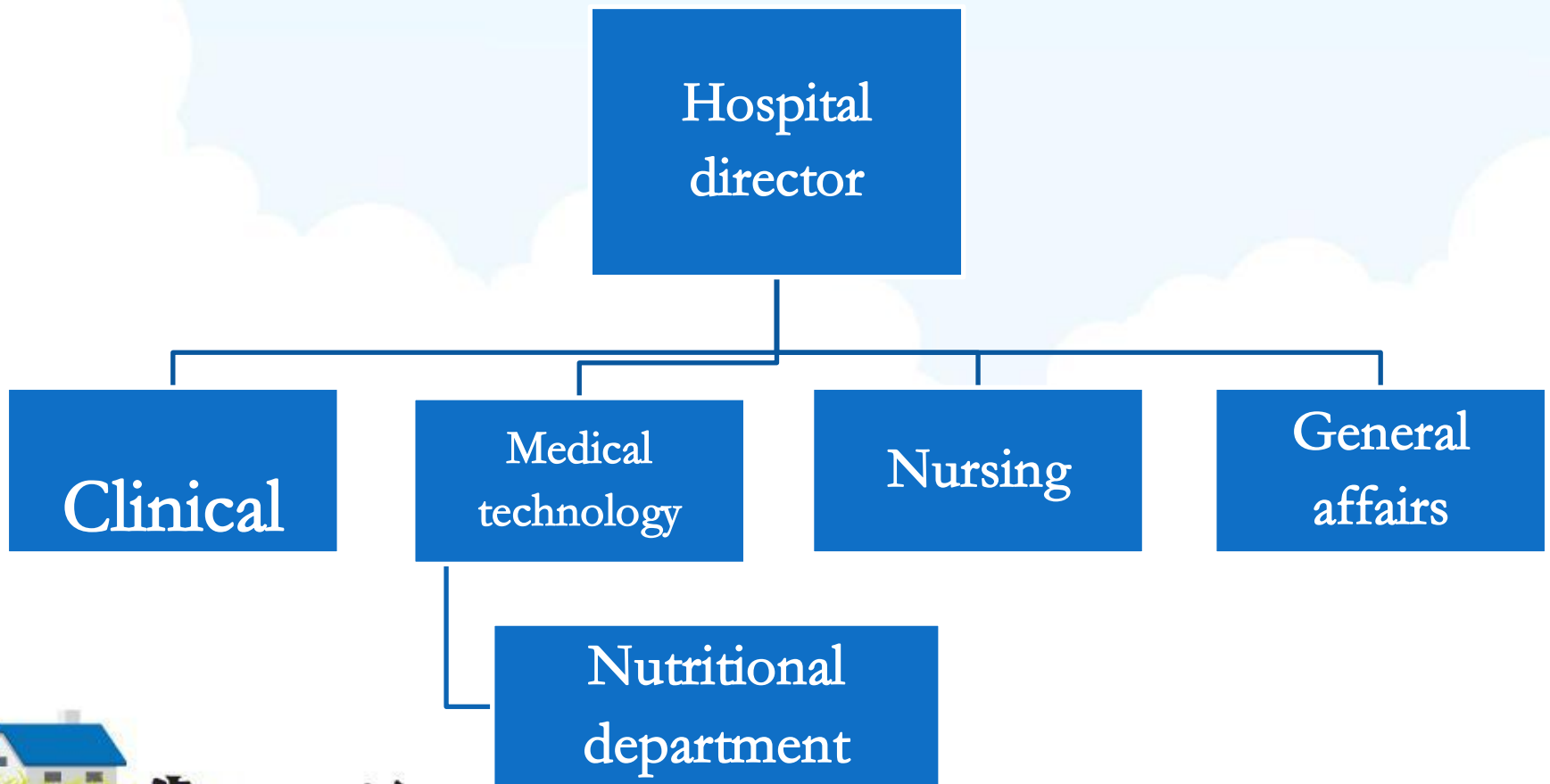
- The Ministry of health set the nutrition division as one of the clinical division.

In the 1990s

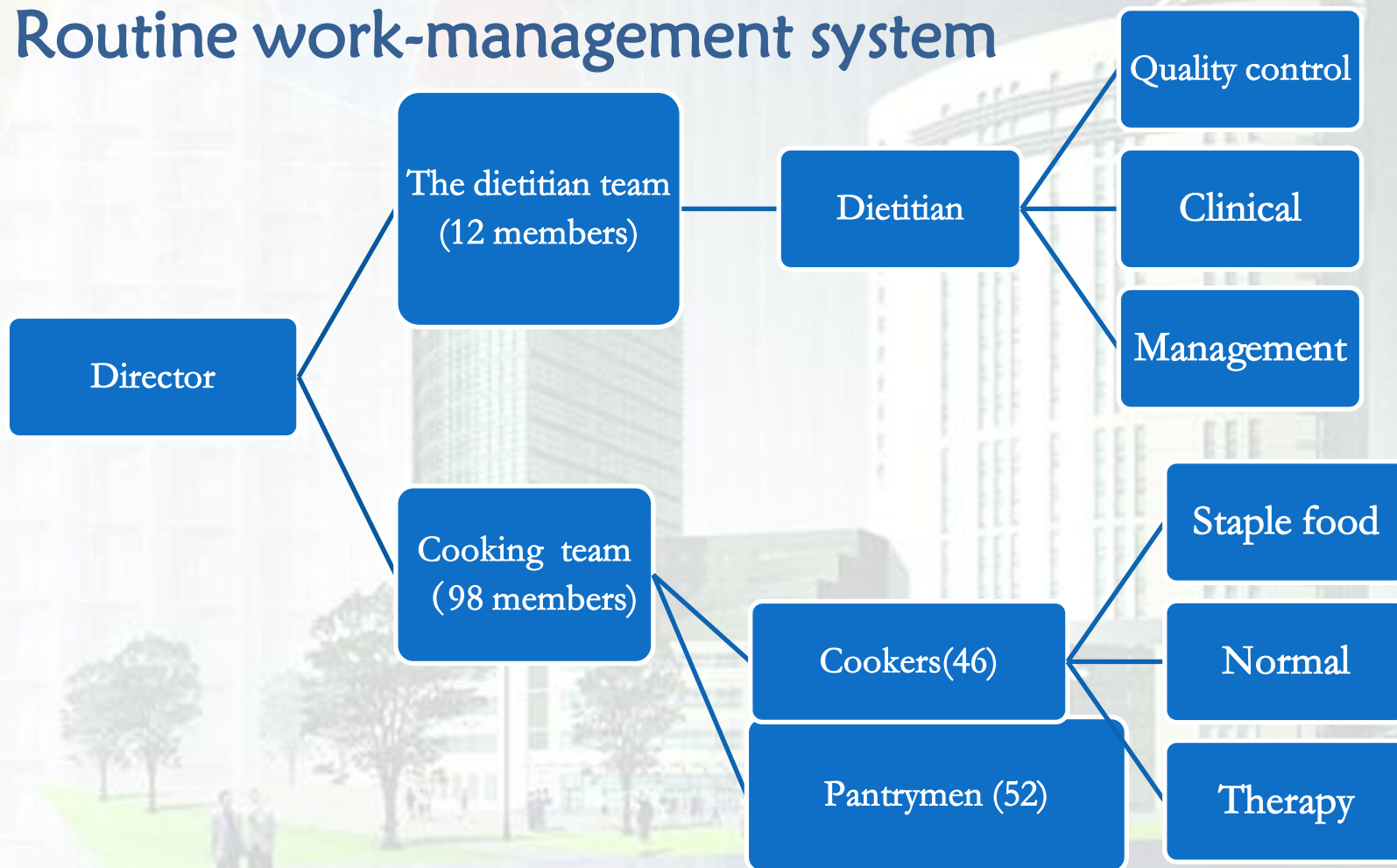
- Implementaction of standardized management.
- Become one of the important indictors of the first-class hosiptal accreditation assessment.



2.Organization



Routine work-management system



Routine work of Nutritional Department

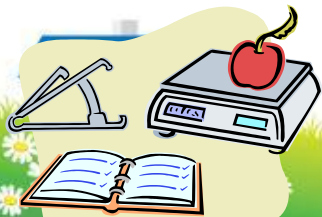
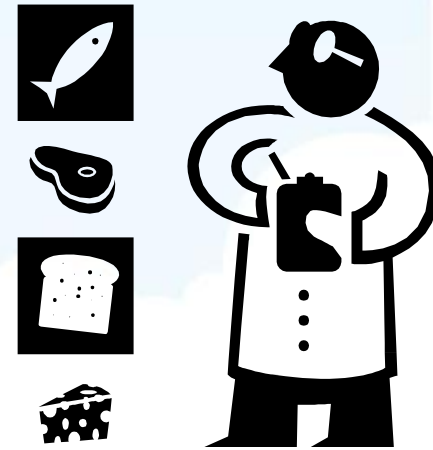
- Clinical nutrition
- Teaching
- Research work
- Diet management for patients
- Others
 - Training management and financial management
 - Food safety management



Organization

Dietitian

1. Make recipe for the patients
2. Nutrition education
3. Manage nutrition kitchen
4. Pay attention to food safety
5. Participation in clinical diagnosis
6. Strengthen the self learning



Clinical nutrition screening and assess



① 白蛋白<35g/l ② 称重饮食 ③ 管饲 姓名: 云兰芳 住院号: 838952

中山医院住院病人营养筛查评估表

性别: 女 年龄: 70 诊断: 2型糖尿病、冠心病 饮食医嘱: 糖尿病饮食

一、基本情况			
身高 160cm	体重 60 Kg	BMI 23.4	小腿围: cm
意识: 清楚 <input checked="" type="checkbox"/>	嗜睡 <input type="checkbox"/>	昏迷 <input type="checkbox"/>	
体温: 正常 <input checked="" type="checkbox"/>	发热 <input type="checkbox"/>	水肿: 有 <input type="checkbox"/>	无 <input checked="" type="checkbox"/>
排便情况: 2	活动情况: 30分钟		
最近3个月体重: ①无变化; ②减少 ___ Kg; ③增加 ___ Kg; ④不清楚;			
最近1周进食量: ①无变化; ②稍减少(约1/4); ③明显减少(1/2); ④显著减少(3/4以上); ⑤增加;			
二、饮食情况:			
饮食习惯:	偏淡 <input type="checkbox"/>	偏咸 <input type="checkbox"/>	偏甜 <input type="checkbox"/> 无特殊 <input checked="" type="checkbox"/>
特别饮食习惯、嗜好及食物过敏史:			
膳食调查:			
1、是否吃完全部饭菜?		A) 1餐	B) 2餐 C) 3餐
2、每日食物多样吗?		A) 是	B) 否 5种

NRS-2002

3. Dietary Therapy

Health diet

Regular meal, soft meal, semi-liquid meal, liquid meal.

Therapeutic diet

Low protein diet, diabetic diet, high energy, high protein, carbohydrate restricted, fat restricted limit cholesterol, dietary fiber etc.

Tube feeding

Nasal F:coma, vomiter or unable to eat through mouth (*no throat and esophageal disorders*). **Intubation F**:no throat esophagus access but gastrointestinal fistula.

ONS

Commercial products mostly.

Mainly used in digestive tract fistula, severe enteritis, chronic diarrhea, short bowel syndrome, pancreatitis, severe burn and etc.





4. Process of food supplication

1

- Medical prescription from clinician

2

- Menu is made by pantryman according to the medical advise

3

- Dietitian check and stats the menus

4

- Process of cooking

5

- Pantrymen give out food to the patients

Example of regular diet



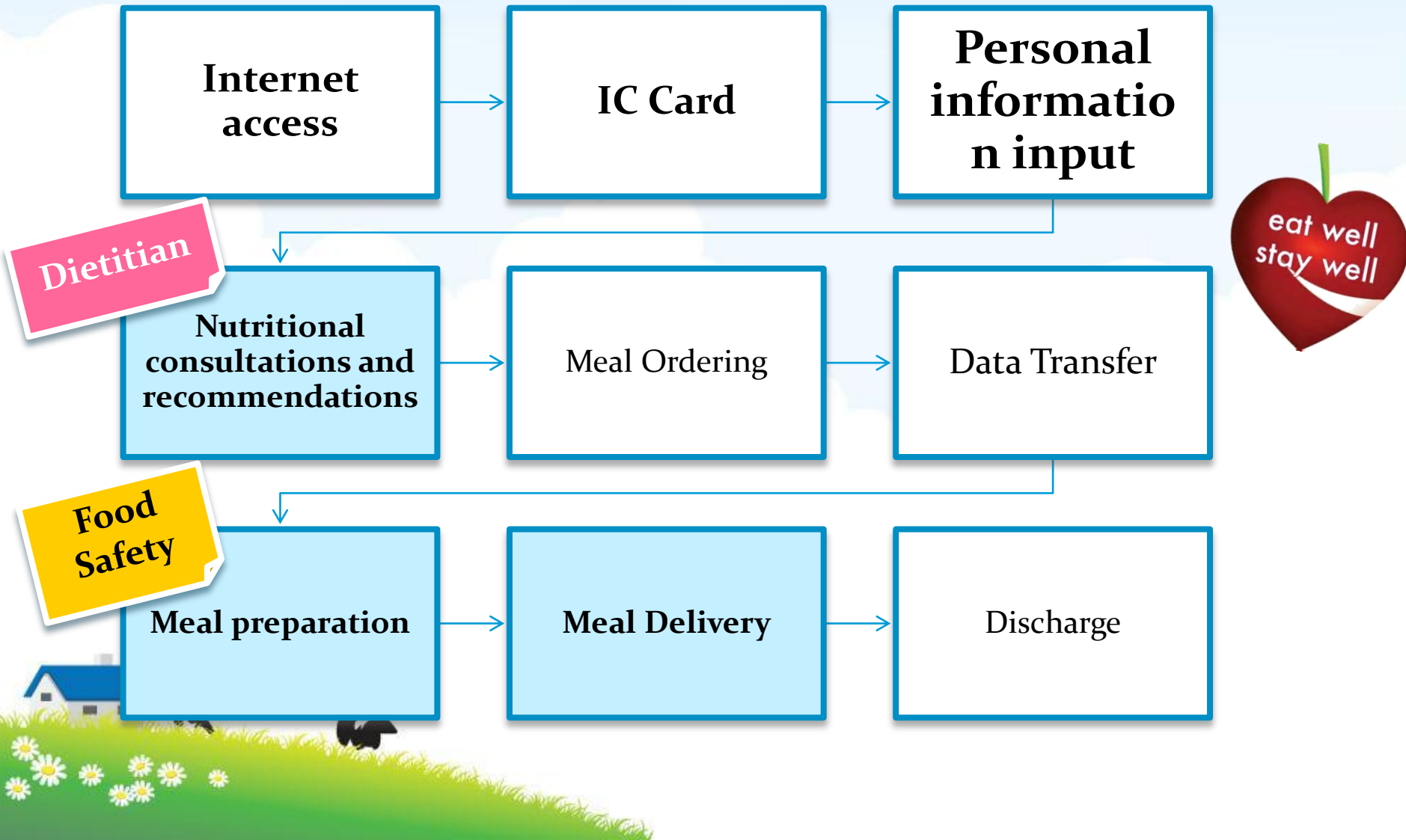
Example of Semi-liquid



Example of Tube feeding



4. Hospital Meal Ordering System



Ordering System

mobile ordering device





5. Process of food supplication

1

- Medical prescription from clinician

2

- Menu is made by pantryman according to the medical advise

3

- Dietitian check and stats the menus

4

- Process of cooking

5

- Pantrymen dilivery food to the patients

(1) Medical advise from clinician



(2) .Menu is made by pantryman according to the medical advise

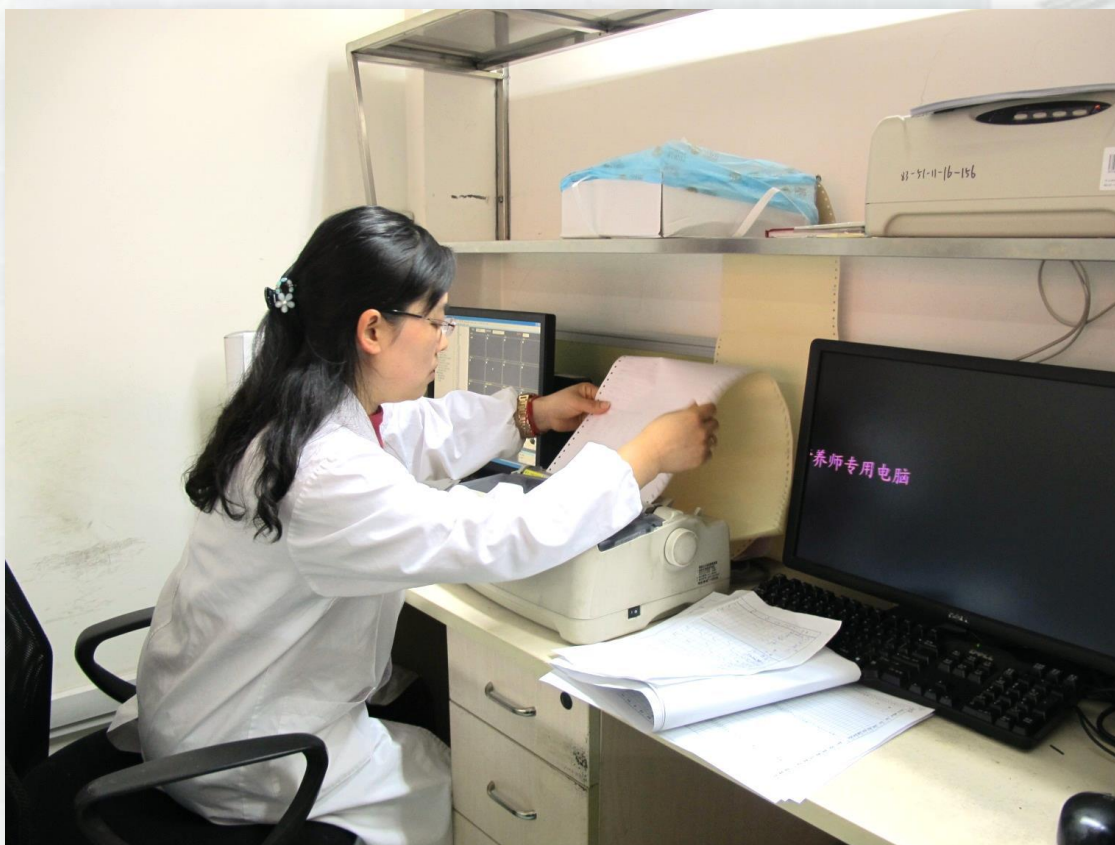




(3) .Input the menu to computer by pantryman



(4) . Dietitian check and stats the menu





(4). Process of cooking

storeroom

- Stock goods based on menus
- Receive, check and give out the goods to cooking ranges



Deal with the food

Washing



Cutting



Making unripe meat diet, preparing, cutting





Cooking





Food finished

Weigh and distribute



Dietitians track and monitor the distribution

Cookers give food to the pantryman



(5).Pantrymen give out food to the patients



5. Food safety management

Employee
management

Quality
control

Process
management

Internal

Food
Safety

External

Clinical nutrition
quality control
center

FDA

- **Personal hygiene:** a health certificate (annual review); cannot work once get sick.
- **Dishware disinfection:** recycling—cleaning—cleaning with disinfectant—high-temperature sterilization.
- **Samples Retention:** more than 100g for 48 hours in special refrigerator lower than 8°C. Keep record, double check, daily cleaning and disinfection.





复旦大学附属中山医院
Zhongshan Hospital, Fudan University



餐饮服务许可证

沪证字 2010310104040007

单位名称：复旦大学附属中山医院(营养科)

法定代表人(负责人或业主)：王玉琦(法定代表人)

地址：枫林路180号

类别：食堂※

备注：不含熟食卤味



发证机关



二〇一三年一月十八日

有效期限：二〇一三年一月十八日至二〇一六年一月十七日

在有效期届满三十日前向原发证部门提出延续申请。

国家食品药品监督管理局制

复旦大学附属中山医院

上海市徐汇区餐饮服务行业食品安全规范化管理单位

上海市徐汇区食品药品安全协会



食品安全监督公示
FOOD SAFETY INSPECTION NOTIFICATION

良好
EXCELLENT

一般
PASS

较差
FAIL

监督检查结果
Inspection Results



食品安全投诉电话：962727
Food Safety Complaint Hotline



上海市食品药品监督管理局徐汇分局
Shanghai Food and Drug Administration Xuhui Branch



- Regular diet



- Meat dish 150g,
- vegetables 200g,
- meat with vegetables 150g
- Meals are self-paying by patients
- 22 RMB (about 2.2 EUR) a day

Knowledge, Attitudes, Practices and Its Influential Factors in Patients with Chronic Kidney Disease

MPH : JIANG Lijing

Supervisor: Prof. HE Gengsheng

School of Public Health

Fudan University



Questionnaire Content: :



■ **Knowledge Questionnaire:** 10 questions about patients' concept of low-protein diet, high quality protein, the appropriate amount of dietary protein, etc.

■ **Attitude Questionnaire:** 10 questions about patients' attitude to low-protein diet therapy, etc.

■ **Behavior Questionnaire:** 10 questions about patients' dietary changes (in protein/staple food/etc.) before and after developing CKD



- In total: 159 completed questionnaires,
- 78 from males and 81 from females
- The average age: 45.97 ± 15.80 y



Analysis of knowledge Score

Table 4 Questions with Highest Scores for the Knowledge Part
(n=159)

Question NO.	Question Content	Score Frequency	Score Rate(%)
3	Have you heard of low-protein diet?	105	66.0
2	Do you think it necessary to restrict protein intake for CKD patients?	104	65.4
6	Which of the following food contains high quality protein?	86	54.1

- Lack of knowledge of low-protein diet.

Analysis of Attitude Score

Table 8 Questions with Highest Scores for the Attitude Part (n=159)

Question NO.	Question Content	Score Frequency	Score Rate(%)
5	Do you need low-protein diet knowledge from nutritionists?	151	95
4	Do you want knowledge of CKD?	150	94.3
7	Are you willing to change your dietary pattern according to your condition?	147	92.5

- Patients answered positively, but with tendentiousness.

Results: Analysis of Practice Score

**Table 10: Questions with Highest Scores for the Practice Part
(n=159)**

Question NO.	Question Content	Score Frequency	Score Rate(%)
11	Whether the participant initiatively acquired knowledge through various channels after illness	98	61.3
5	Whether there was any change in his/her dietary pattern after illness	82	51.6
9	Whether he/she ate soy products after illness	43	27.0

- The Practice part scored the lowest.

Results: Analysis of Practice Score

Table13: Multiple Linear Stepwise Regression Analysis of Influential Factors on Practice Score

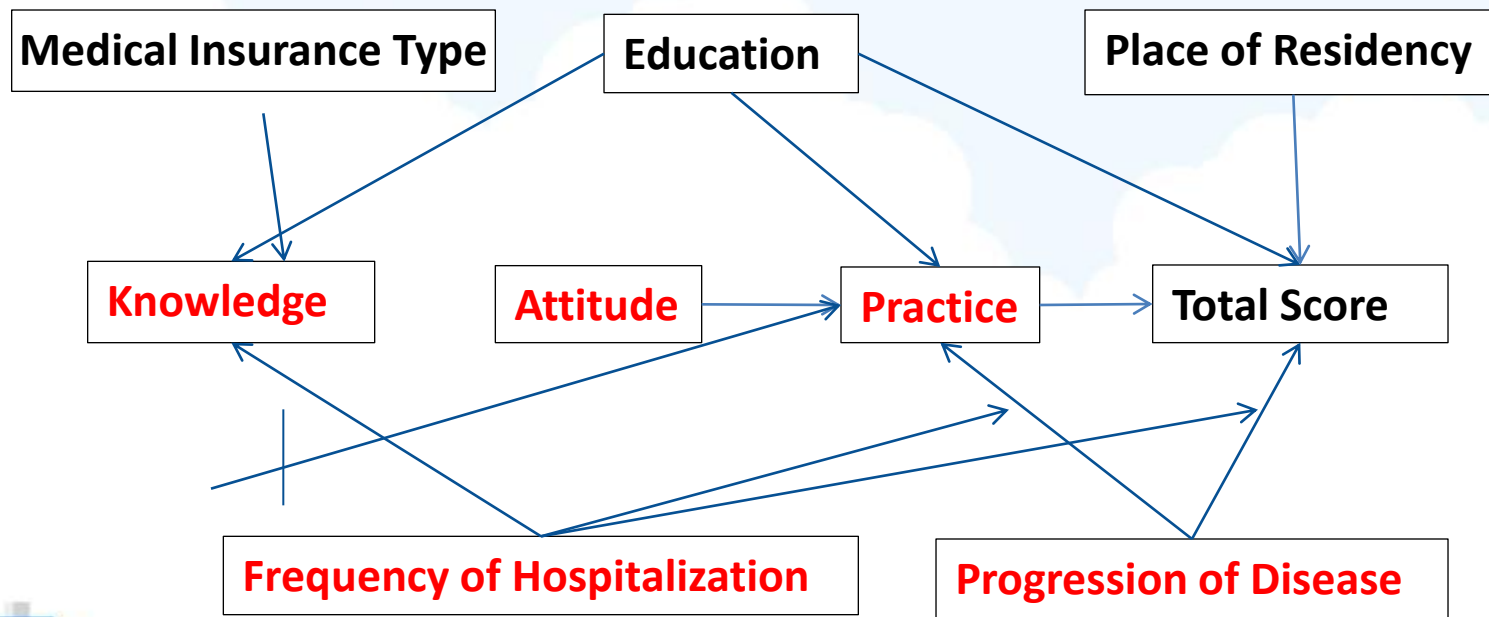
	Independent IF	β (SE)	P
Education Level	\leq Primary School	Referent	
	Middle or High School	3.57 (3.55)	0.289
	\geq (Junior) College	10.55 (4.17)	0.013
Frequency of Hospitalization	Once	Referent	
	Twice	12.94 (3.50)	<0.001
	3 Times	5.32 (4.20)	0.208
	>3 Times	8.00 (4.05)	0.040
Knowledge Score	Low	Referent	
	Intermediate	5.00 (3.37)	0.141
	High	13.02 (3.63)	0.001

*adjust age, sex, education level ,frequency of hospitalization, medical insure

Summary



- Preliminary Conclusion: the influential factors on KAP shown below



Could short message service improve infant feeding practices? Findings from a community-based study in Shanghai

Presenter: Hong Jiang, PhD
School of Public Health, Fudan University, China

Co-authors:

Mu Li, PhD; Li Ming Wen, PhD, Louise A Baur, PhD; (Sydney School of Public Health, the University of Sydney, Australia);

Gengsheng He, PhD; Qiaozhen Hu, MS; DonglingYang, MS; Xu Qian*, PhD(1 School of Public Health, Fudan University, Shanghai, China; 2 Key Laboratory of Public Health Safety, Ministry of Education, China)

* Corresponding author

Mobile phone short message service (SMS)

- The most widely adopted and inexpensive example of mHealth



Research Objective

- To assess whether the community-based SMS infant feeding promotion intervention to expectant and first time mothers would improve infant feeding in Shanghai, China

The duration of EBF

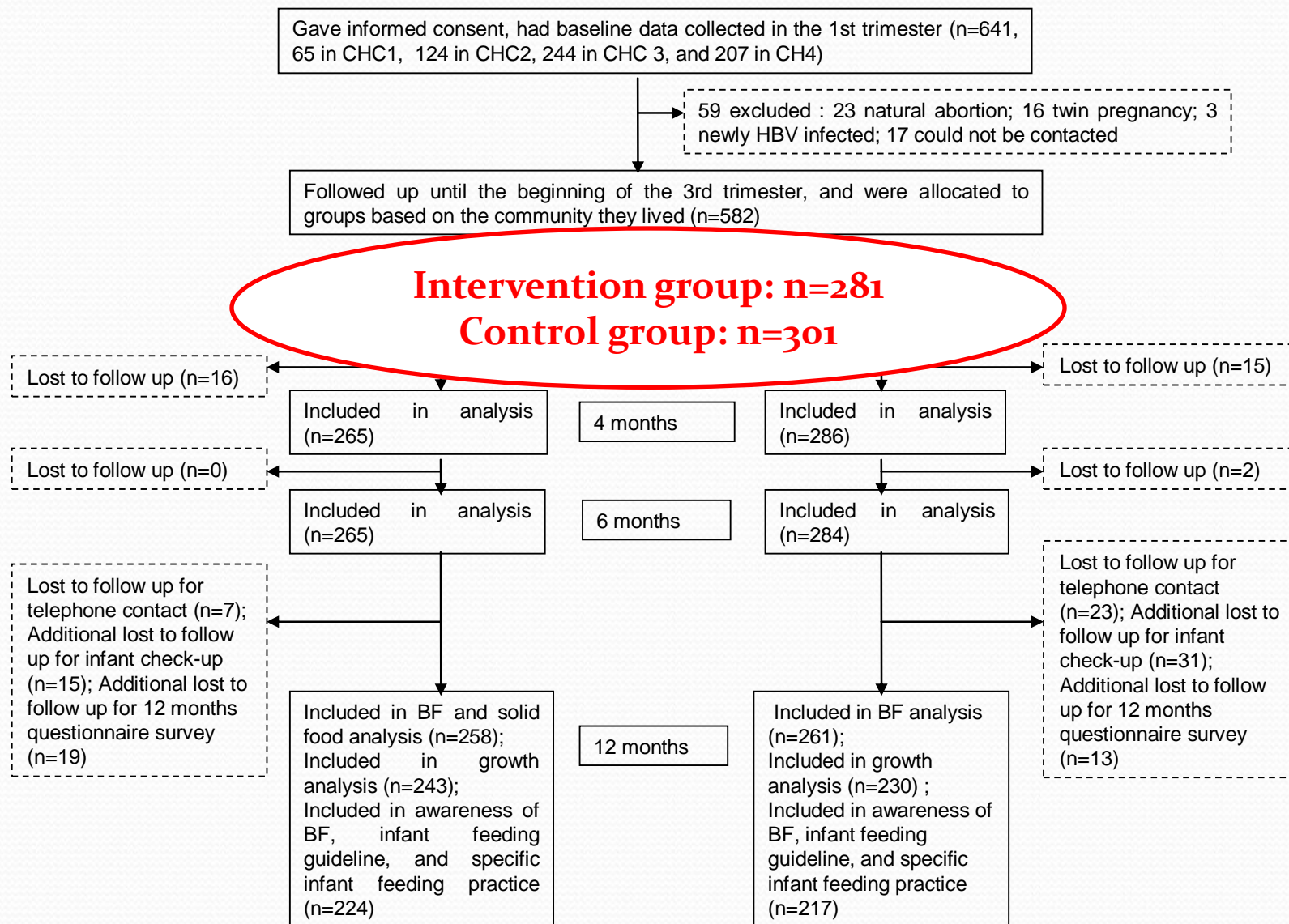
— Primary outcome

Methods

- A quasi-experimental design
- In 4 community health centers (CHCs) of Shanghai
- Between December 2010 and October 2012



Participant recruitment and retention



Control group

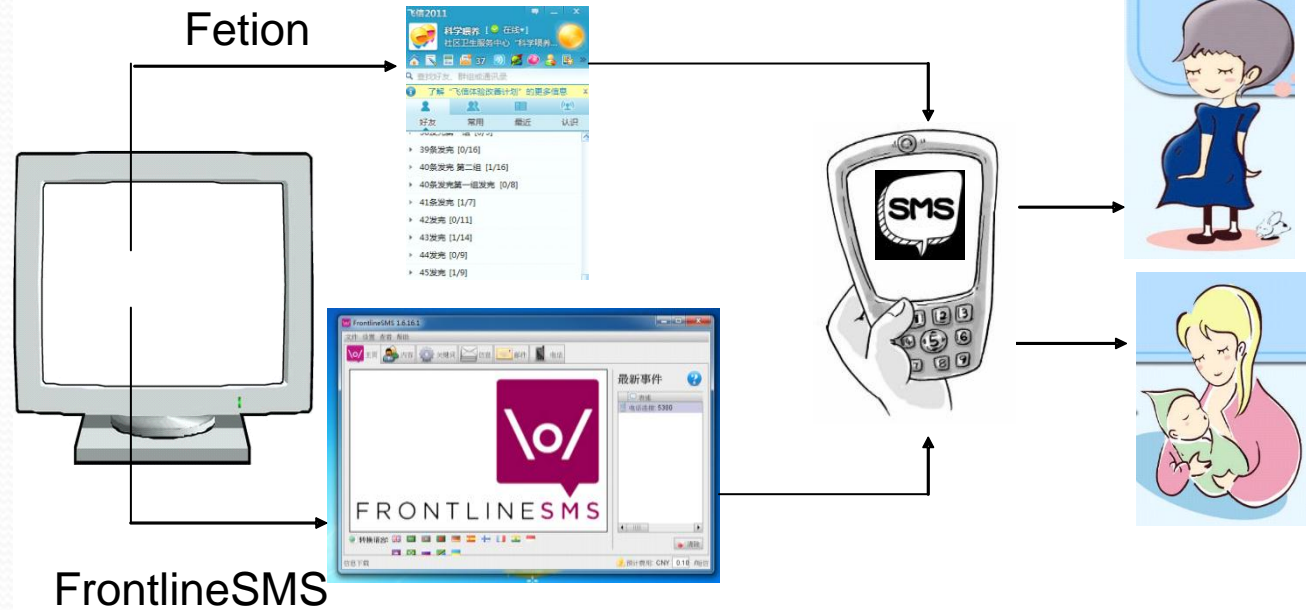
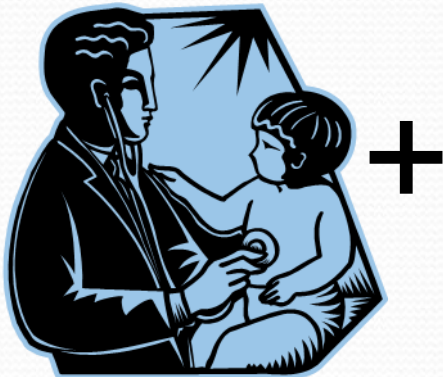


Routine maternal and child health care

Routine maternal and child health care
+ SMS intervention



Intervention group

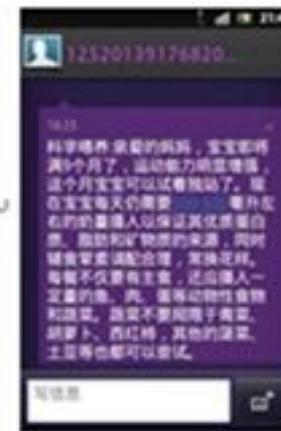


The intervention

- Weekly message to mothers from 3rd trimester to 1 year postpartum
- Consultation through messages
- Routine maternal and child health care



Computer based software



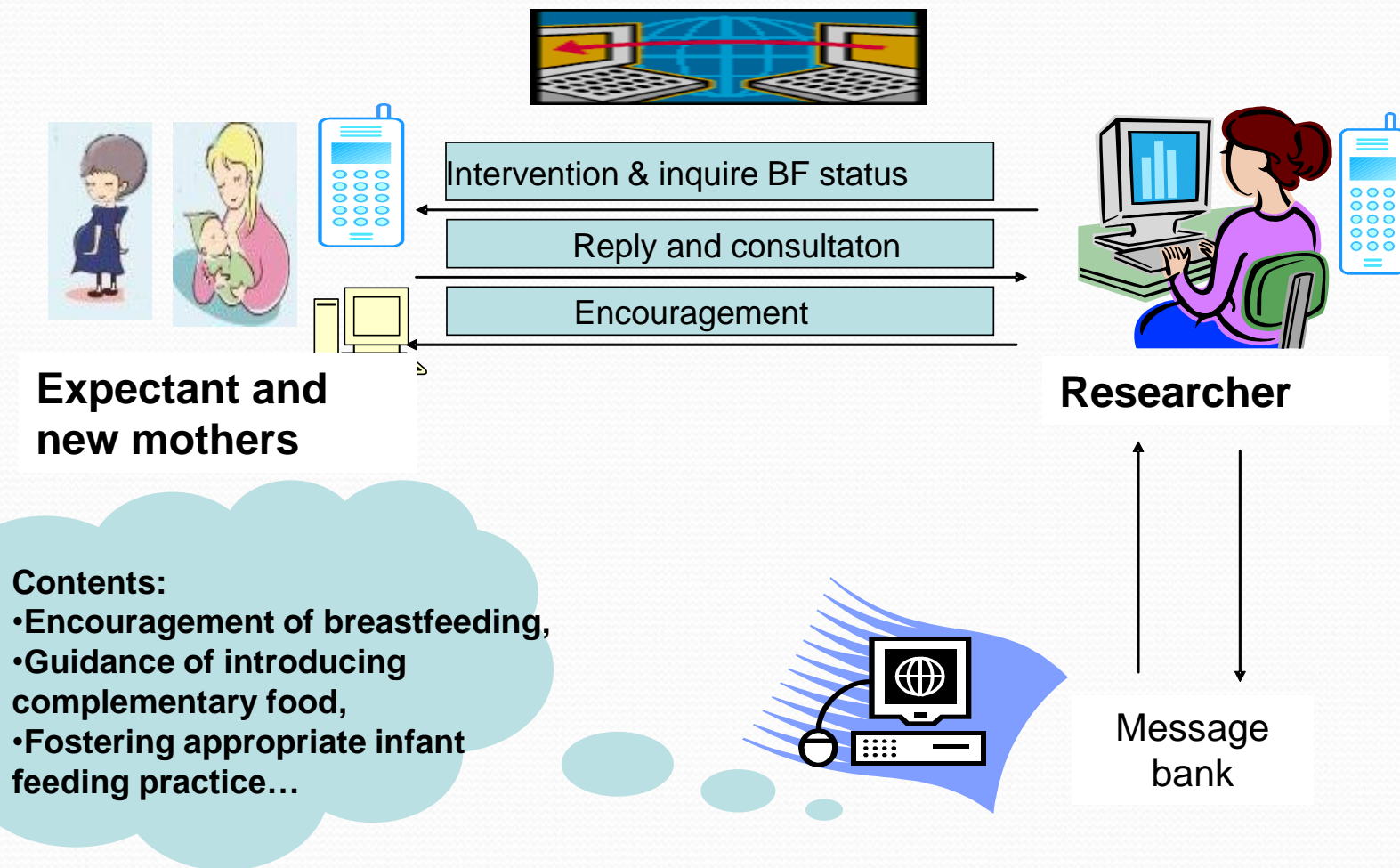
Mobile phone

Message bank

Stage	Focus of messages
3 rd trimester	Preparation for breastfeeding, instructions for breastfeeding after vaginal delivery or caesarean section, tips for avoiding baby reflux
First week after childbirth to age 2 months.	Rapid response to problems of breastfeeding initiation, specific guidance for women had caesarean section delivery
Child's age 2-4 months	Encouragement for exclusively breastfeeding and advice not starting complementary food at this period. For mothers who would return to work soon, encouragements and advice for continuing breastfeeding.
Child's age 4-6 months	1) For mothers go back to work: how to adapt to their work environment and continue breastfeeding. 2) For mothers who still breastfed exclusively: continue to EBF until 6 months and preparation for starting solids at 6 months.
Child's age after 6 months	Encouragement for continuing breastfeeding and adopting appropriate infant feeding practices

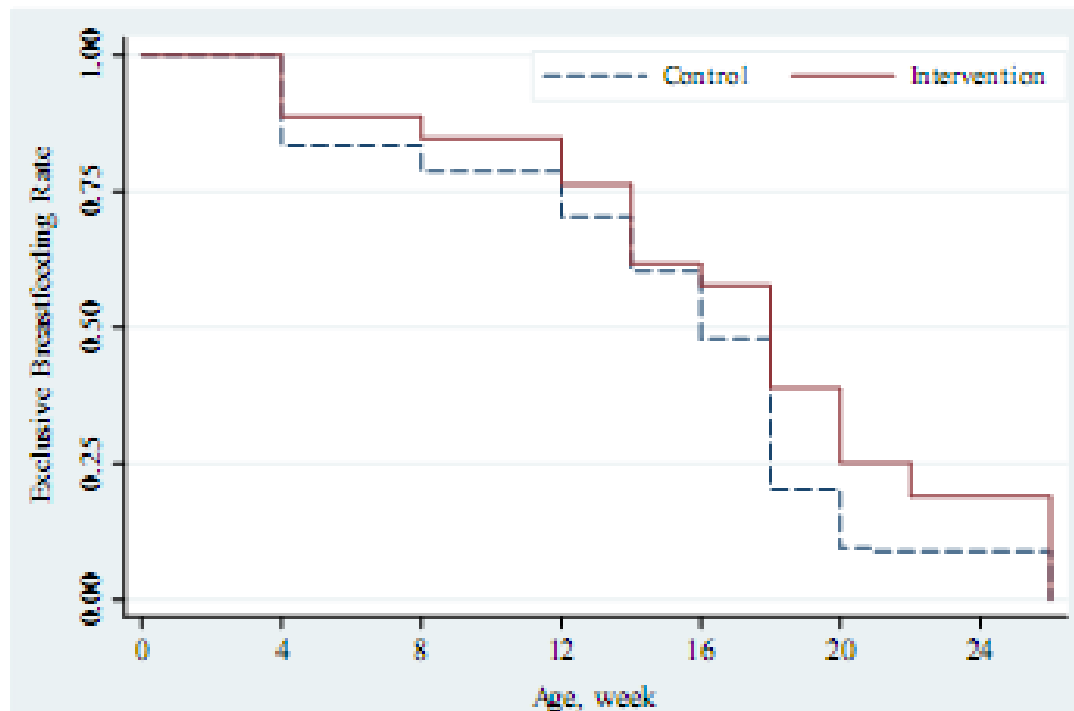


Intervention implementation



Results

1. EBF duration



No. remaining

Control	286	141	133	119	78	15	14
Intervention	265	157	150	135	101	44	33

2. Introduction of complementary food before 4 months

Variables	No. (%)			AOR(95% CI)	P
	Total	Intervention	Control		
Exclusive breastfeeding					
at the 4 th month* (n=551)					
Yes	237(43.0)	123 (46.4)	114(39.9)	1.40(0.98- 2.00)	.0690
No	314(57.0)	142 (53.6)	172(60.1)	1	
at the 6 th month* (n=549)					
Yes	58 (10.6)	40 (15.1)	18 (6.3)	2.67(1.45- 4.91)	0.002
No	491(89.4)	225 (84.9)	266(93.7)	1	
BF at the 12 th month* (n=519)					
Yes	102(19.7)	52 (20.2)	50 (19.2)	1.03(0.65- 1.63)	0.891
No	417(80.3)	206 (79.8)	211(80.8)	1	
Introduction of solid food regularly					
before the 4 th month* (n=551)					
Yes	15 (2.7)	4 (1.5)	11 (3.8)	0.27(0.08- 0.94)	0.039
No	536(97.3)	261 (98.5)	275(96.5)	1	
before the 6 th month* (n=549)					
Yes	353(64.3)	179 (67.5)	174(61.3)	1.26(0.87- 1.83)	0.214
No	196(35.7)	86 (32.5)	110(38.7)	1	
Other infant feeding behaviors					
Drinking from a cup at 12 months* (n=441)					
Yes	221(50.1)	120(53.6)	101(46.5)	1.33(0.90-1.97)	0.155
No	220(49.9)	104(46.4)	116(53.5)	1	
Food for reward* (n=441)					
Yes	175(39.7)	102(45.5)	73(33.6)	1.49(0.98-2.25)	0.060
No	266(60.3)	122(54.5)	144(66.4)	1	
Having a bottle to go to bed* (n=431)					
Yes	210(47.6)	109(48.7)	115(51.3)	1.06(0.71- 1.57)	0.786
No	231(52.4)	101(46.5)	116(53.5)	1	

- 3. Median time of any breastfeeding ($P > 0.05$)
 - Intervention group-- 7.72 months (95% CI 7.26-8.19) vs control group-- 7.73 months (95% CI 7.28-8.18)
- 4. Specific infant feeding practices ($P > 0.05$)
 - No significant differences between the groups at 12 months in cup usage, bottle at bedtime, and food for reward

Conclusion

SMS intervention

- Effective in promoting EBF at 6 months
- Effective in reducing introduction of solids before 4 months
- With limited effect in improving some other infant feeding practices
- Need for large scale cluster randomized controlled trials

Thank you

