Diabetes care in China

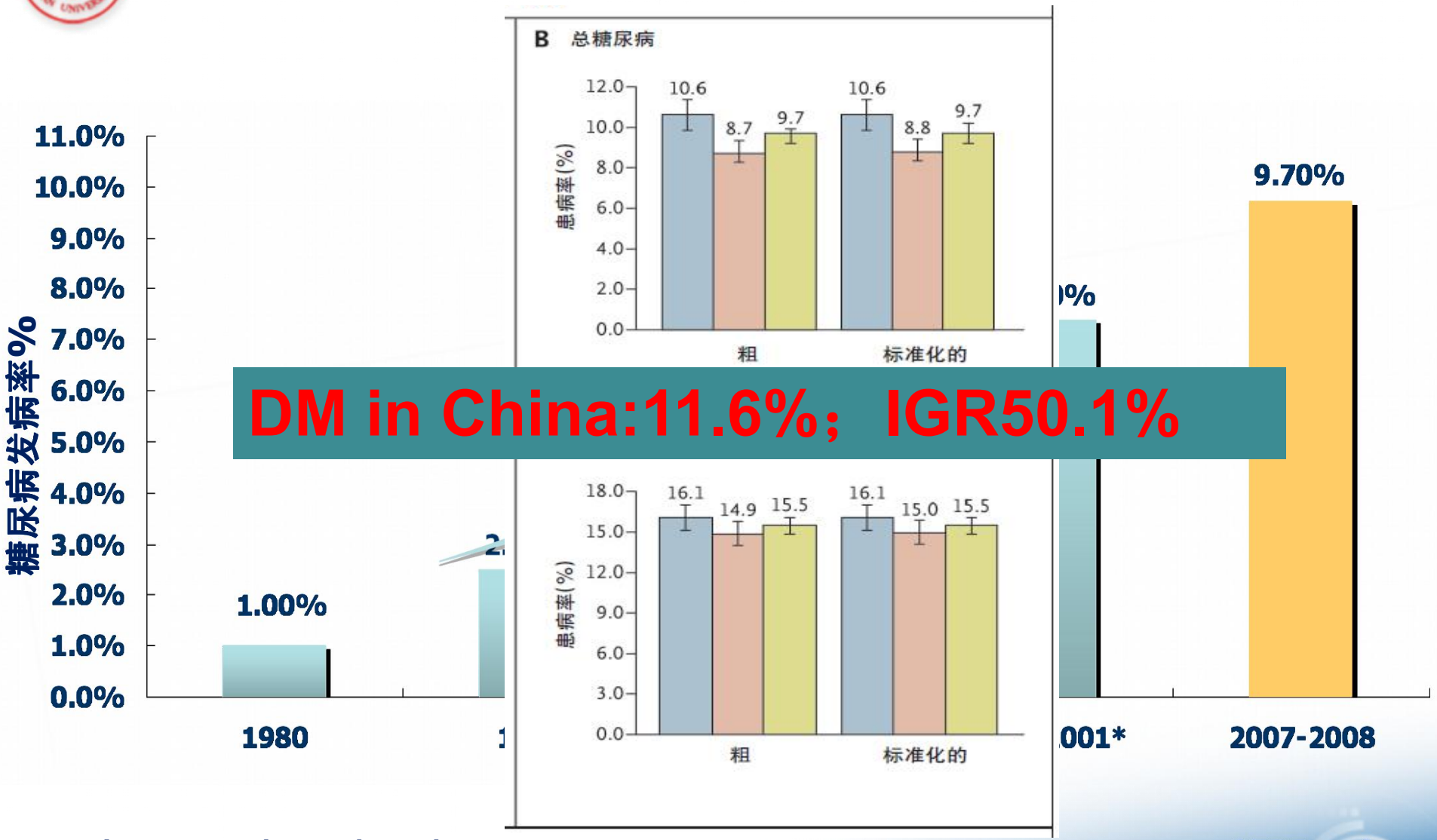
暨南大学附属第一医院
周佩如
Zhou peiru
Vice Director and supervisor of outpatient Dep.
The First Affiliated Hospital of Jinan University

暨南大學
JINAN UNIVERSITY

Peiru Zhou

- Master degree
- Master Nursing Teacher
- Diabetes Speciality Nurse
- Vice Director of the Outpatient Dep. the first affiliated hospital of JNU
- Vice Chairman of Diabetes Professional Committee of Guangdong Provincial Nursing Association
- Standing Management of Guangzhou Nursing Association
- luzhmm@126.com
- www.jd120.com/dims
- http://www.jd120.com/tnb

Increased： Prevalence of diabetes in China



DM in China:11.6%； IGR50.1%

Wenying Yang et al. N Engl J Med 2010: 362:1090-1101

中国2型糖尿病防治指南。中华内分泌与代谢杂志. 2008; 24(2)

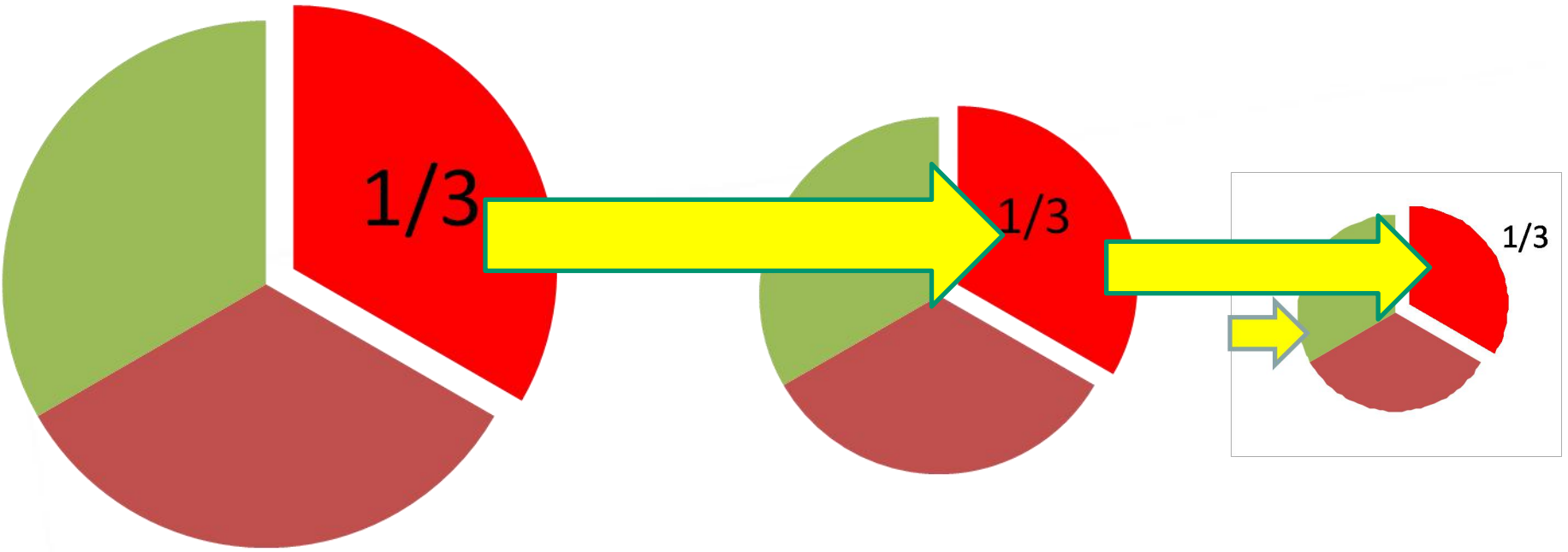
中国14省市糖尿病和代谢综合征得患病率调查 中华医学会糖尿病学分会网站

http://cdschina.org/page.jsp?id=15

*FPB only

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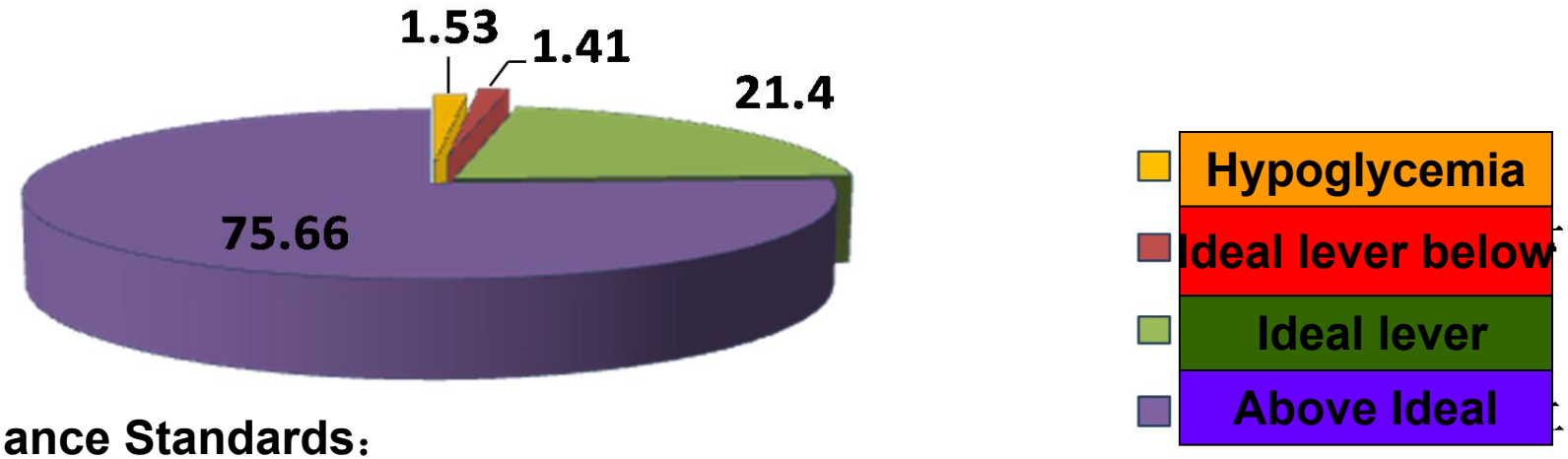
Diabetes control in China



- 1/3 patients are diagnosed with diabetes
- 1/3 diagnosed diabetes be treated
- 1/3 patients diabetes be complianced

Inpatients Glycemic Control

- **Ideal glycemic control: 21. 4%**
- **1.53% Hypoglycemia(inpatients)**



Compliance Standards：

Ideal: FBG:4.4—6.1mmol/L; Ideal PBG: 4.4—8.0mmol/L

Above Ideal: FBG>6.1mmol/L, PBG>8.0mmol/L

Ideal below: >3.9mmol/L & <4.4mmol/L

Hypoglycemia: BG≤3.9mmol/L

Severe hypoglycemia:BG≤2.8mmol/L

Hypoglycemia inpatients diabetic Survey in China , 2009

Challenges of Diabetes Management

- **Survey(inpatien) in Guangdong:**

➢ Survey to the 8753 inpatients:

✓ 729 cases with diabetes (8.3%)

➢ Survey to who was not diabetes:

✓ 353 cases FPG≥7.0mmol/L(4.0%)

✓ 864 cases: FPG 5.6～6.9mmol/L (9.9%)

➢ 433 cases inpatients were be OGTT:

✓ 27.9% can be diagnosed diabetes

✓ 49.9% can be diagnosed IGR

➢ 15.1% with diabetes and 4.9% with IGR inpatients in the 8753 inpatients

广东省糖尿病防治研究中心,广东省医学会糖尿病学分会.
广东省住院病人糖尿病调查.
中华医学杂志,2006,86(12):815-818.

Diabetes specialist nursing in China

1. Diabetes nurse group was established after the Chinese Medical Association Diabetes Society in the early 1990s
- Several major hospitals have diabetes specialist nurse

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Diabetes specialist nursing in China

2. Some of China's comprehensive teaching hospital sent their nurses to west countries (eg. USA/Aus…) to study diabetes education mid-1990s.

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Diabetes specialist nursing in China

3. “Chinese Diabetes Education Program” supported by three large pharmaceutical companies and the Ministry of Health, 1997

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Diabetes specialist nursing in China

4. Diabetes Nursing group of Chinese Medical Association held the diabetes specialist nurses program, 2001

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Diabetes specialist nursing in China

5. Full-time diabetes education nurses work in the hospital in recent years

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the development of diabetes specialist nurse in Guangdong

- the first diabetes specialist nurses program(**master program**) in Guangdong, 2005
  - Guangdong Provincial Health Department commissioned Hong Kong Polytechnic University combine with Southern Medical University
- **9 DSN Graduated**



Diabetes education model development

- **1. Diabetes educator team**:

➢ Diabetes specialist, diabetes nurse educators, dietitians, exercise rehabilitation division, diabetic foot care nurse, diabetes management

➢ **Diabetes specialist nurse education is a core member of the team**

➢ Community Diabetes Education Mode is being maturing

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Diabetes education model development

- **2.Diabetes education model**:

➢ Individualized education(by DNS clinic)(Oral)

➢ Group education

➢ Healthy nutrition education card

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Diabetes education model development

- **3. Diabetes education models and tools are diversification:**
- Figure dialogue\complications experience study

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Diabetes education model development

- **4.Diabetes Education Books：**

➢China Diabetes Care and Education Guide

➢Diabetes medication injection guidelines …

- **5.New media -** internet communication technology

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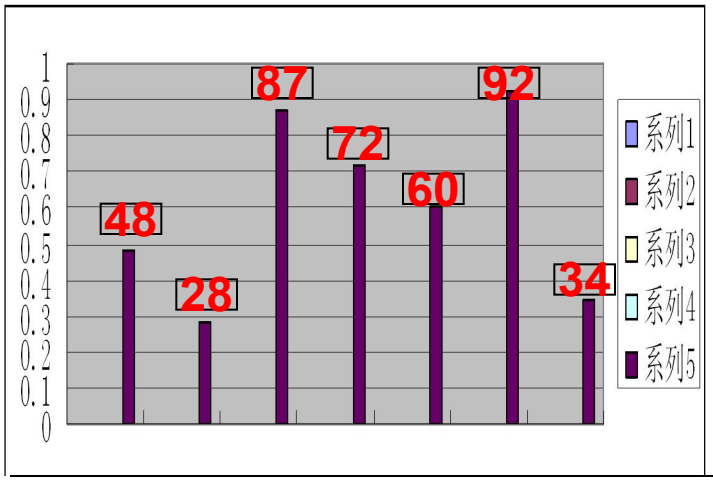
Diabetes education model development

- **6.Hospital - Community - Integrated** management(hospital and community referral)

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Diabetes education status(Survey)

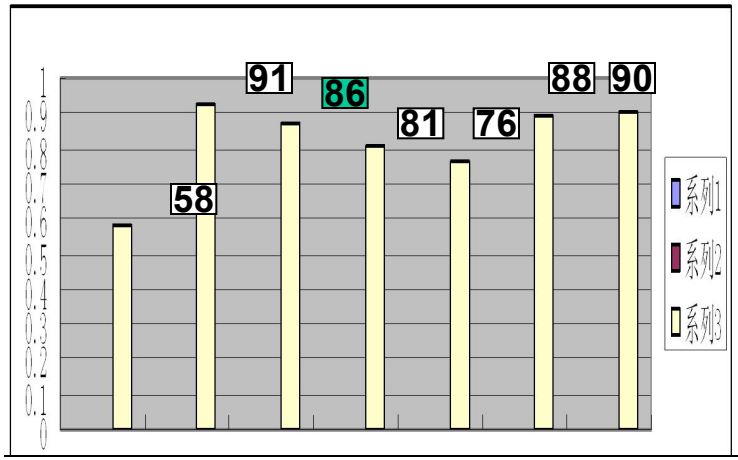
- **1. Newly diagnosed patients did not receive education 48%**
- **2. Elderly patients received diabetes education 28%**
- **3. Understand antidiabetic drugs 87%**
- **4. Not self-monitoring of blood glucose 72%**
- **5. Does not control diet 60%**
- **6. Do not know how to exercise 92%**
- **7. Hypoglycemia** Occurred **34%**



Survey in Jiangsu Provincial People's Hospital

Division knowledge survey among patients with diabetes in the Cardiovascular Dep.

- Who diagnosed diabetes had not received education 58%
- New diagnosis but had not received education 91%
- Glucose did not compliance 86%
- Don’t know anti-diabetic drugs 81%
- No diet 76%
- No SMBG 88%
- No activity 90%



Survey in Jiangsu Provincial People's Hospital

What can we do?

- In our hospital

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1. DSN clinic education

We have being established 1500 patient files, since 2006

2. Case management dependent on DIMS

- 1800 case in the DIMS
- Individualized recommendations to the patient
- Follow up (Different times)

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3. Blood glucose measure free in communities

- **912 blood glucose monitoring from 2009 to 2011 in a number of communities**

	blood glucose (mmol/l)					
	<4.4	4.4-7.8	7.9-11.0	11.1-15	15.1-20	>20
人数	18	594	112	30	18	3
%	1.9	94.7	93.8	76.2	48.4	52.9	17.6

In the 775 cases who were without diabetes history, there were163 blood glucose results were unnormal(21%)

4.Screening for risk of the diabetes foot

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- **376 cases were review analysis (May 2010 to November 2011)**

n	abnormalities or risk factors	normal
376	213 （56.6%）	163（43.4%）

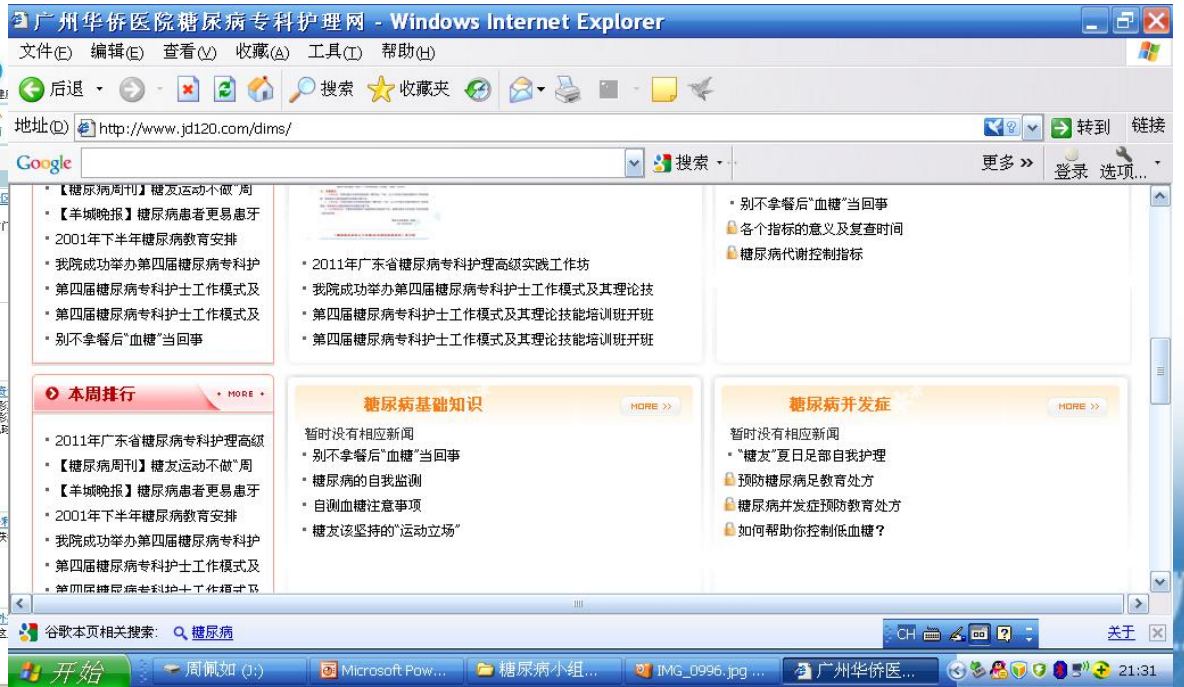
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5.Group education

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6.Online Education





7.Continuous care services for diabetes

- With the remote glucose management platform(more than 300 patients)

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护士主页

查询年份： 2013 查询月份： 06 查询

序号	登记号	姓名	预警类型	输入类型	测试日期	测试值	预警值	备注
1	000000000372	魏华荣	餐后血糖高值	早餐后2H	2013-06-06 11:30	11.0	7.8	小于等于7.8，餐后血糖正常值
2	000000000415	王晓霖	餐后血糖高值	早餐后2H	2013-06-11 11:30	8.0	7.8	小于等于7.8，餐后血糖正常值
3	000000000755	邓伯衡	餐后血糖高值	早餐后2H	2013-06-13 11:30	7.9	7.8	小于等于7.8，餐后血糖正常值
4	000000001355	张锡万	餐后血糖高值	早餐后2H	2013-06-06 11:30	10.0	7.8	小于等于7.8，餐后血糖正常值
5	000000001846	樊海峰	餐后血糖高值	早餐后2H	2013-06-04 11:30	13.2	7.8	小于等于7.8，餐后血糖正常值
6	000000001854	杨二妮	餐后血糖高值	早餐后2H	2013-06-11 11:30	15.9	7.8	小于等于7.8，餐后血糖正常值
7	000000001857	唐桂林	高血糖	早餐前	2013-06-11 08:30	17.71	16.7	血糖值偏高，请马上看医生.
8	000000001858	肖燕	餐后血糖高值	早餐后2H	2013-06-11 11:30	13.44	7.8	小于等于7.8，餐后血糖正常值

8.Diabetes Liaison Nurse Group in the hospital

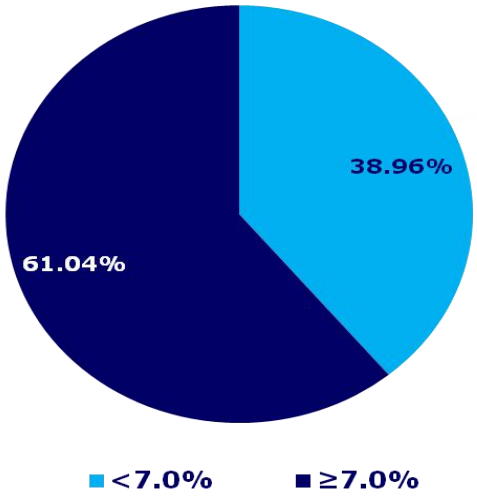
- Care for the inpatients who with diabetes in the other units

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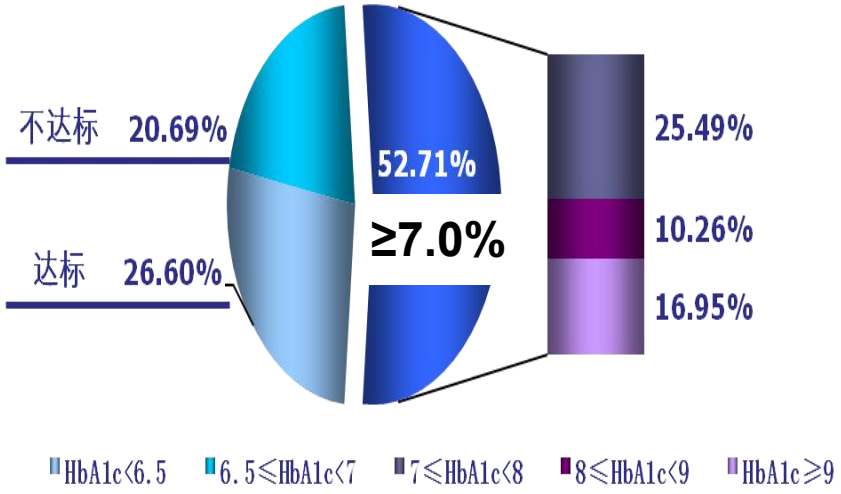
Share

61.04% Patients HbA1c is not object

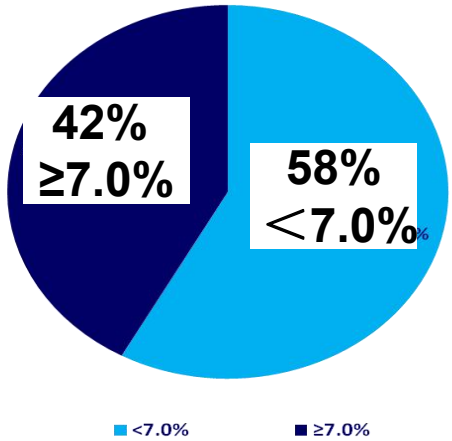
Result Guangdong Province 2011



Result in Guangzhou 2010



Result in the First affiliated hospital Of Jinan University 2011

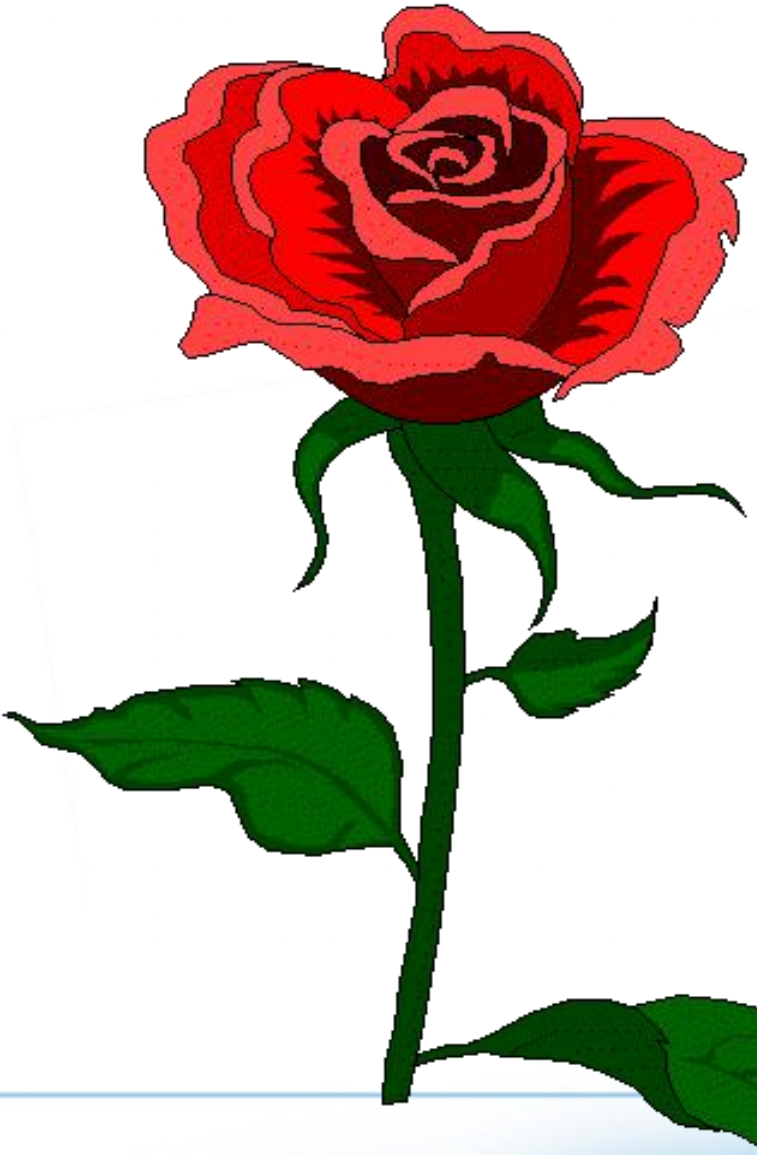


* Ref: 《中国2型糖尿病防治指南》2010年版 讨论稿

Summary

- Diabetes Increased
- Requires a lot of diabetes education nurse (diabetes specialist nurse)
- Patient education and management are the importance ways to improve diabetes comtrol

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谢谢！