

SETMA Healthcare transformation Pilgrimage

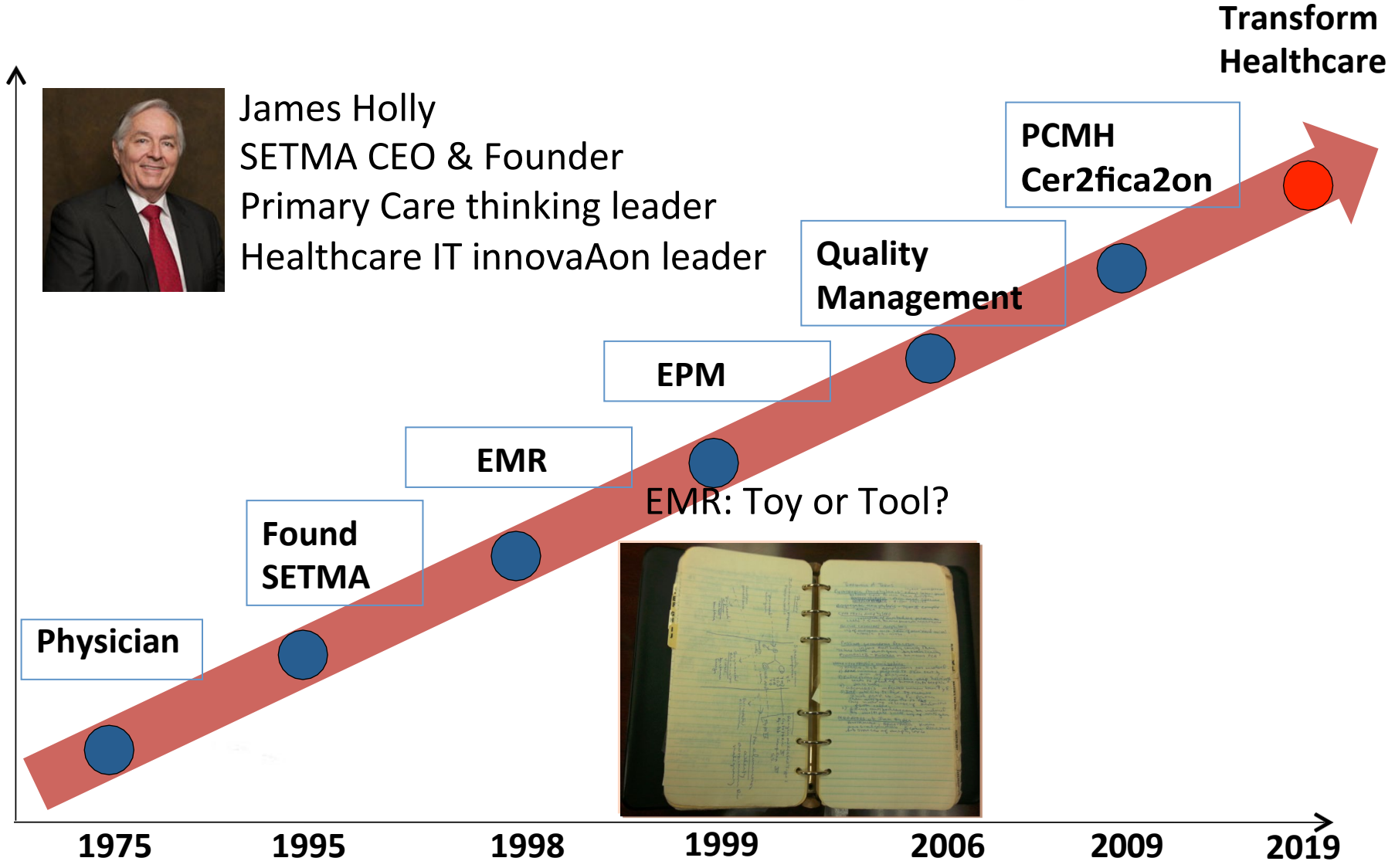


Jingwei Liu

Director of Healthcare Transformation Center,CETC-SS

2015-11-10

The Future of Healthcare Innovation Journey



EMR-EPM

Evidenced--base Medicine

Diabetes Management

Diabetes Slice Patient: Robert Test Jr. Age: 42 Sex: M

Joalin Treatment Goals: **Imc Diabetes Concepts**

Diagnostic Criteria: **Evidenced-Based Recs**

Adherence: **Denial Care**

Dilated Eye Exam: 06/16/2008
Flu Shot: 11/04/2011
Foot Exam: 02/07/2011
Monofilament: 02/07/2011
HgbA1c: 02/22/2012
Pneumovax: 03/02/2011
Urnalysis: //
Aspirin: //
Statin: //

10-Year General Risk: 7.5 %
10-Year Stroke Risk: 2 %
Global Cardio Score: 4.4 pts

Weight Management: //
Lipid Management: //
HPT Management: //
Immunizations: //

Vital Signs: Height: 72.00, Weight: 210.00, BMI: 28.48, Body Fat %: 22, Protein Req: 114, BMR: 2945

Most Recent Labs: HgbA1c: 8.0, Previous: 8.2, eAG: 182, Mean Plasma Glucose: 207.5, C-Peptide: //, Fasting: //, Insulin: //, HOMA-IR: //

Cholesterol: 111, LDL: 63, Triglycerides: 118, HDL: 111, TriHDL Ratio: 1.87

Navigation: Home, Diab Sys Review, Diabetic History, Eye Exam, Nasopharynx, Cardio Exam, Foot Exam, Neurological Exam, Complications/Education, Insulin Insulin, Insulin Pump, Lifestyle Changes, Diabetes Plan

PCPI Diabetes Management

Has the patient had a Hemoglobin A1c within the last year? **Yes** (Date of Last: 08/25/2010) [Order HgbA1c]

Has the patient had a Lipid Profile w/in the last year? **Yes** (Date of Last: 12/02/2010) [Order Lipid Profile]

Has the patient had a urinalysis within the last year? **No** (Date of Last: 04/24/2007) [Order Urinalysis]

Has the patient had a dilated eye exam within the last year? **No** (Date of Last: 10/29/2009) [Add Referral Below]

Has the patient had a flu shot within the last year? **Yes** (Date of Last: 03/05/2010) [Order Flu Shot]

Has the patient had a 10-gram monofilament exam within the last year? **Yes** (Date of Last: 03/05/2010) [Click to Complete]

Is the patient on Aspirin? **Yes**
Is the patient allergic to aspirin? **No**
Is the patient's blood pressure controlled (<130/80 mmHg)? **No** (Today's Blood Pressure: 166 / 96)

Follow-Up Visit: // [Click to Complete]

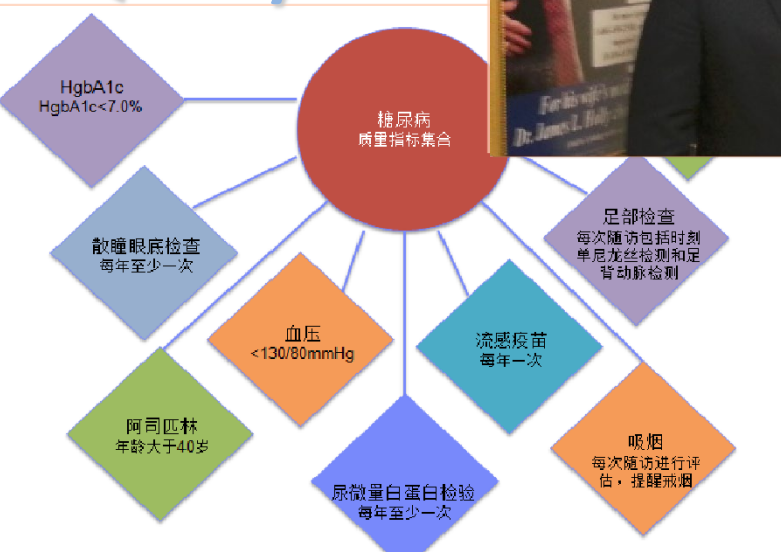
Active Medications:

Brand Name	Dose
ALENDRONATE SODIUM	10 MG
ASPIRIN	81 MG
ASPIRIN EC	325 MG
ATENOLOL	100 MG



Quality Mana

Repor2ng



ber 31, 2013

Provider	Encounters	A1c >9.0 <= 15%	A1c < 8.0 >= 65%	A1c < 7.0 >= 40%	BP > 140/90 <= 35%	BP < 130/80 >= 25%	Eye Exam >= 60%	Smoking Cessation >= 85%	LDL >= 130 <= 35%	LDL < 100 >= 50%	Nephropathy >= 85%	Foot Exam >= 80%	Total Points
Anthony	999	11.7%	80.1%	57.0%	11.5%	64.9%	68.0%	96.4%	10.9%	70.7%	92.4%	96.3%	100
Anwar	1,192	11.2%	77.8%	55.0%	4.9%	73.7%	63.6%	90.3%	9.2%	70.1%	90.4%	77.6%	95
Aziz	919	12.7%	74.4%	56.3%	24.2%	51.9%	50.2%	95.8%	9.9%	75.5%	88.7%	71.3%	85
Cash	2,345	22.0%	60.2%	33.5%	3.7%	63.3%	72.0%	82.2%	10.2%	69.6%	82.4%	99.8%	60
Castro	930	8.3%	65.3%	45.6%	25.6%	45.3%	62.2%	84.5%	6.1%	55.9%	69.7%	97.1%	85
Cox	261	3.4%	32.2%	23.0%	14.6%	43.3%	12.6%	63.0%	8.4%	24.1%	23.0%	90.8%	52
Darden	374	12.3%	75.4%	55.3%	16.0%	51.6%	54.5%	81.2%	12.0%	63.1%	78.3%	91.2%	75
Deiparine, C	823	13.2%	70.5%	48.7%	12.8%	59.8%	42.5%	97.8%	11.9%	64.9%	72.8%	79.6%	80

Crowded large hospital



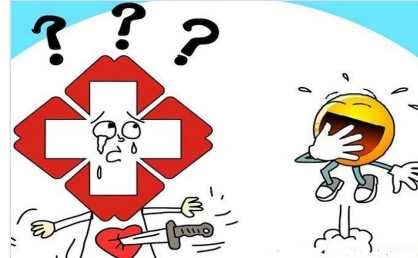
West China Hospital:
• 18,000 patient visit/day
• 80% unnecessary visit

Over-utilized hospital facility



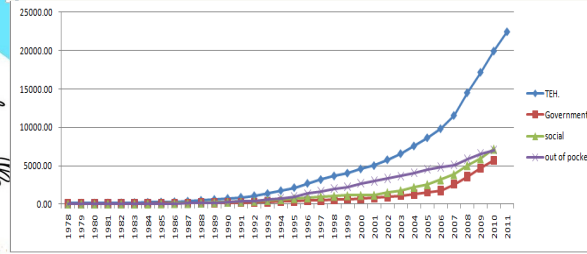
Large Hospital
Bed Utilization: 104%

Broken doctor patient relationship



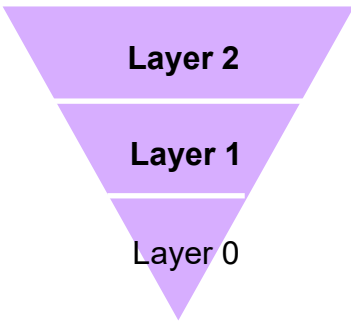
3 doctors were killed by angry patients in April 2012

Soaring healthcare expenditure

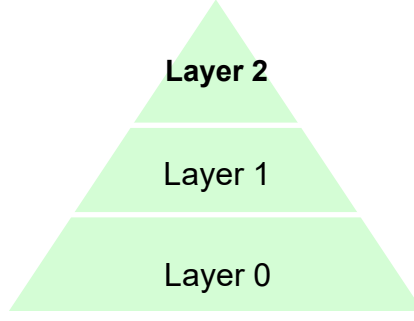


2.2 Trillion RMB, 2011 TEH
CAGR 20+% in past 3 years

Today's Healthcare Resources



To-be: Optimized Utilization of Resources



China Healthcare Resource		Amount	Outpatient (per day)
Layer 2	Tertiary hospital	1233	2000-10000
	Secondary hospital	6523	300-2000
	Other hospital	12535	100-300
Layer 1	Community hospital	5206	143
	Rural hospital	39627	66
Layer 0	Community Clinic	22092	15
	Private Clinic	174809	8
	Village Clinic	632770	7

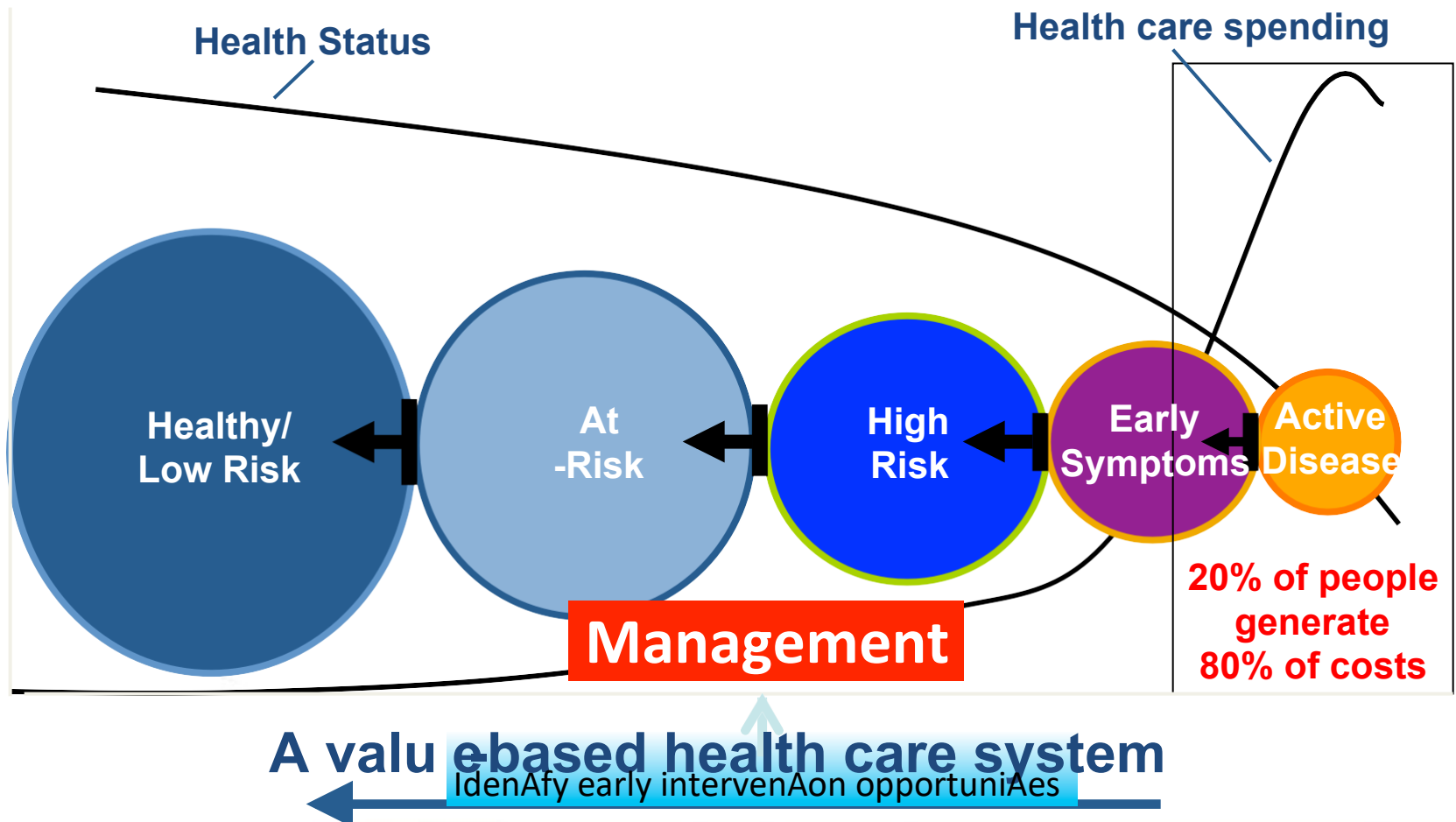
Root Cause:

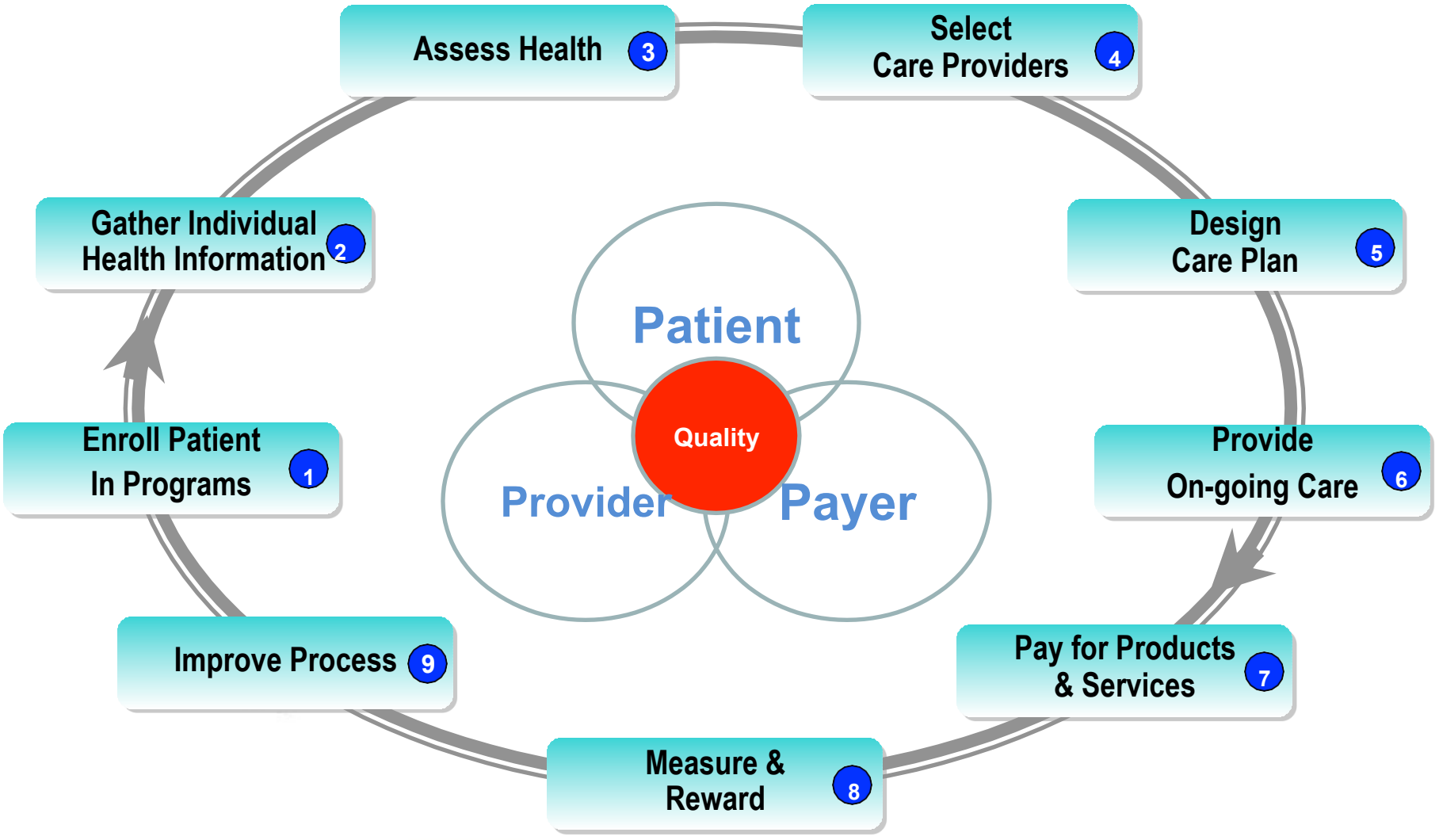
Primary Care
Healthcare Model

Top Pain:

Poor Primary Care
Healthcare Quality

Patient-Centered Value-Based Chronic Disease Management Model





Clinical Guideline

Main Algorithm
April 2012

Test in blue in this algorithm indicates a listed corresponding association.

Glycemic Control Algorithm

Test in blue in this algorithm indicates a listed corresponding association.

THE JOURNAL OF CLINICAL AND APPLIED RESEARCH AND EDUCATION VOLUME 36 SUPPLEMENT 1
DIABETES CARE
AMERICAN DIABETES ASSOCIATION
1
Clinical Practice Recommendations
2013
AMERICAN DIABETES ASSOCIATION

Quality Metrics

A "Cluster" -- Multiple Metrics on a Single Condition

Diabetes
PCPI Measurement Set

- HgbA1c**
HgbA1c < 7.0 %
- Lipids**
CHOL < 200 mg/dL
LDL < 100 mg/dL
TRIG < 150 mg/dL
- Foot Exam**
At Each Visit Including Monofilament and Pulse Exam
- Smoking**
Assess At Each Visit
Provide Cessation if Applicable
- Urine Protein Screening**
At Least Annually
- Flu Shot**
Annually
- Blood Pressure**
< 130/80 mmHg
- Aspirin**
Patients > 40 Years
If Not Contraindicated
- Dilated Eye Exam**
At Least Annually



NCQA Diabetes Measures

Encounter Date(s): January 1, 2013 to December 31, 2013

Quarterly Public Report

Provider	Encounters	A1c >9.0 <= 15%	A1c < 8.0 >= 65%	A1c < 7.0 >= 40%	BP > 140/90 <= 35%	BP < 130/80 >= 25%	Eye Exam >= 60%	Smoking Cessation >= 85%	LDL >= 130 <= 35 %	LDL < 100 >= 50%	Nephropathy >= 85%	Foot Exam >= 80%	Total Points
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Cash	2,345	22.0%	60.2%	33.5%	3.7%	63.3%	72.0%	82.2%	10.2%	69.6%	82.4%	99.8%	60
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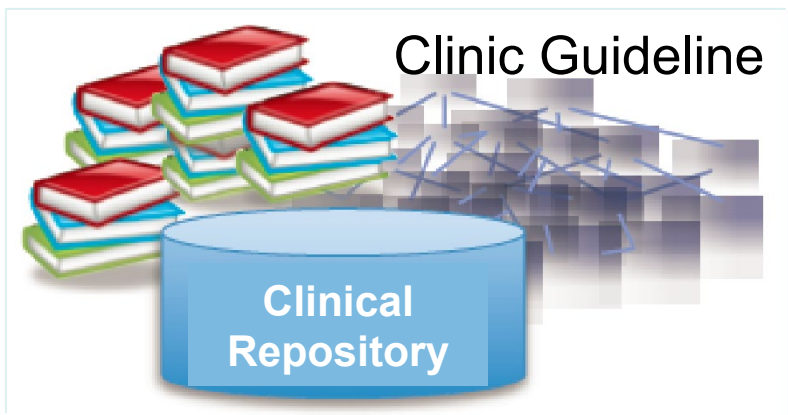
Pay for Performance

PMPM Payment: Medicaid Population

Physician Practice Size (# of patients)	Level of PCMH Recognition		
	Level 1+	Level 2+	Level 3+
< 10,000	\$5.45	\$6.22	\$7.00
10,000–20,000	\$4.54	\$5.19	\$5.84
> 20,000	\$4.08	\$4.67	\$5.25

Leverage IT to Optimize Process & Management

Evidence-Based Medicine



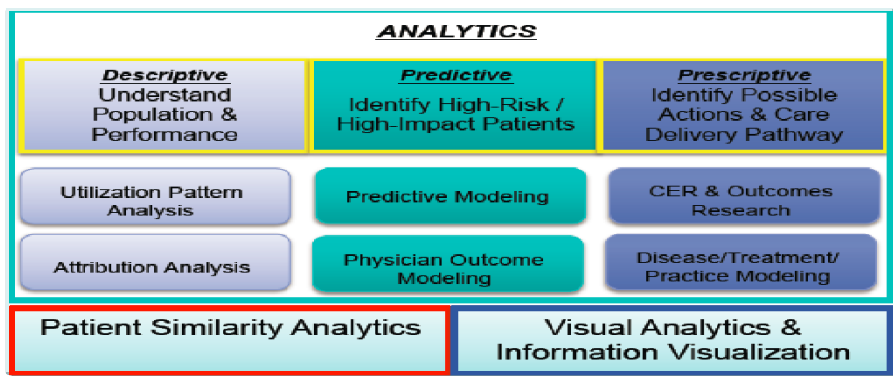
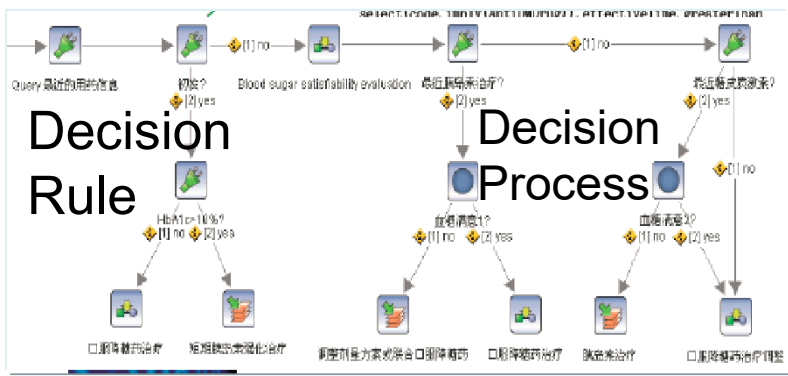
Data-Driven Analytics



Standardization



Personalization



Primary Care Automation

Introduction of Wuhou

In 1998 China began to build community healthcare system, there are 2 pilots, Wuhou district is one of the pilot at that time.

Area:
76.56
square
kilometers

Population:
1.08million.

12 community
health
service
centers



WuHou Temple



Jin Li



WangJiang Park



WangJiang Park

YEAR 2013: PCMH Seminar by IBM&Chengdu Medical Information Institute



YEAR 2014: Leverage PCMH to facilitate the Pilot project of General Practitioner Team Service Mode(Shared Wellpoint and SETMA)



YEAR 2014: ITSP Consulting project

成都市武侯区区域卫生信息化建设
规划报告

YEAR 2015: Consulting Project for IT Implementation

成都市武侯区区域卫生信息化升级
改造建设方案

China GP Service Model Reform Direction

1. 组建分工合作的服务团队
Team-Based Service Model
2. 推行防治结合的契约服务
Proactive Service & Patient Registration
3. 实行人头包干的支付制度
Capitation-Based payment system
4. 建立服务导向的分配机制
Service-Oriented funding allocation
5. 形成自由选择的竞争机制
GP team competition & Patient's choice freedom
6. 构建分级诊疗的协作模式
Care Coordination between specialist & GP

PCMH Principle

- PCP-directed medical “team”
- Patient Centric/Personal PCP
- Whole person orientation
- Appropriate reimbursement
- **Emphasis on quality & safety**
- Enhanced access
- Care is coordinated and/or integrated

Practice Innovative healthcare service model

Integrate Healthcare Service Model

Service capability

- Team service
- Service process redesign
- Application of evidence-based medicine

Incentive mechanism

- Public health quality metrics
- Chronic disease quality metrics
- Patients satisfaction metrics
- Cost control incentives
- Market allocation mechanism

Hierarchical coordination

- Coordination content
- Coordination management
- Coordination

Patient service

- Patients self-management

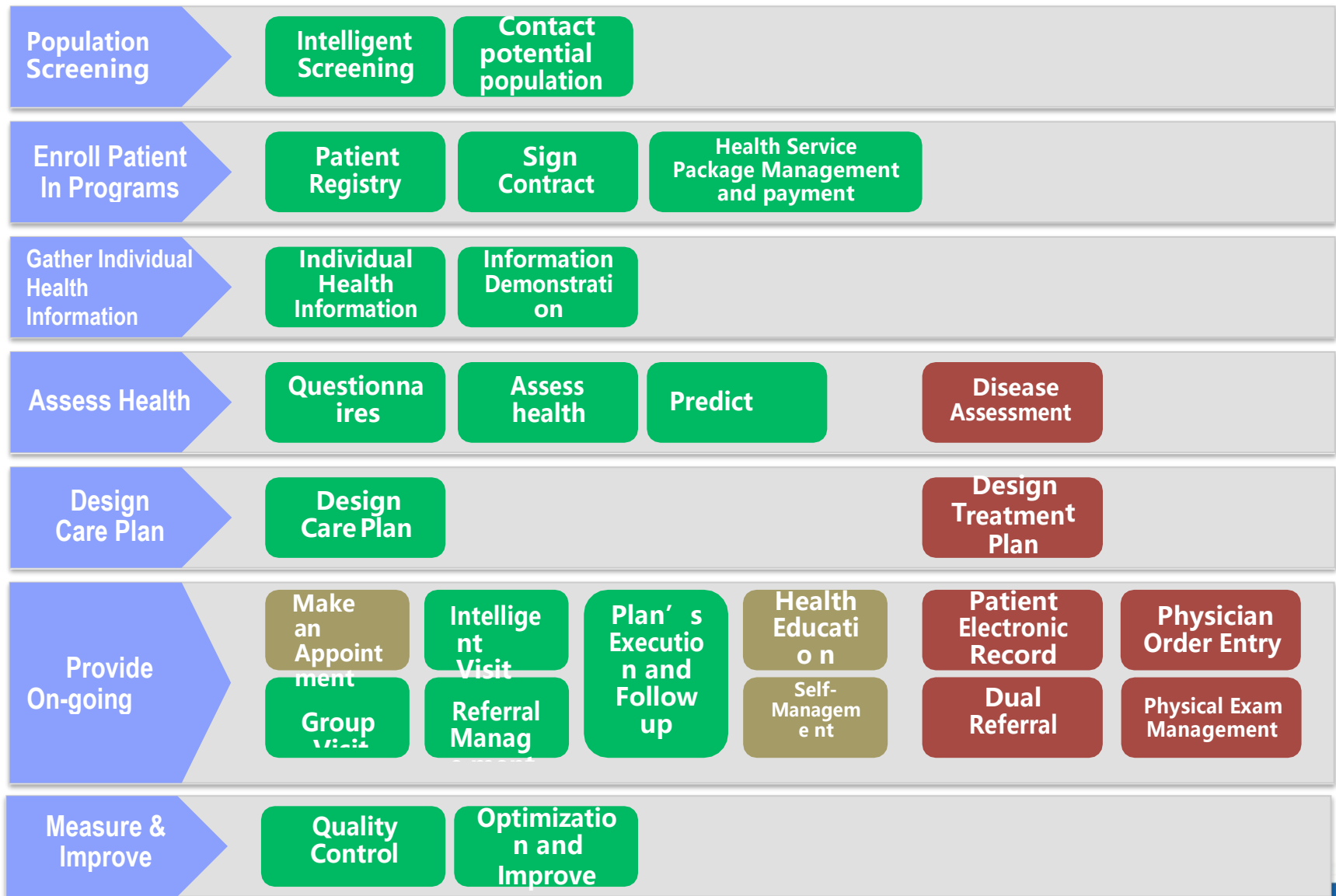
Chronic disease management as the breakthrough point

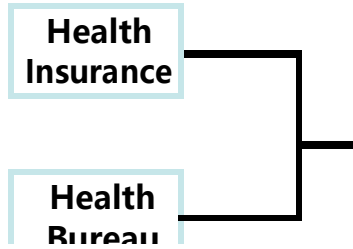
Information System Foundation

Wuhou's PCMH-based general practitioner team service model and population served



Business function of general practitioner team service model





Care Coordination

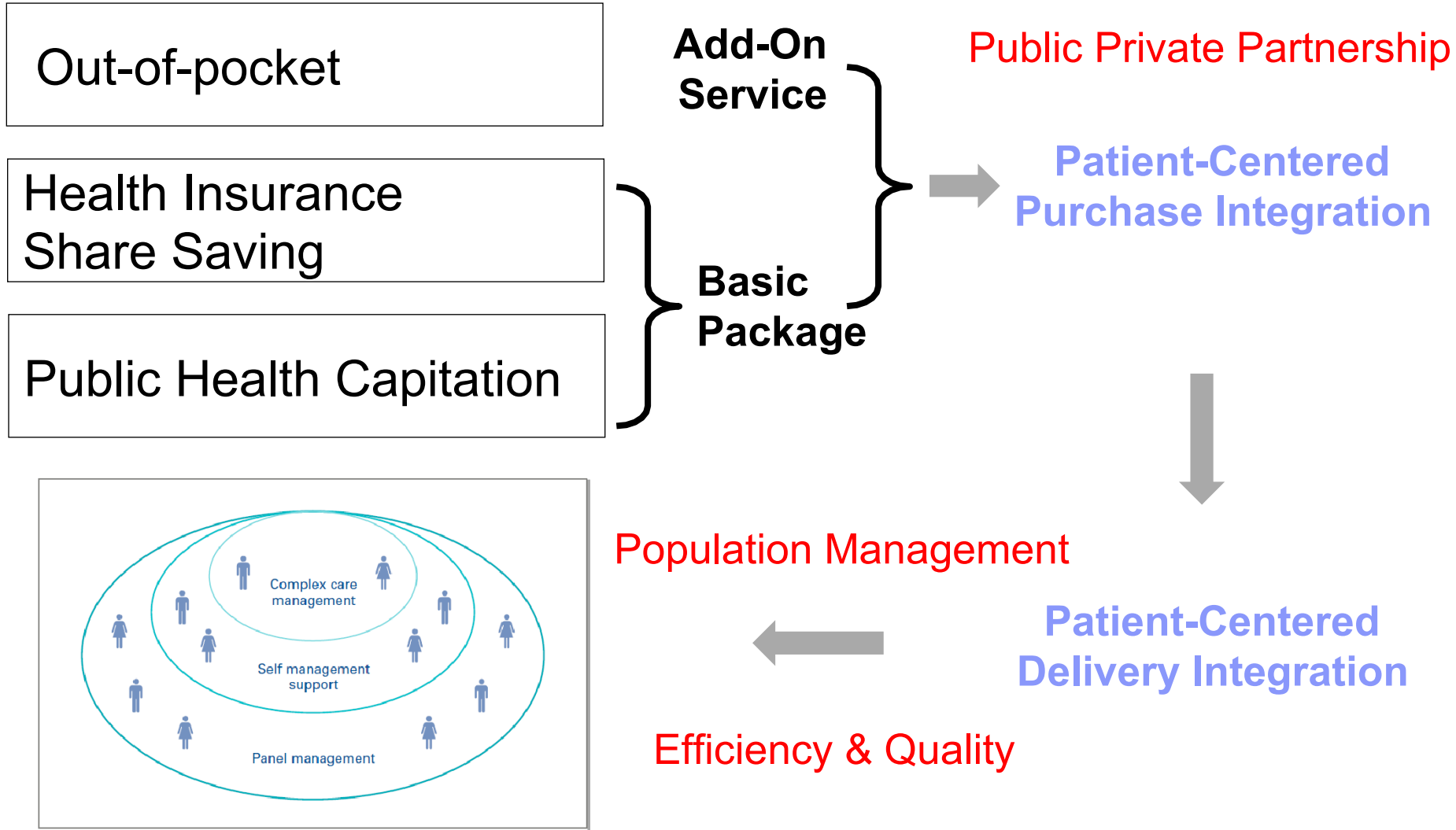


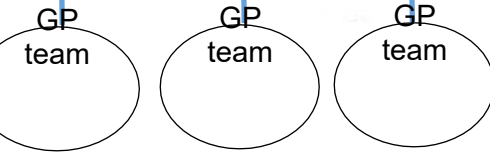
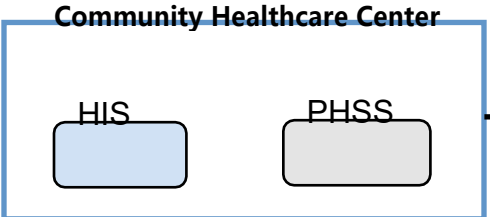
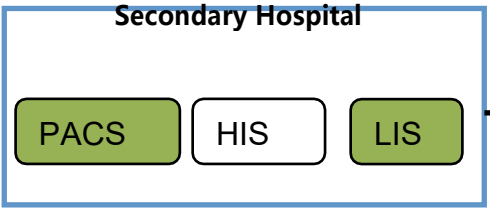
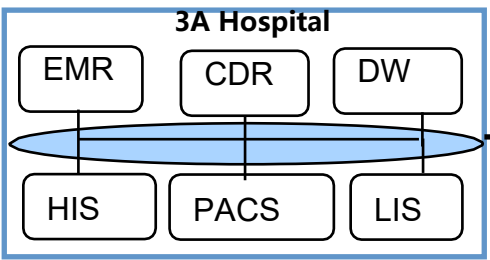
- 专家预约
- 双向转诊
- 代理检验
- 代理检查
- 远程阅片片
- 远程会诊

Care Management

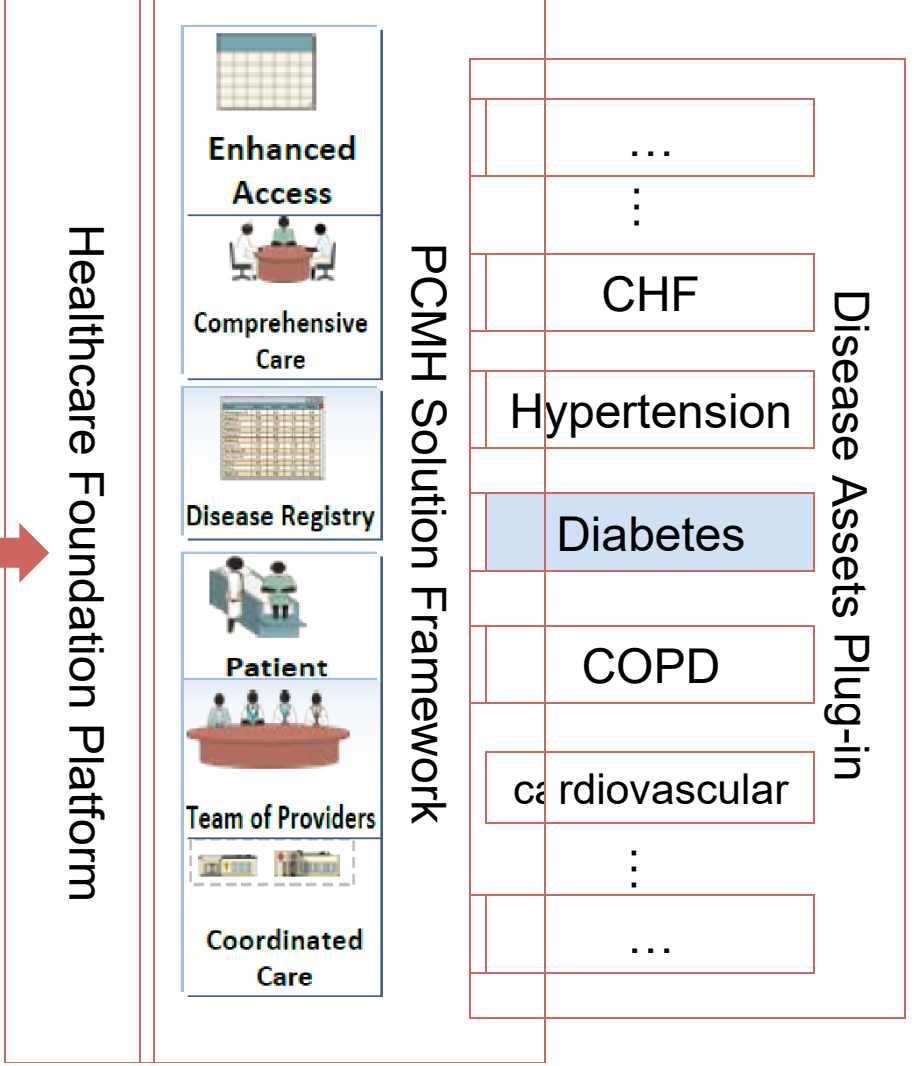


- 患者签约
- 健康档案
- 健康评估
- 健康计划
- 团队协作
- 监测评估
- 医患互动
- 过程优化





Health Information exchange



Team-Based
Care Model



Quality Improvement




Southeast Texas
Medical Associates




Taiwan

PaAent
Engagement



Changning

PopulaAon Risk
Screening



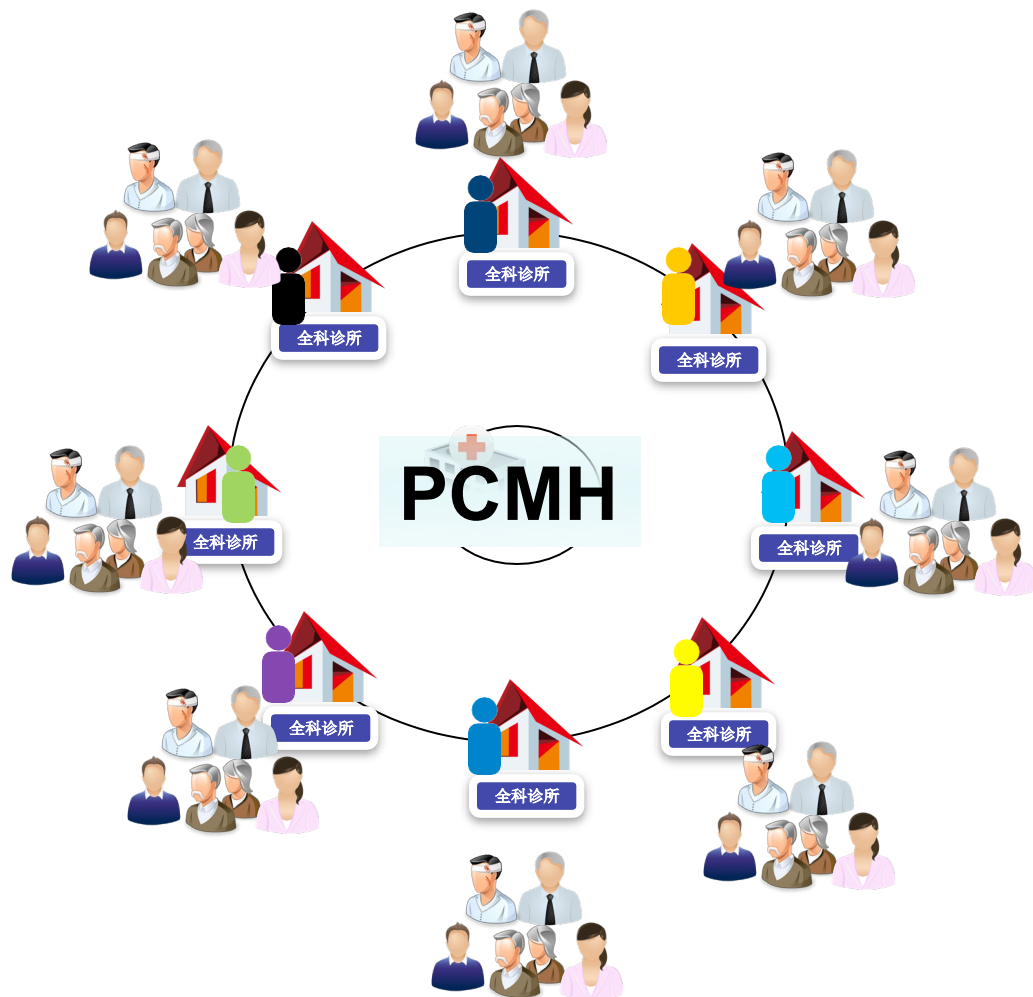
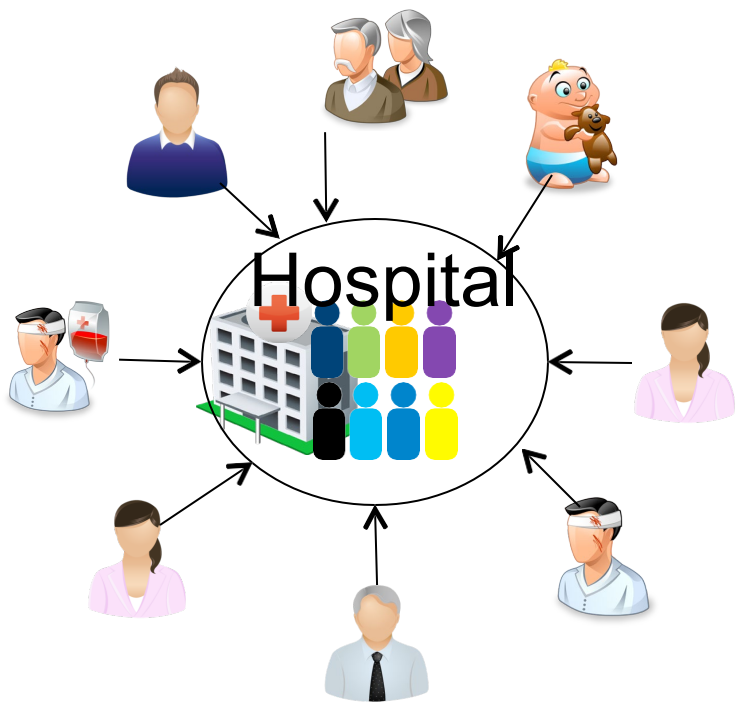
PUPH

Clinical Guideline
Decision Support

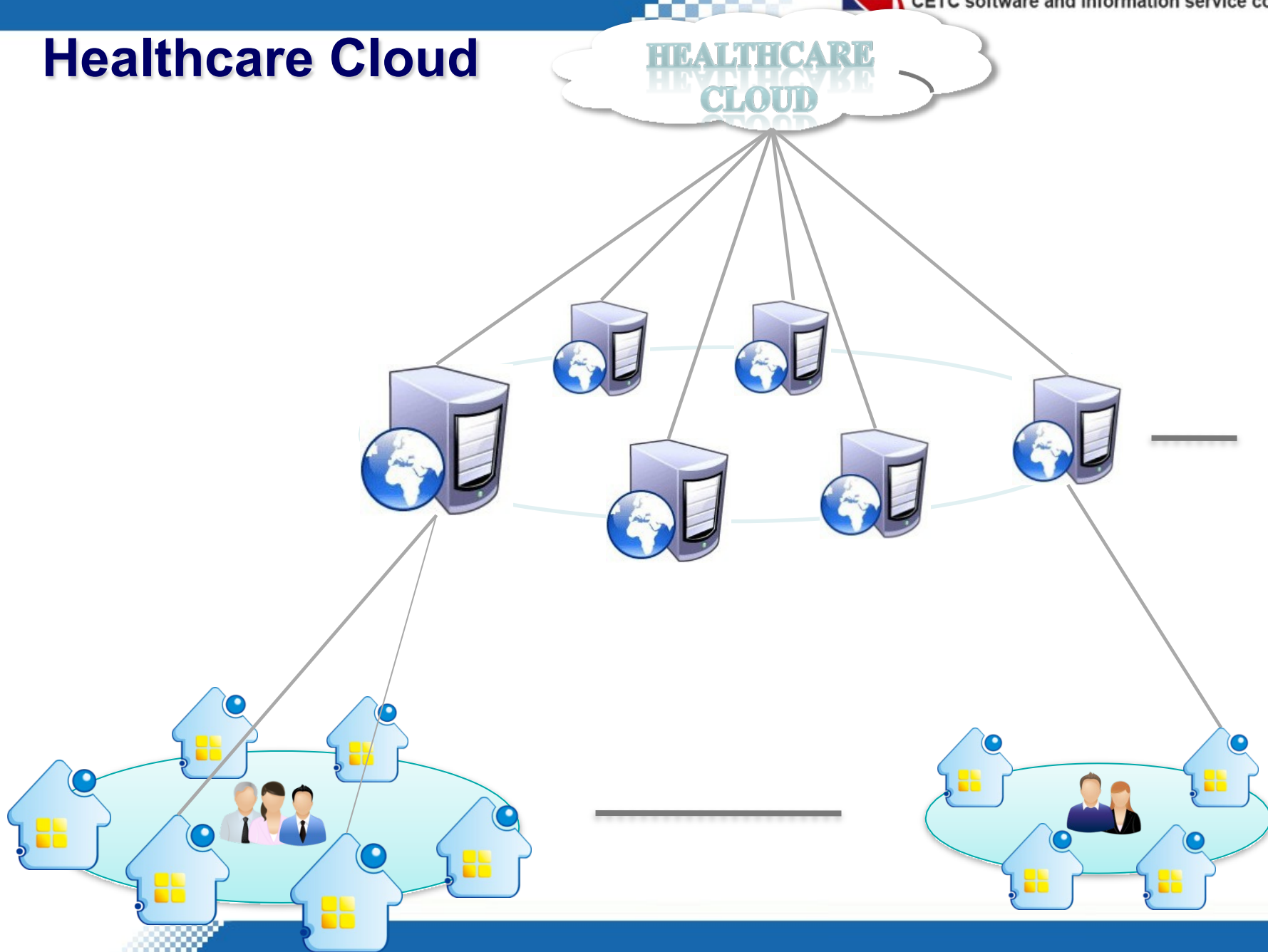
Centralized Model



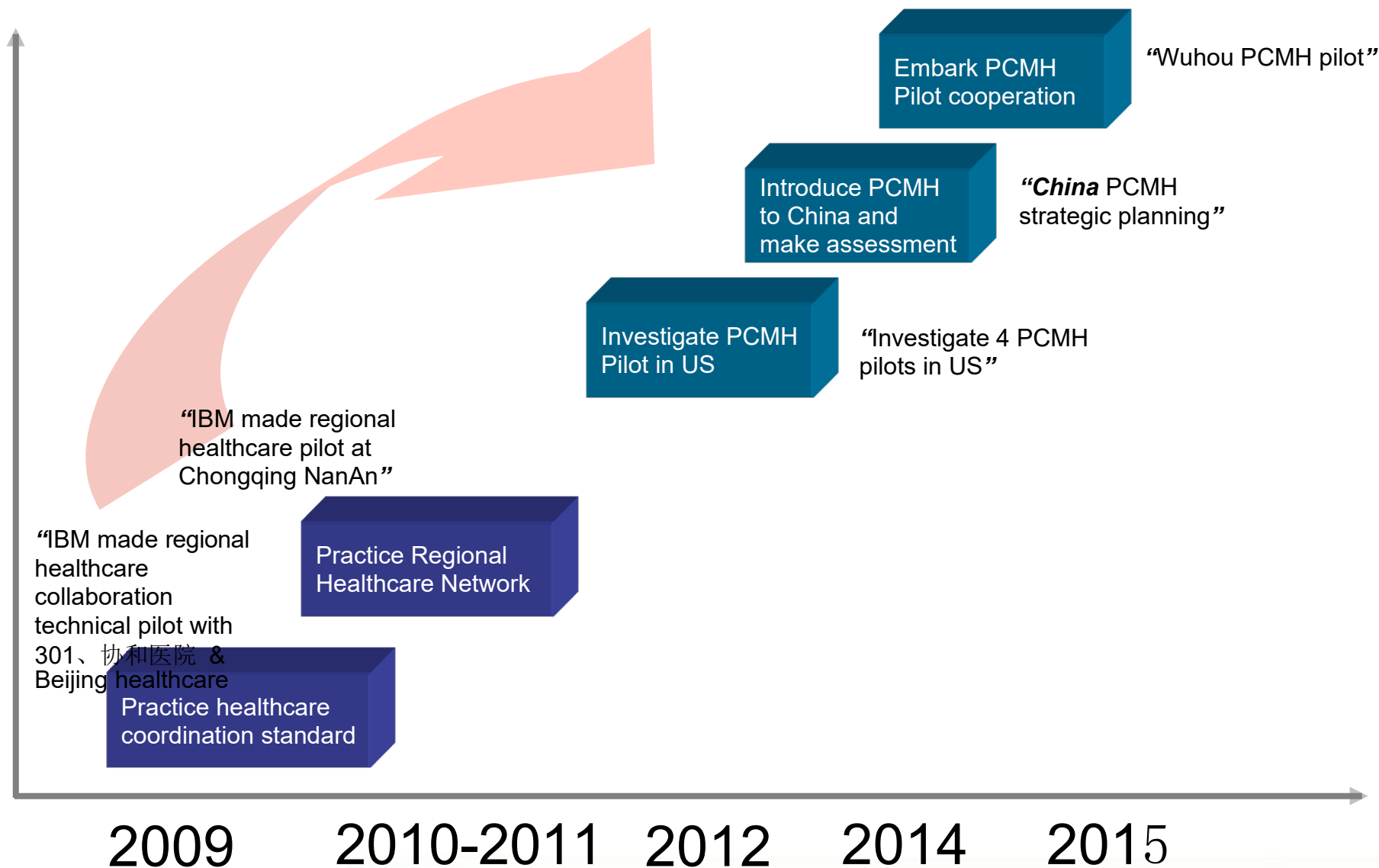
Distributed Model



Healthcare Cloud



Our Journey in China Healthcare



US & China Healthcare Transformation Cooperation

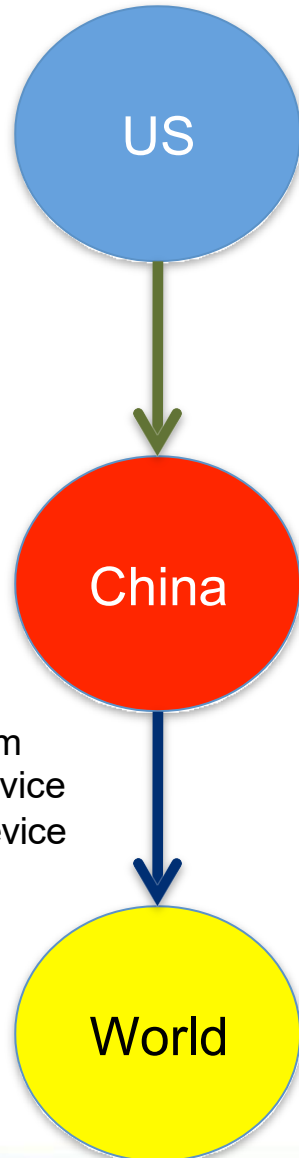
1. Experience of US

- Healthcare Model
- Healthcare Standard
- Healthcare Technology
- Healthcare Education

2. Integrate in China

- Integrated healthcare system
- Cloud-based healthcare service
- Cost effective healthcare device
- Healthcare Tele-education

3. Promote to World



US & China cooperate to solve global healthcare challenge.

Cooperation Expectation:

- Visit China to share SETMA' s experience on healthcare transformation
- Healthcare IT joint innovation
- Healthcare work force exchange and training program
- Jointly establish next-generation clinic chain in China