NCDs & Elderly Care in Beijing

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Agenda

1. **Project overview**

2. **Background of Beijing**

3. **Findings**:
   - Non-communicable Diseases (NCDs) in Beijing
   - Healthcare and elderly care services in Beijing

4. **Recommendations**
   - Health Information on NCDs
   - HR Development on Elderly Care

Project Overview

Overview

Objectives:

- Analyze current situation and major problems
- Explore future investment opportunities

Scope:

- Urban setting: Beijing
- Elderly Population
- NCDs
- Elderly Care

Methodology:

- Desk research

Background of Beijing

Background of Beijing

- Population: 21.7 million
- GDP: 2,489.9 billion Yuan
- GDP per capita: 115,000 Yuan
- Aged population (60+): 3.1 million (23.4% of total population)
- Chronic diseases contribute to a large portion of all deaths each year. (Top three cause of death: Cancer: 27.4%; Cardiovascular Disease: 25.7%; Cerebrovascular disease: 19.6%)

*2015 & 2016 Data

Findings

Findings

Non-communicable Diseases (NCDs):

- **Highest mortality rate**: cancer, cardiovascular diseases, diabetes and chronic respiratory diseases
- **Gender difference**: men are more likely than women to die of NCDs
- **Highest morbidity rate**: hypertension, dyslipidemia, diabetes, cardiovascular diseases, and rheumatism
- **Opposite gender difference**: women are more likely than men to suffer from NCDs
- **Different patterns of diseases within Beijing**. Uptown area: higher morbidity rate of rheumatism, digestive problems, and dental problems; downtown area: higher morbidity rates of other NCDs

Findings

Non-communicable Diseases (NCDs):

- **Major risk factors:**

Findings

Demand and Preference for healthcare and elderly care services:

- **Disability rate**: Around 15% of the elderly population
- **Preference for healthcare providers**: first choice: large hospitals; second choice: community health centers
- **Top three factors**:


- **Demand for community center services**: **Top desirable healthcare services**: treatment for NCDs, common emergency treatment, treatment for minor injuries, “home ward”, home visit, health education, referral assistance, rehabilitation, Psychological Services.

Top non-healthcare services:



Recommendations

Health Information on NCDs

Health Information on NCDs

Current situation:

- Insufficient data on morbidity rate (always focus on mortality rate)
- No official subgroup data on NCDs (only on the general population)
- No official district/neighborhood level data (only national/city level)

Problems of current data:

- Morbidity rate of NCDs is different from Mortality rate
- Morbidity rate of the young is different from the elderly
- Morbidity rate is different in areas within a city
- Available district/neighborhood level data on NCDs is collected through different methods

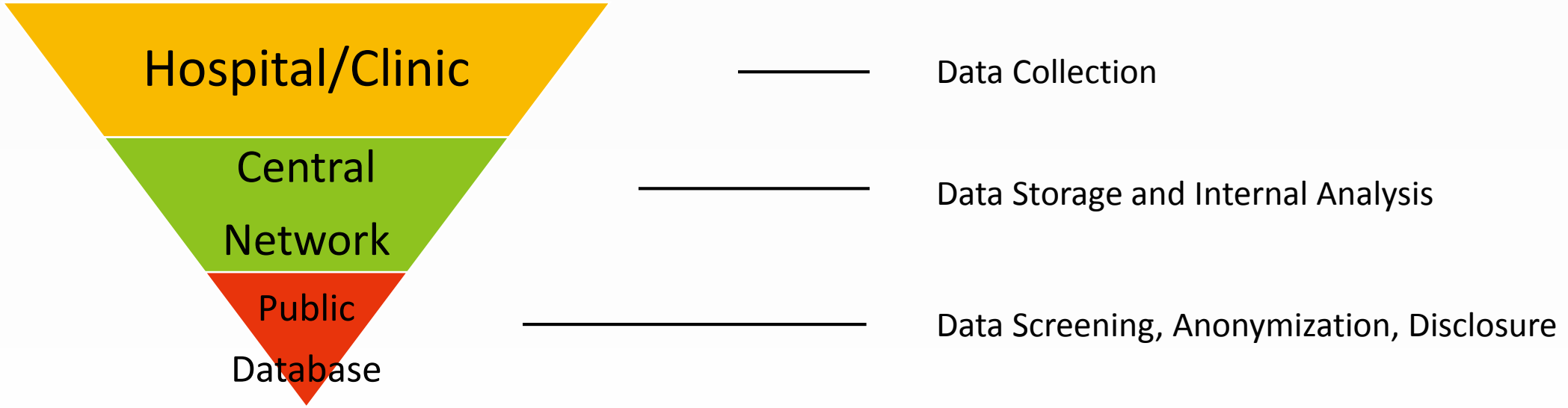
Challenge in data collection:

- Cost
- Quality

Health Information

Solution:

- Establish a central NCDs information network with public databases



What is in the network:

- Mortality and morbidity rate of NCDs, which can be sorted by age group, neighborhood, gender, etc.

Benefits:

- Lower Cost
- Better Quality
- Greater Accessibility

Health Information

Feasibility Analysis:

- Establish a central NCDs information network with public databases

Hospital/Clinic ——— Data Collection

Health information can be collected in urban cities:

e.g. Shanghai health information exchange system

Available data resource:

- 970 million outpatient and emergency medical records (registration, prescription, charge, examination and test)
- 10 million inpatient medical records(doctor`s advice, charge, examination and test, first page of hospital discharge record, and hospital discharge summary)
- All kinds of detailed data reached more than 25 billion pieces

Healthcare Institutes Level Data

截止至2016年12月(住院市属综合)
标准单价:13583.0元

筛选

序号	医疗机构名称	机构CMI	实际例数	上年同期例数	例数同期比(%)	CMI偏离度(%)	总量指数偏离度(%)	单价偏离度(%)	增长速率
1	中山	2.12	130750	113457	↑ 15.24	↑ 6.59	↑2775445.73	↓ 3.31	0.96
2	华山	1.76	68852	65735	↑ 4.74	↓ 0.57	0.00	↑ 5.71	1.05
3	瑞金	1.72	104321	93564	↑ 11.50	↑ 17.33	0.00	↓ 15.02	0.88
4	市六	1.50	100935	95215	↑ 6.01	↓ 0.18	0.00	↑ 5.31	1.05
5	仁济	1.40	121111	106917	↑ 13.28	↑ 6.54	0.00	↓ 9.53	0.97
6	市一	1.30	111865	104157	↑ 7.40	↑ 6.85	0.00	↑ 5.47	0.98
7	十院	1.30	81367	73698	↑ 10.41	↑ 6.49	0.00	↓ 4.01	1.00
8	新华	1.24	105535	99278	↑ 6.30	↓ 0.65	0.00	↑ 17.81	1.07
9	瑞金北	1.21	20518	17202	↑ 19.28	↑ 13.22	0.00	↓ 8.94	0.92
10	九院	1.20	62748	59754	↑ 5.01	↓ 8.93	0.00	↑ 25.45	1.16
11	市东方	1.18	61037	60640	↑ 0.65	↓ 2.00	0.00	↑ 20.80	1.14
12	华山北	1.13	21063	17931	↑ 17.47	↑ 5.38	0.00	↑ 4.44	0.99
13	市六东	1.11	15814	13487	↑ 17.25	↓ 0.45	0.00	↓ 5.16	0.99
14	华东	1.08	46136	40465	↑ 14.01	↓ 0.22	0.00	↑ 38.31	0.93
15	三院	1.06	38374	33660	↑ 14.00	↓ 2.67	0.00	↑ 20.95	1.09

Diseases Level Data

截止至2016年12月(住院市属综合)

筛选

序号	病种名称	病种rw	实际例数	上年同期例数	增长例数	例数同期比(%)	病种市均费用(元
1	短暂性脑缺血发作	0.76	2066	2382	-316	↓ 13.27	13087.58
2	脑出血	1.23	4186	4904	-718	↓ 14.64	21794.13
3	吉兰-巴雷综合征	1.29	240	234	6	↑ 2.56	24940.23
4	多发性硬化	0.58	210	206	4	↑ 1.94	25238.88
5	癫痫	0.32	3298	3256	42	↑ 1.29	6093.11
6	重症肌无力	0.70	642	610	32	↑ 5.25	13140.94
7	脑梗死	1.01	26122	25666	456	↑ 1.78	18497.79
8	全面惊厥性癫痫持续状态（GCSE)	0.32	36	56	-20	↓ 35.71	3629.62
9	肌萎缩侧索硬化（ALS)	0.98	454	372	82	↑ 22.04	23522.59
10	急性横贯性脊髓炎或可能急性横贯性脊髓..	0.60	140	122	18	↑ 14.75	13219.31
11	视神经脊髓炎	0.89	606	460	146	↑ 31.74	10452.05
12	亚急性脊髓联合变性	0.79	90	128	-38	↓ 29.69	13849.92
13	新型隐球菌脑膜炎	1.03	826	548	278	↑ 50.73	12753.13
14	三叉神经痛+显微镜下三叉神经根血管减..	2.73	162	102	60	↑ 58.82	52060.90
15	慢性硬脑膜下血肿+慢性硬脑膜下血肿钻..	2.05	74	92	-18	↓ 19.57	34856.32

Individual Level Data

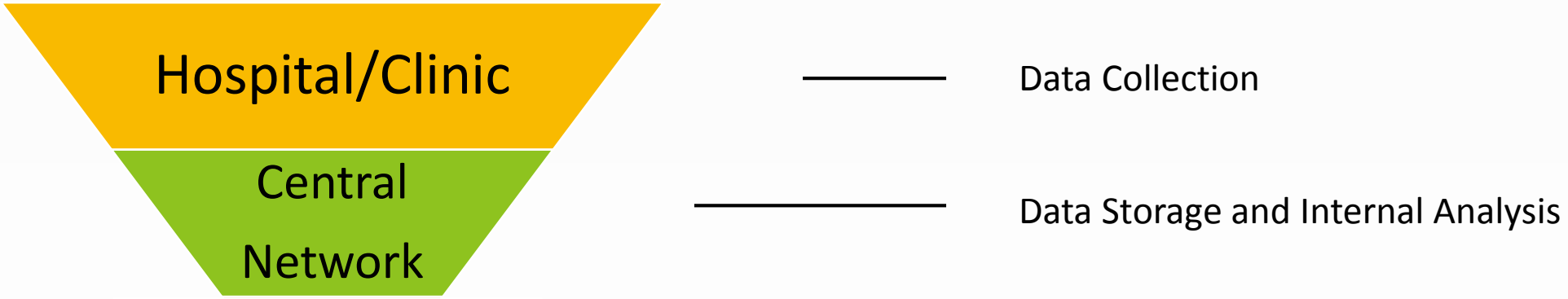
年份 2016 区县 --请选择-- 搜索

序号	患者姓名	患者年龄	签约社区	GP姓名	签当年就诊次数	签上年就诊次数	社区就诊次数(其中签约社区)	区属就诊次(其中签约区
1	赵**	63	大桥	周焱鸿	930	52	927(36)	3(0)
2	朱**	66	淮海中路	娄晓敏	709	349	393(232)	156(146
3	王**	63	斜土	祁永秀	706	847	699(44)	3(0)
4	沈**	56	淮海中路	娄晓敏	702	417	390(231)	152(144
5	陈**	63	江浦	巢云	637	1114	467(36)	1(0)
6	陈**	83	北站	张红娟	495	256	495(18)	0(0)
7	王**	70	长风	胡燕	486	454	460(399)	23(23)
8	王**	77	四平	沈轶	465	980	371(75)	68(0)
9	朱**	69	真新	刘晓楠	464	425	350(7)	114(114
10	金**	71	宝山	齐丽丽	460	675	427(96)	30(0)
11	陈**	62	枫林	杨呈	457	433	236(132)	203(0)
12	唐**	63	静安寺	温艳艳	454	191	397(148)	22(18)
13	孙**	64	真新	刘晓楠	453	340	344(7)	109(0)
14	潘**	66	曹杨	张慧琰	444	330	386(132)	2(0)
15	王**	71	五角场镇	王燕	444	521	422(181)	13(1)

Health Information

Feasibility Analysis:

- Establish a central NCDs information network with public databases

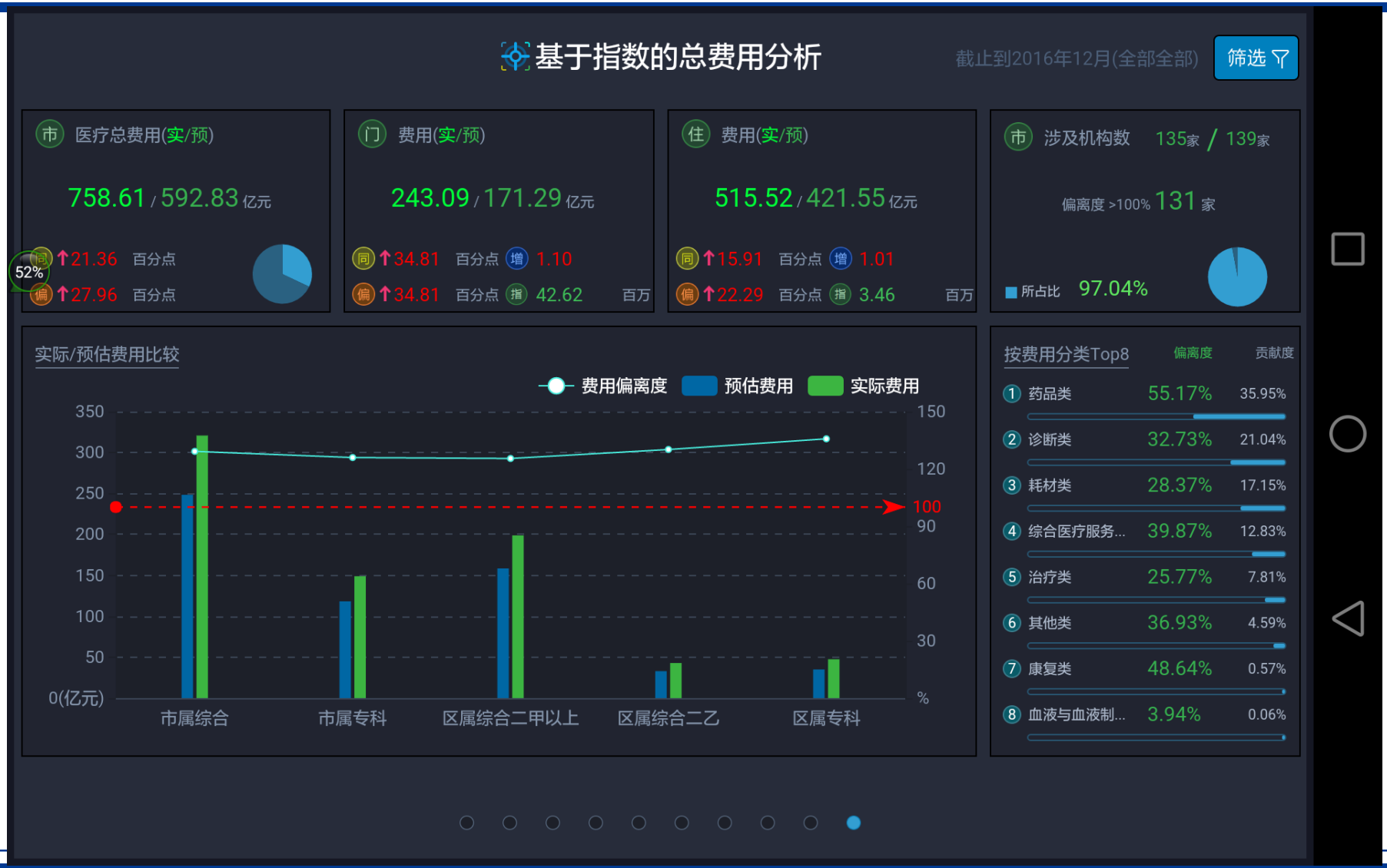


Similar central network is available at city level:

e.g. Shanghai health information exchange system

Outpatient Visit Frequency Analysis

Health Expense Growth and Structure Analysis



Health Information

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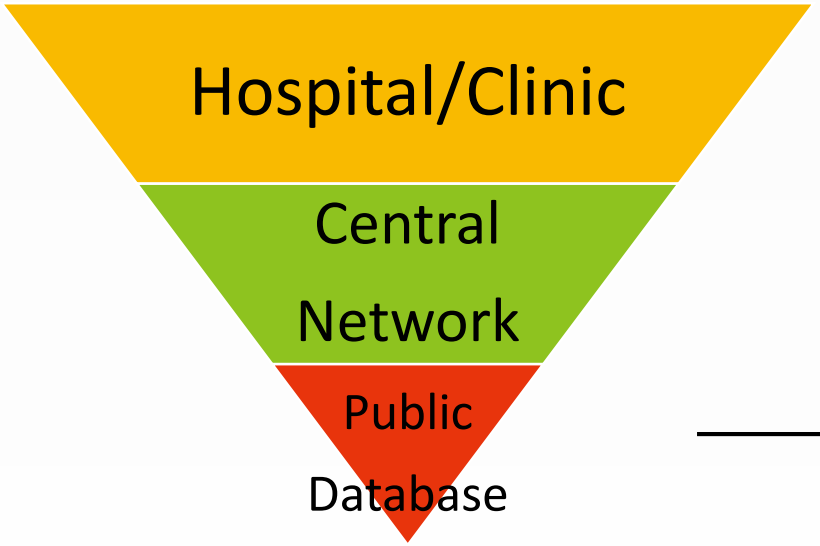


Data Collection

Data Storage and Internal Analysis

Data Screening, Anonymization, Disclosure

Current health information systems are not available to the public
Establishing public databases may require more time and political dialogues

HR Development on Elderly Care

HR Development

Facts of Elderly Care Market in Beijing:

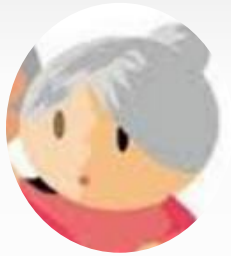
- Demand for elderly care workers: 30,000
- Supply of elderly care workers: 5,000
- High employee turnover: 50%

Situation Analysis:

- Low economic status of elderly care workers
- Difficult career development for elderly care workers
- Poor working environment
- Ineffective education system

HR Development

Low Salaries
Harder Career Development



V.S.

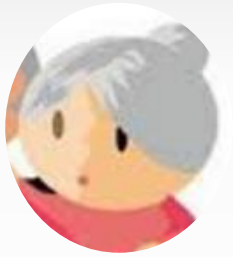
	Salary*	Requirements
Entry-level	3,500	For caregivers: provide only basic care For the elderly: without disabilities
Intermediate	4,500	For caregivers: provide basic care and some level of personal assistance, such as bathing or showering, dressing, hygiene, etc.
Advanced	5,500	For caregivers: provide basic care and personal assistance, and also be able to provide professional services, such as health education and first aid treatment, etc.

*(Yuan/Month)

Salary*	Requirements
4,000	For caregivers: provide basic care with little working experience
6,000	For caregivers: provide basic care with some working experience
8,000	For caregivers: provide basic care with great working experience

HR Development

Similar Working hours
Similar Duties



V.S.

A day of an elderly care worker*

5:30 – 6:40
- Ventilate rooms
- Clean bodies
- Assist nurses in basic physical examination

6:40 – 8:00
- Assist with eating breakfast
- Assist with taking drugs

8:00 – 11:30
- Clean rooms
- Outdoor or indoor activities

11:30 - 14:30
- Assist with eating lunch
- Assist with taking drugs
- Nap time

14:30 – 17:00
- Clean rooms
- Outdoor or indoor activities
- Assist nurses in basic physical examination

17:00 - 20:00
- Assist with eating dinner
- Assist with taking drugs
- Prepare the elderly for sleeping

*(Public nursing home)

A day of a childcare worker

06:00-07:00
- Caregiver gets ready to work
- Wash child and change diaper
- Measure body temperature and weight

08: 00-10: 00
- Feed child
- Outdoor activities

10: 00-12: 00
- Prepare lunch
- Feed child
- Wash dishes
- Nap time

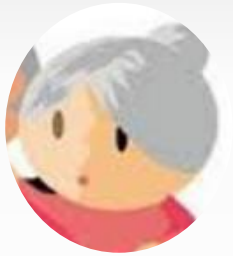
12: 00-13: 00
- Clean toys
- Clean home for afternoon activities
- Prepare afternoon snack

13: 00-15: 00
- Provide early education, such as music
- Story time
- Indoor activities

16:30-20:00
- Prepare dinner
- Feed child
- Wash dishes
- Wash child clothing

HR Development

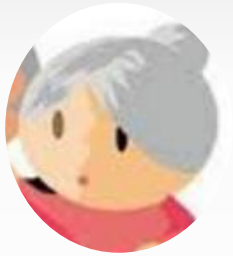
Poorer Environment



V.S.

HR Development

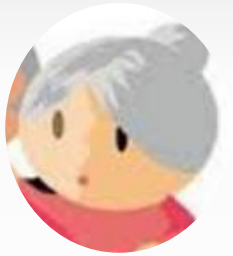
Less Cute Customers



V.S.

HR Development

Result



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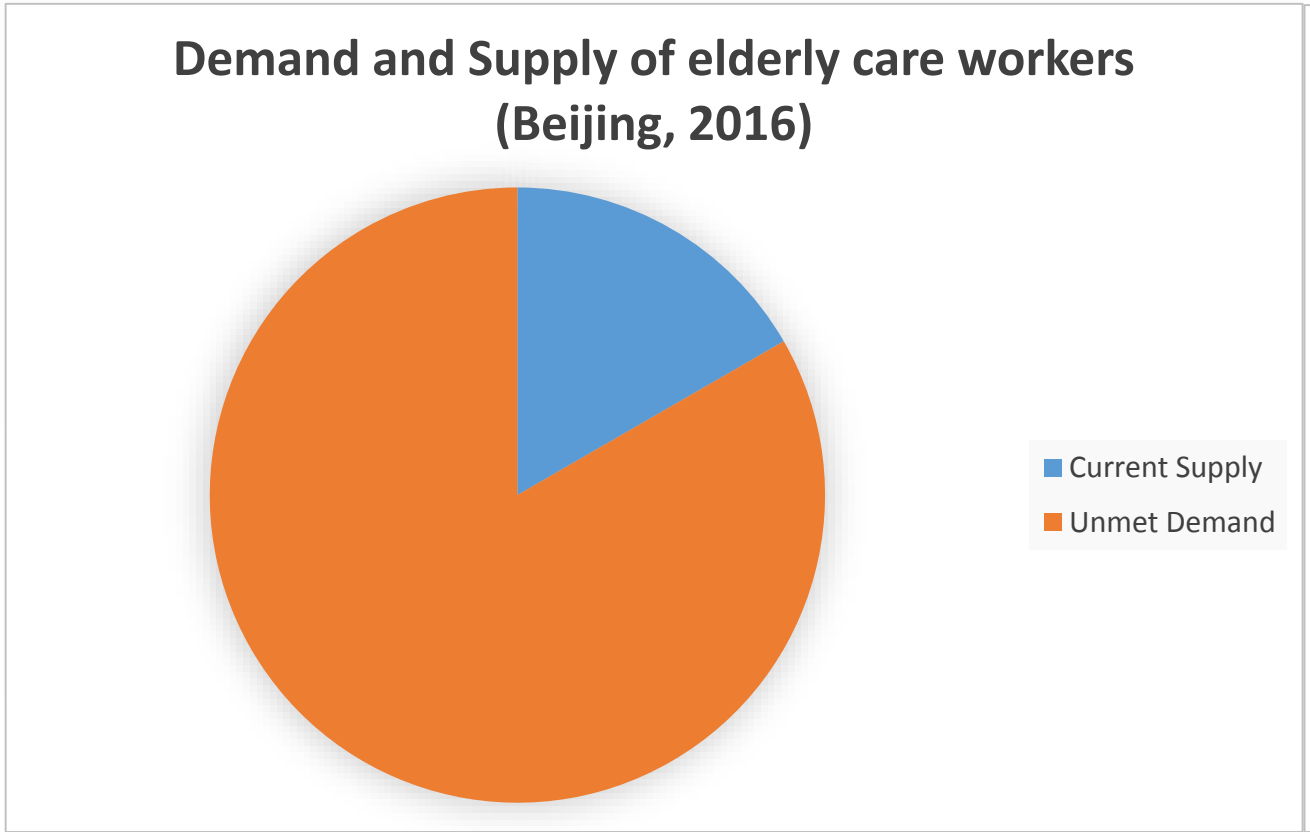
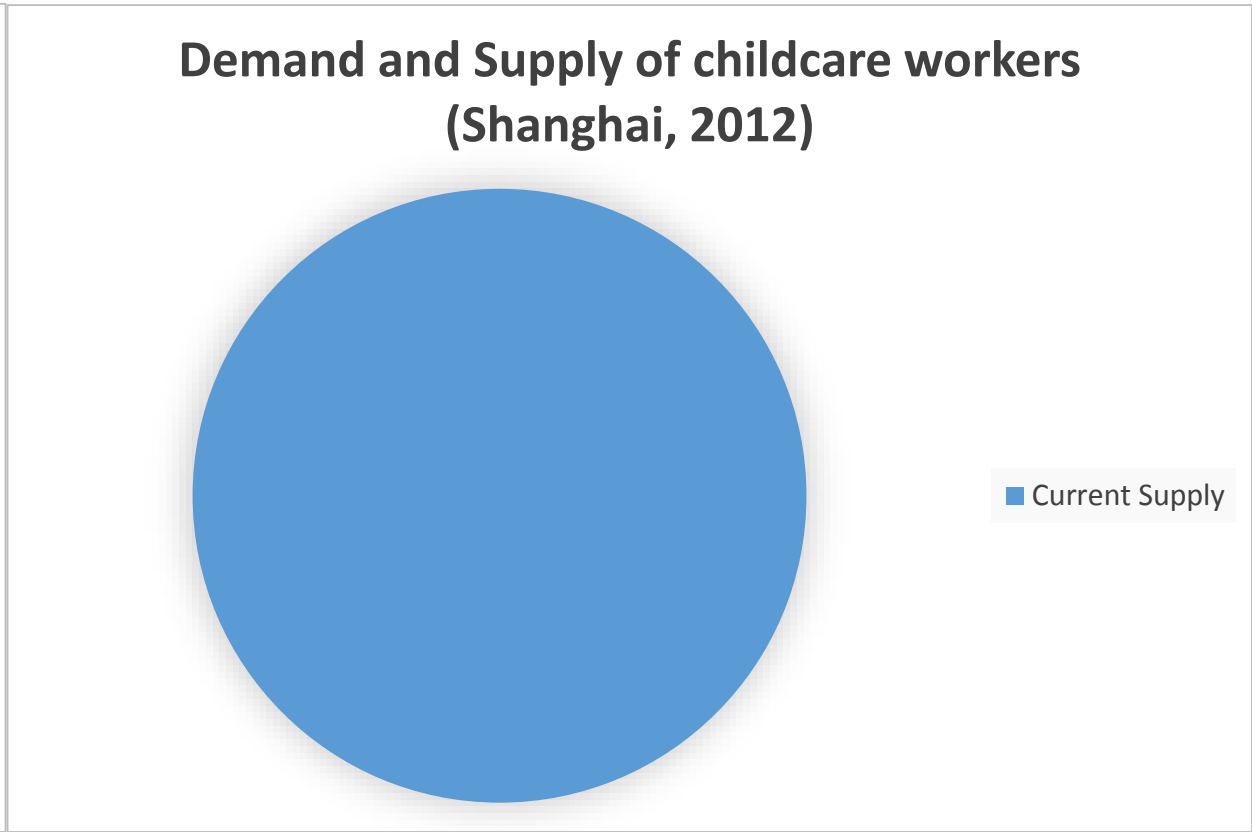




HR Development

Education System

Current: In class, Degree program, textbook based, exam focused

Education Organization	Beijing College of Social Administration Senior Caring Institute
Program	Senior Care and Administration
Type	Junior College
Course	Total: 41 In class: 37 Practice: 3 Internship: 1
Length	Three Years (Full-Time)
Tuition	6,000 Yuan (Annual)

HR Development

Education Results:
Time-consuming, Money-consuming, lack of practical experience

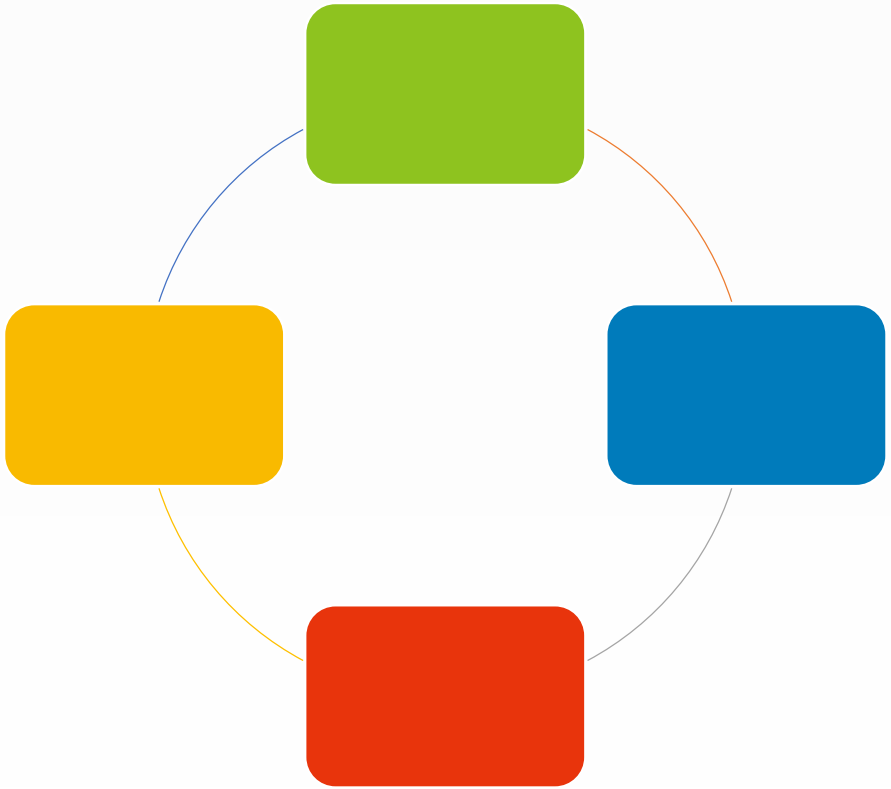
Admissions Results:
Enrollment:
A few schools: around 20
Most of schools: fewer than 10

Employment Results
70%+ of graduates work in other industries

HR Development

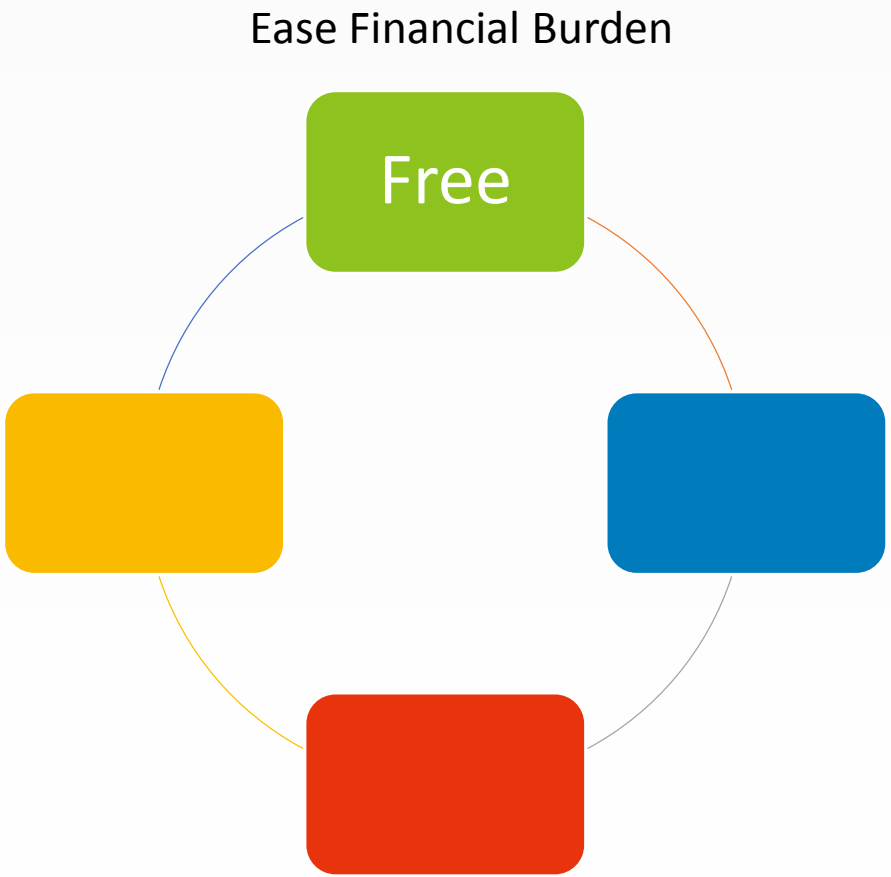
Next Step: Reform Education System

Future System:



HR Development

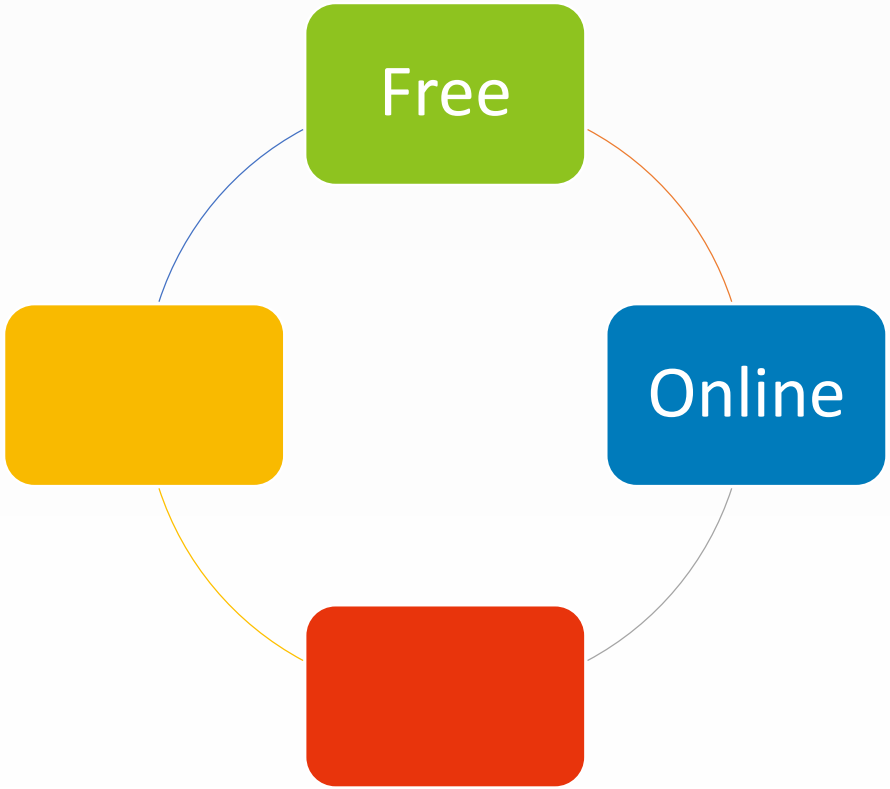
Future System:



HR Development

Future System:

Ease Financial Burden



Remove Physical Barrier

HR Development

Future System:

Ease Financial Burden

Remove Physical Barrier

Develop Practical Skills

HR Development

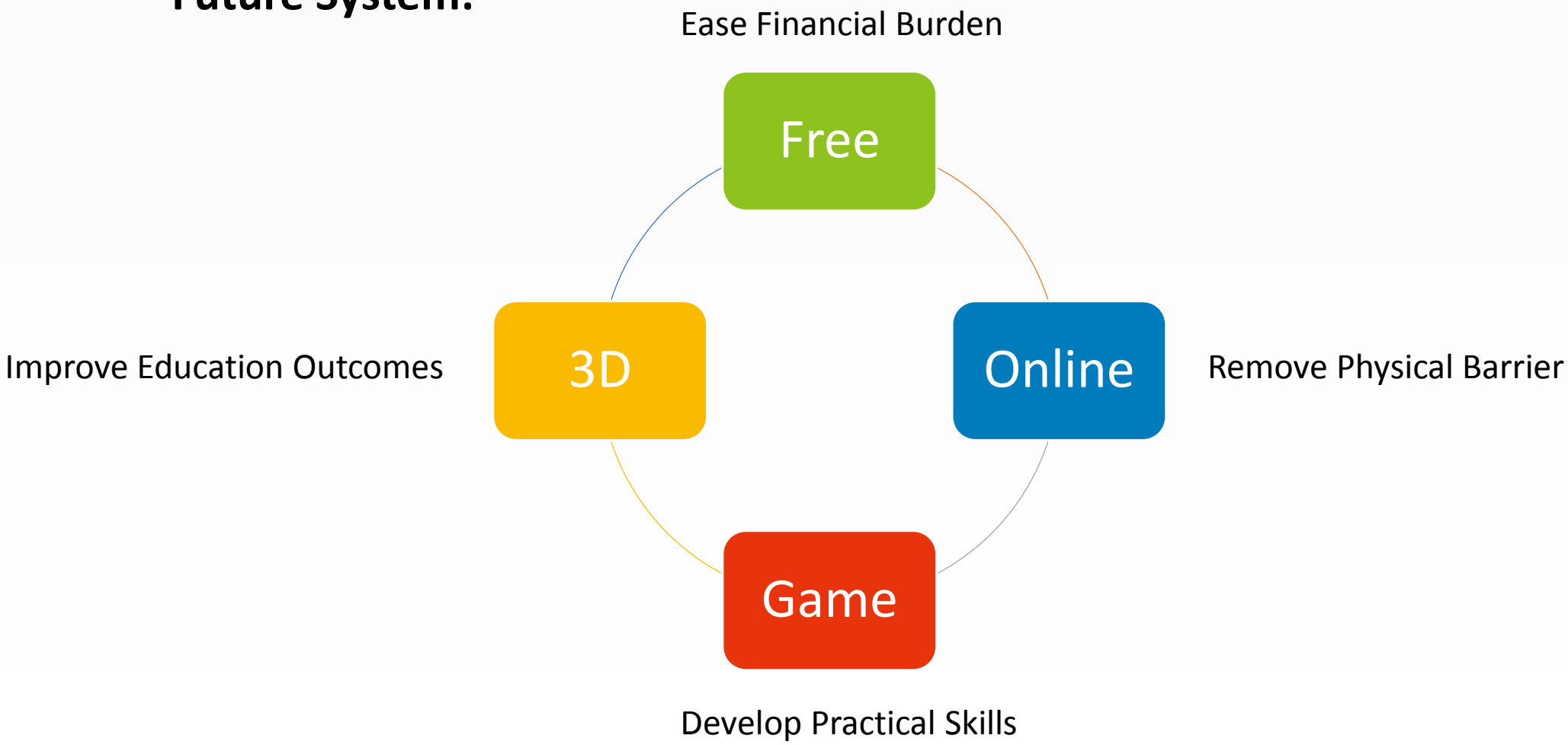
Game

VitalSims™

Company	VitalSims
Profile	Online accelerated learning provider
Methodology	By allowing the user to play the role of a practitioner in a simulated environment, we can assess and validate clinical competency and decision-making in real time while giving immediate feedback to the user.

HR Development

Future System:



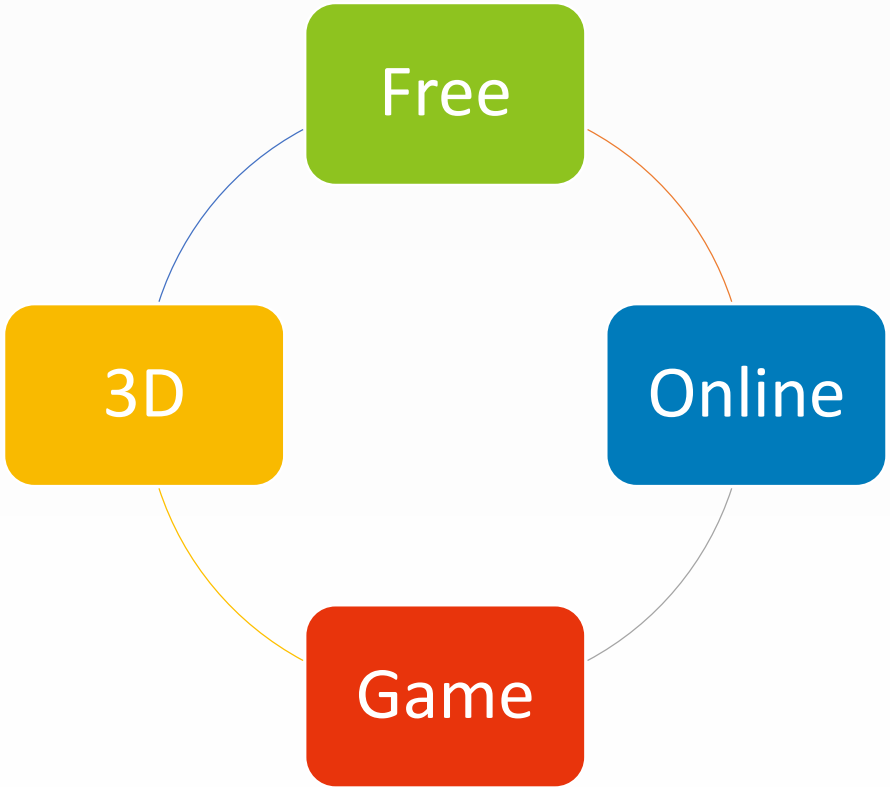
HR Development

3D

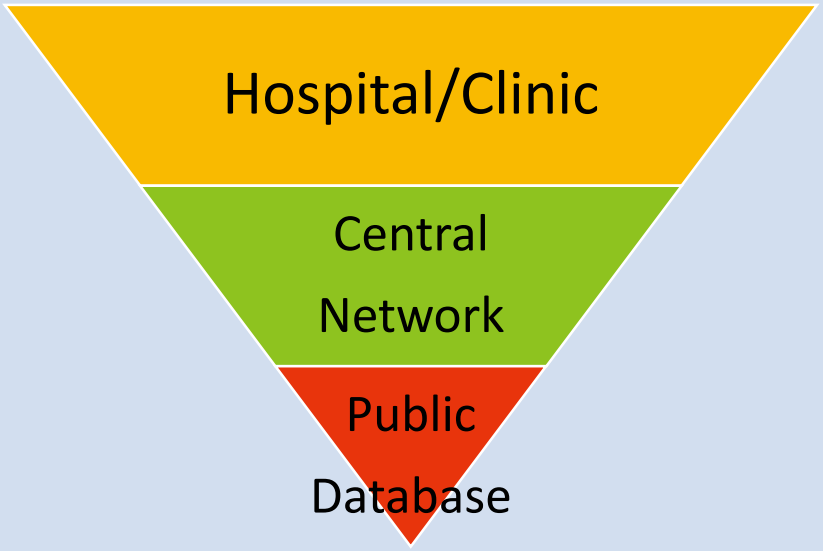
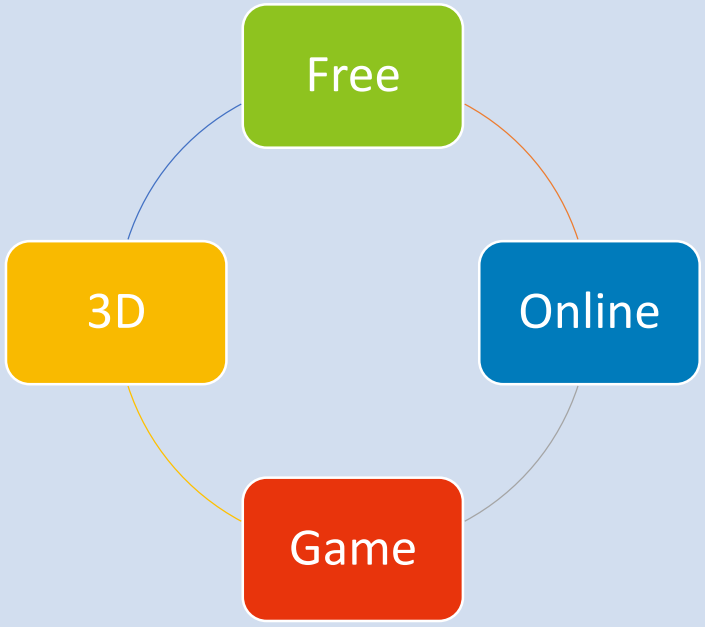
Company	GEMS Education
Profile	An international company with schools and education services in 14 countries
Methodology	Find new and creative ways to stimulate learning and continually striving to improve the way we teach
3D education	3D lab allows students wearing 3D glasses to review multimedia presentations that float off a projection surface
Feedback	3D learning draws student attention, and can help make abstract concepts easier to grasp.

HR Development

Future System:



Summary

Issue	NCDs	Elderly Care
Strategy	Improve Health Information System	Focus on HR Development
Action	Establish a central NCDs information network with public databases	Reform Education System
Structure		

Thank you