

Development of Telemedicine - Where to go for China?

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Overview

- Telemedicine and e-health
- Tendencies in the development of telemedicine
- What can be learnt by China?

Telemedicine and Health Care

- Definition of Telemedicine
- Integrated research and development
 - Medical perspective (teleeducation, medical service, ...)
 - Social perspective (patient, doctor, family, commune...)
 - Technical perspective (Comm & Info technology, EPR...)
 - Patient's perspective (Home care, patient satisfaction ...)
 - Economical perspective (cost-effectiveness, quality of life)
- Short history: 60's? late 80's? Rapidly developed in 90's
- Rich research and development

Major Issues of Telemedicine (MedLine 1996-2000)

	1996	1997	1998	1999	2000	Total
Telemedicine	588	742	1015	1124	1094	4563
Teleconsultation	185	203	325	344	325	1382
Telepathology	39	51	71	92	117	370
Telecardiology	9	4	11	13	11	38
Telediagnosis	3	10	10	6	18	47
Teleeducation	0	0	0	1	10	11



Tendencies of telemedicine development

1. IT support ensured by laws (hospital law, patient law, Evidence-Based Medicine, standards...)
2. Rare areas prioritised (remote, anytime, anywhere globalisation, ...)
3. Cost-effectiveness (money and time savings, life and quality of life)
4. Balance between treatment and prevention (from treatment to treatment & prevention combined)
5. Community supported individual services (medical service management to different patient groups)

Tendencies of telemedicine development

6. Rehabilitation from hospital to home (Telemonitoring, net available device...)
7. Integration of whole population and individual's needs (teleeducation, teleconsulting...)
8. Service provision via Web (Doctor moving -> Patient moving -> Information moving -> Service moving...)
9. Instruments/devices integrated into systems (automatic signal transfer...)
10. Multiple channels and multimedia

Tendencies of telemedicine development

Multiple channels - bidirectional communications between patients and doctors/hospitals

- Email,
- Teleconference,
- ISDN telephone, web-TV...

Multimedia - medical images

- Digital X-ray
- 2D or 3D images
- Text-voice-picture conversion

What can be learnt by China?

- **Integrated efforts and social engineerings**
 - Medical system reform in the direction to e-health
 - Long term national development plans
 - Law systems
 - Infrastructure construction
 - Social insurance systems (welfare or insurance systems)
 - Cooperation of different sectors (health, science...) at different levels (state, province, district and commune)

What can be learnt by China?

- **Research in the lead**
 - National research center of telemedicine
 - International cooperation
- **Infrastructure construction**
 - Network/communication (broad band,
 - Information/systems
- **Chinese medicine (“Walking on two legs”)**
 - Chinese medicine + IT = ???????
 - Chinese medicine facing to the world
 - Measurement of Chinese medicine (signal, parameter...)

Major differences of Chinese medicine from others in relation to IT aspects

	Chinese	Others
Diagnosis	Experience	Evidence
Instrument	Hand	Device-relied
Visiting	Just coming	Booking in advance
Patient record	No.	Saved in system
	At patient'hand	Copy access/view
	Paper version	Electronic version
Medicine	Natural	Chemical
	Inside hospital	Outside hospital

