



Health promotion by implementing Health Information Ordering System (HIOS) in clinical pathway:

Consistent, understandable and appropriate
information delivery service for patients

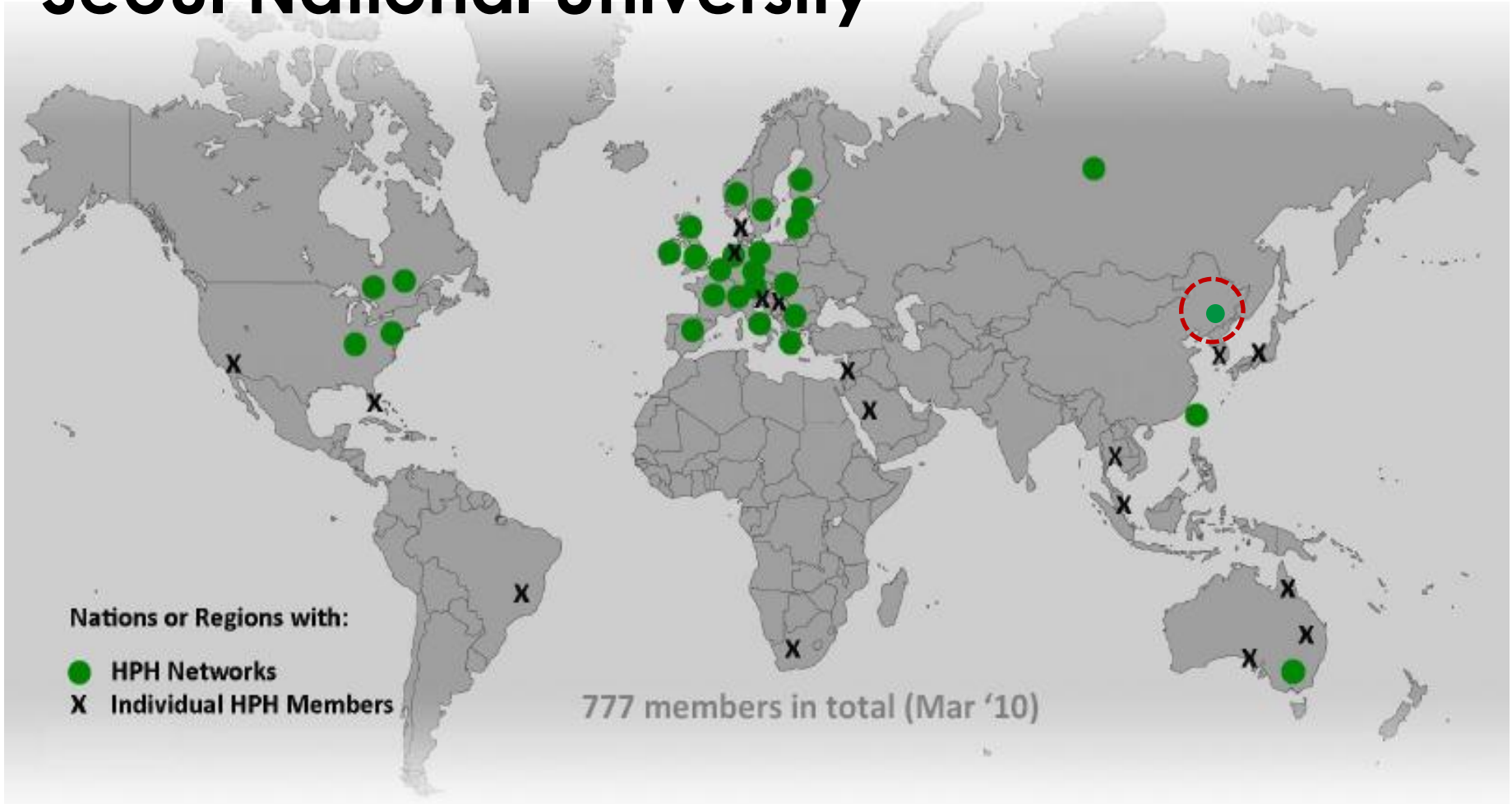
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SMG – SNU Boramae Medical Center



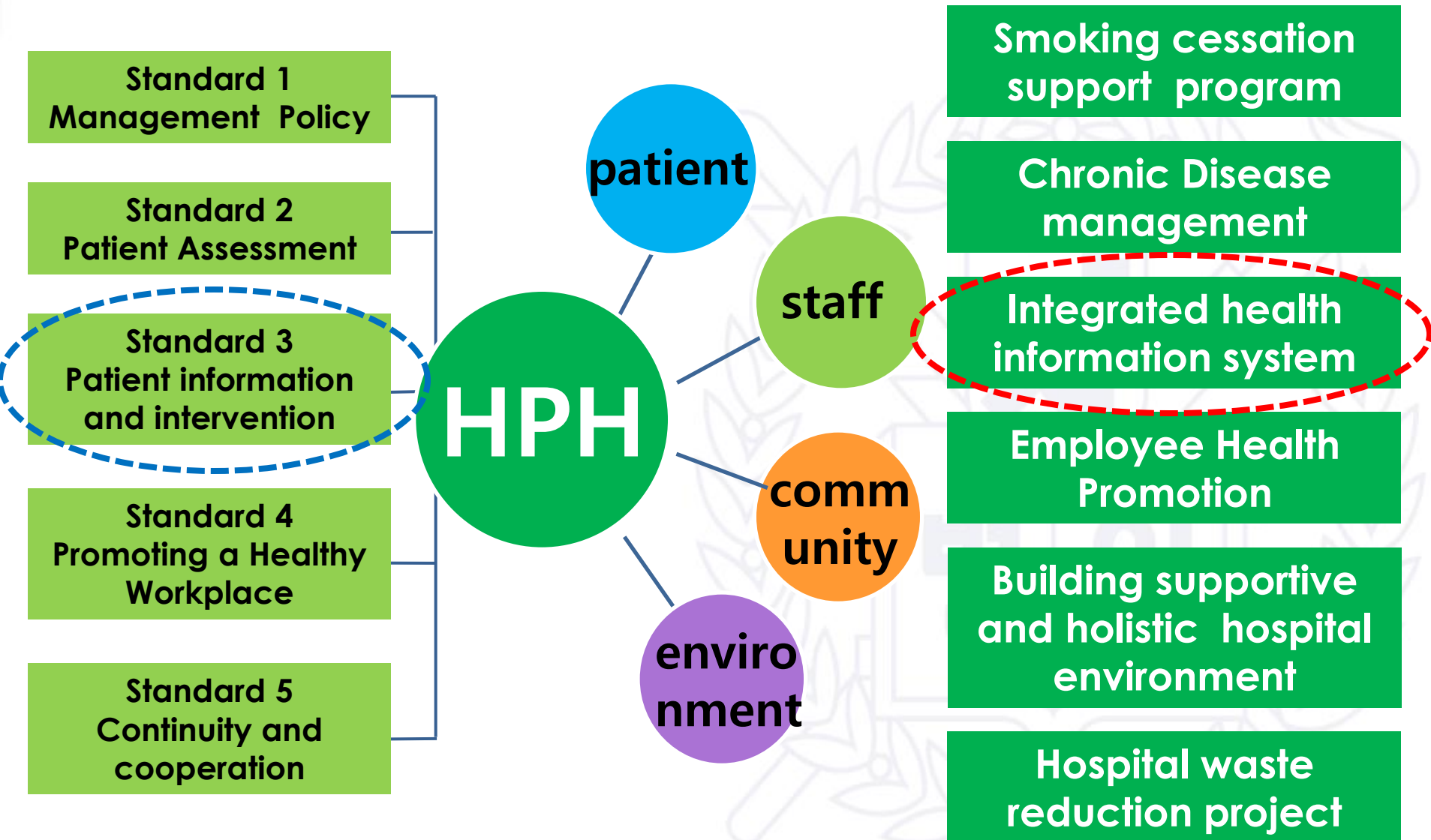
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Seoul Metropolitan Government Seoul National University



Information ordering system to meet HPH standard 3

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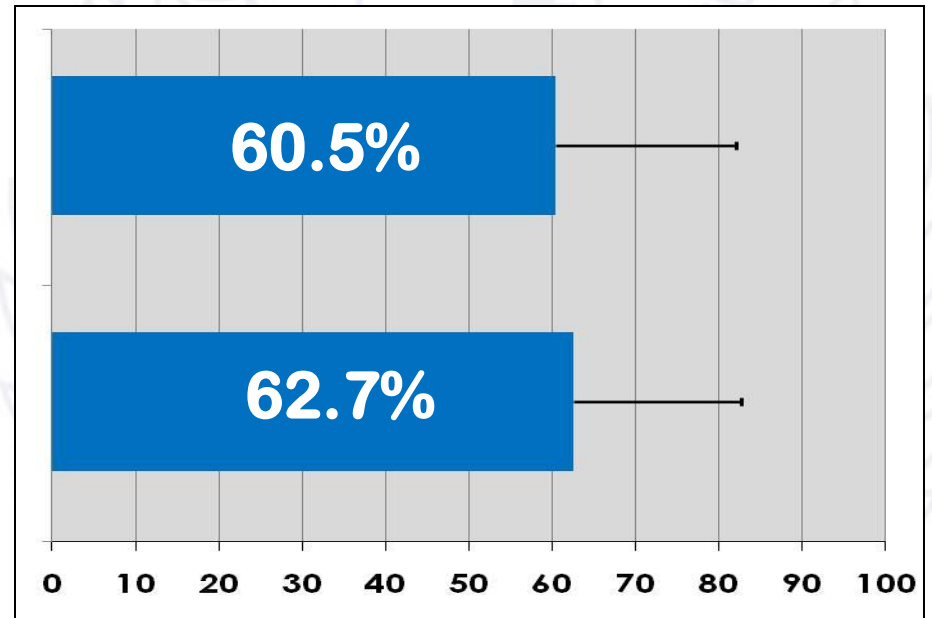
Survey of doctors on the office practice

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- How much information doctors give to patients (100% is amount of information that doctors should have given to patient)

Information regarding
Disease itself

Information regarding
How to control the disease



%

Survey on doctors on the office practice

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- Reasons for difficulties to give all patients information which is necessary for disease itself and management

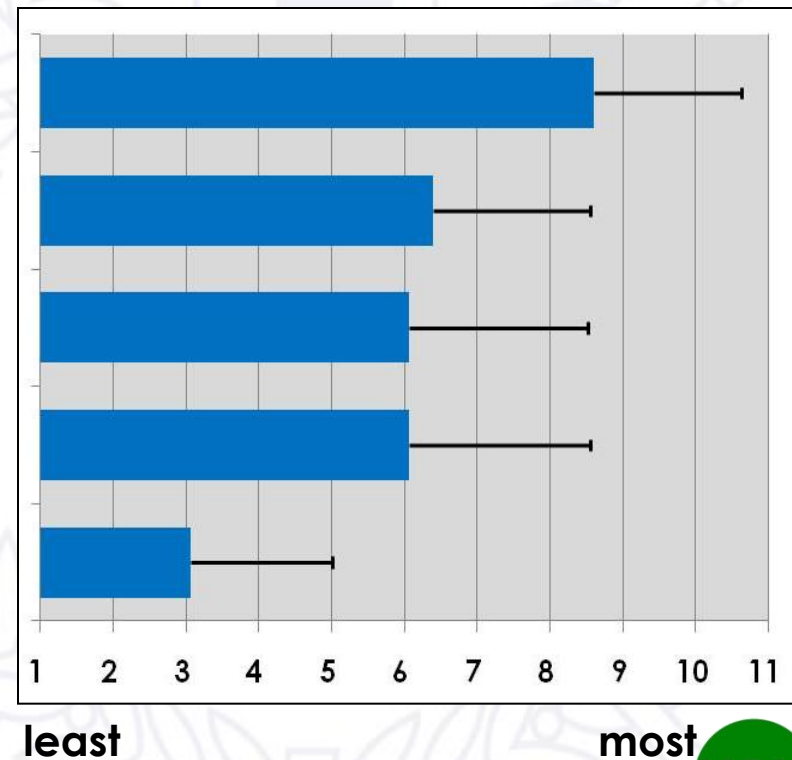
1. No time to provide information

2. Patients do not understand information given

3. Information material is not available

4. Media to provide information is not available

5. Patients do not want information



Development of Health Information Ordering System (HIOS)

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Health Information Ordering System?

Prescribing

Drug (D), Information (I)

Order

Test (T), Measure (M)

Health information ordering in electronic order communication system

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How will 'HIOS' be presented in EMR?

정보처방

aceta

약효군분류

- 신경계감각기관용 의약품
- 개개의 기관계용 의약품
- 대사성 의약품
- 조직세포의 기능용 의약품
- 항병원생물성 의약품
- 치료를 주목적으로 하지 않는 의약품 관련
- 마약
- 위생용품

정보처방 (i)

Subcategorical Structure

하이차트 설명처방

질병설명 리플렛

질병설명 동영상

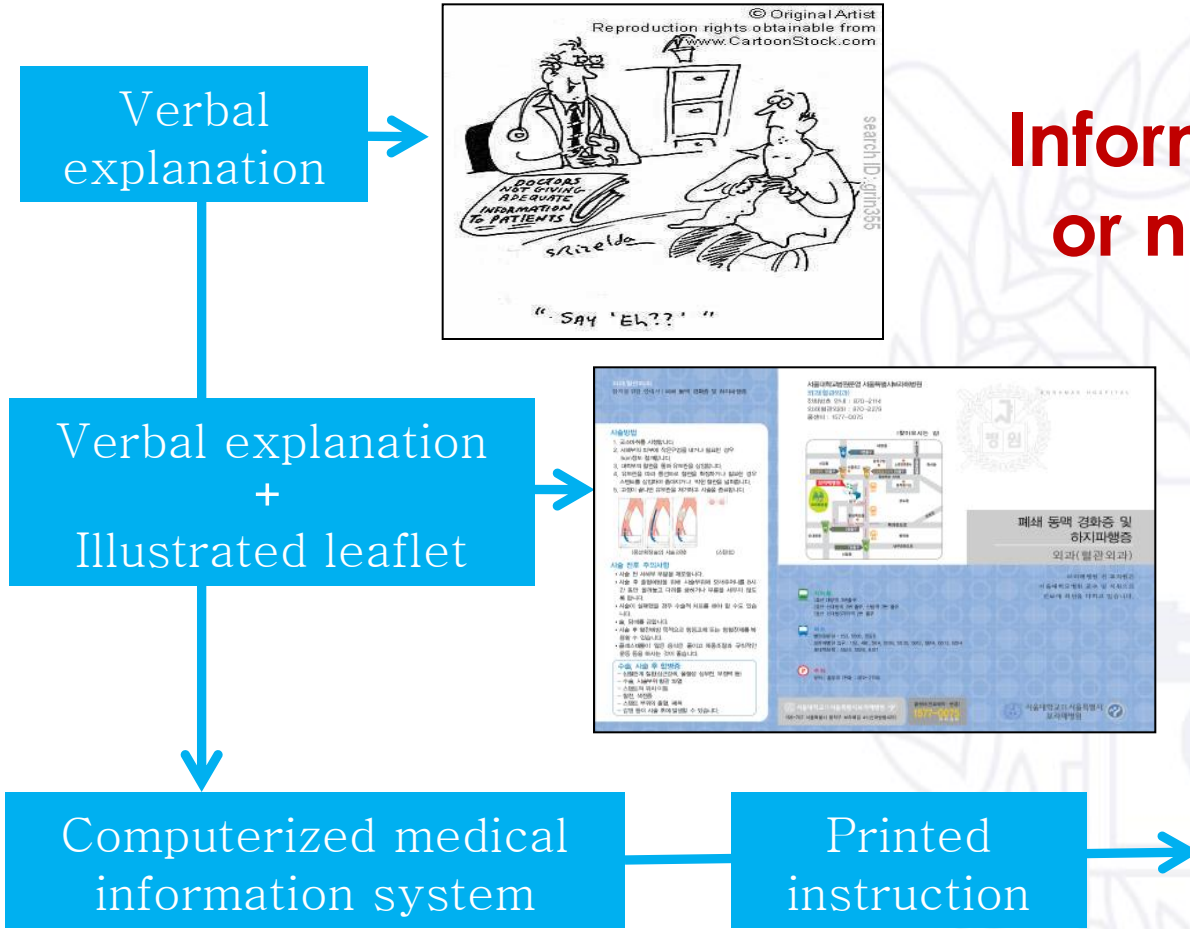
국가정보포탈사이트

코드	항목명	Y/N
외	EFMLA1 Flarex Eye Drop 0.1% 5ml(Fluorometholone)	Y
안	EPRD Predforte Eye Drops 1% 5ml(Prednisolone)	Y
주	IATZ Zoladin inj 500mg (Acetazolamide)	Y
외	NHCDAAP Hycodone (Hydrocodone/Acetaminophen 7.5/	Y
외	SAAP Children Tyrenol sus 32mg/ml(Acetaminoph	Y
외	SLVTR Keppra Soln 100mg/ml (Levetiracetam)	Y
외	TAAP16 Tylenol	
외	TAAP3 Endapen	
외	TAAP6 Tylenol	
외	TAAP80 Children	
외	TLVTR Keppra T	
외	TLVTR10 Keppra Tab 1000mg(Levetiracetam)	N
외	TLVTR2 Keppra Tab 250mg(
외	TMPG10 Provera Tab 10mg(
외	TOXR Oxiratam Tab 800m	
외	TPRC8 Nootropil Tab 800	
외	TTAR* (임상)Tramadol 75	
외	VAAP Suspen Supp 125mg	

Variable forms of information in HIOS

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Existing method of providing information



Information provision or not : Recorded!!



Diabetic Neuropathy

Diabetic neuropathy is a common complication caused by diabetes. Neuropathy is a term that means nerve disease or damage. If your diabetes is uncontrolled and you have high blood glucose (sugar) levels, over time, this can lead to damage to nerves throughout your body. There are three types of diabetic neuropathy:

- **Peripheral.**
- **Autonomic.**
- **Focal.**

PERIPHERAL NEUROPATHY
Peripheral neuropathy is the most common form of diabetic neuropathy. It causes damage to the nerves of the feet and legs and eventually the hands and arms.

SYMPTOMS
Peripheral neuropathy occurs slowly over time. The peripheral nerves sense touch, hot and cold, and pain. When these nerves no longer work:

- Your feet become numb.
- You can no longer feel pressure or pain in your feet.
- You may have burning, stabbing or aching pain.

This can lead to:

- Thick calluses over pressure areas.
- Pressure sores.
- Ulcers. Ulcers can become infected with germs (bacteria) and can even lead to infection in the bones of the feet.

DIAGNOSIS
The diagnosis of diabetic neuropathy is difficult at best. Sensory function testing can be done with:

- Light touch using a monofilament.
- Vibration with tuning fork.
- Sharp sensation with pin prick

Other tests that can help diagnose neuropathy are:

- Nerve Conduction Velocities (NCV). This checks the transmission of electrical current through a nerve.
- Electromyography (EMG). This shows how muscles respond to electrical signals transmitted by nearby nerves.
- Quantitative sensory testing, which is used to assess how your nerves respond to vibration and changes in temperature.

AUTONOMIC NEUROPATHY
The autonomic nervous system controls functions that you do not think about. Examples would be:

- Heart beat.
- Regulation of body temperature.
- Blood pressure.
- Urination.
- Digestion.
- Sweating.
- Sexual function.

SYMPTOMS
The symptoms of autonomic neuropathy vary depending on which nerves are affected.

- There can be problems with digestion such as:

Variable forms of information in HIOS

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Health Information Ordering System

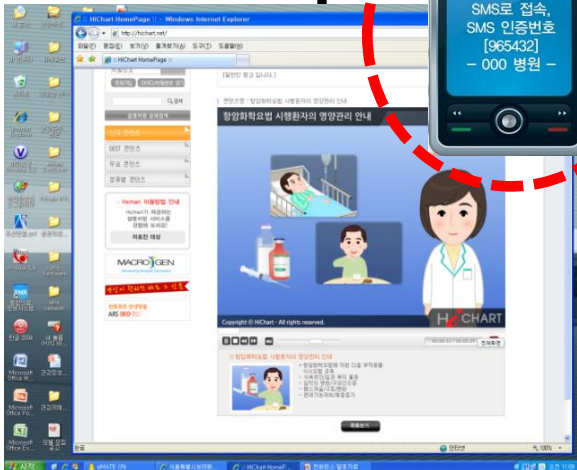
Text message of order number to patient, so pt may go online to view content at home



View content through pc monitor or **tablet pc** with verbal instruction by medical provider



Printed content or leaflet given with explanation



Expected outcome and Conclusion

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Disease Control & Health Promotion

Appropriate
information

Easily
understand

Time-effective
practice

Tailored
information

Consistent
data base

Comprehensive
data base

Health Information Ordering system

Patient

Doctor

Hospital



서울대학교 서울특별시
보라매병원



감사합니다!

Thank you!

SMG-SNU

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