



# **Information Sharing System for Disaster Recovery Related to Dialysis Treatment in Japan**

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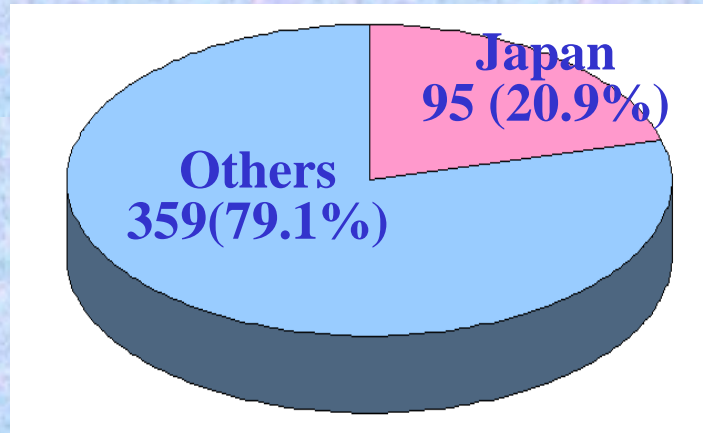
**(Photo : [http://www.kkr.mlit.go.jp/hanshin/mati/photo/photo\\_01.html](http://www.kkr.mlit.go.jp/hanshin/mati/photo/photo_01.html))**

# A Disaster-prone Country

## Comparison of Natural Disasters in Japan and Other Parts of the World

**Number of earthquakes with magnitude of 6.0 or larger**

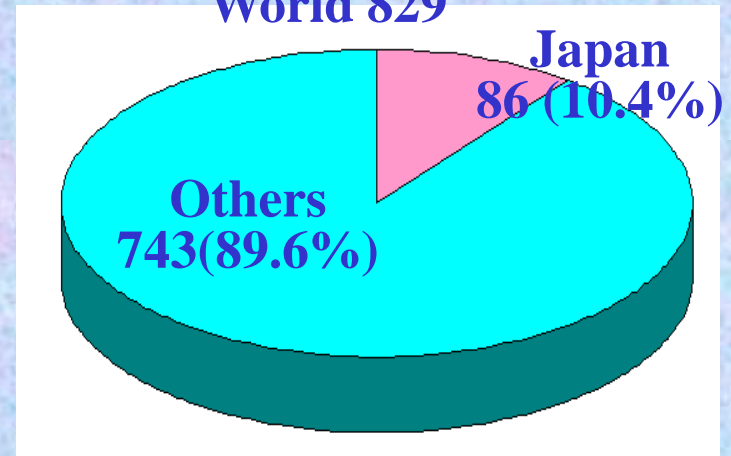
**World 454**



**Note: Total for 1994 to 1998 Prepared by the Cabinet Office based on data from the Japan Meteorological Agency and world data provided by USGS.**

**Number of active volcanoes**

**World 829**



**Note: Prepared by the Cabinet Office based on data from the Japan Meteorological Agency.**



# **An Overview of Dialysis Treatment in Japan**

## **(as of Dec. 31, 2004)**

- **Number of dialysis patients 248,166**
  - **One out of every 500 Japanese citizens is a dialysis patient.**
  - **Hemodialysis patients are predominant, accounting for 96.3% of all.**
  - **The average age is 63.3.**
  - **Patients are concentrated in and around big cities such as Tokyo, Osaka, Kanagawa, Aichi, and Saitama.**
  - **The number of patients is increasing by about 10,000 every year.**
  - **Number of kidney transplants 700-800 cases per year**
- **Number of dialysis facilities 3,882**
  - **Total number of patient stations at facilities 97,366**
  - **Most of the facilities use multi-patient dialysate supply systems.**

# Dialysis Treatment after Disasters

In January 1995, we experienced the Great Hanshin-Awaji Earthquake that claimed more than 6,400 victims. In the affected area in the Hyogo prefecture, 66 out of 104 dialysis facilities were affected, forcing some 1,700 patients to go to other facilities to receive dialysis. Many of the patients visited dialysis facilities out of the affected area on their own and asked for treatment. The facilities that accepted patients gave dialysis, as if it was only natural, although the patients could not bring any data on their treatment.



Photo :

<http://www.kippo.or.jp/kc/bousai/images/bousai06.pdf>

[http://www.kkr.mlit.go.jp/hanshin/mati/photo/photo\\_01.html](http://www.kkr.mlit.go.jp/hanshin/mati/photo/photo_01.html)



# Dialysis Treatment after Disasters

From this past experience, we consider the following two points as the major principles to be applied after massive disasters:

1. Patients escape to a safe area and ask for dialysis treatment there.
2. Facilities accepting the patients must give them whatever dialysis treatment possible.



(Photo : <http://www.kippo.or.jp/kc/bousai/images/bousai06.pdf>)

# Dialysis Treatment after Disasters

Needless to say, systematic responses are required especially after major disasters. What we need is a network for dialysis treatment after disasters.

The Japanese Association of Dialysis Physicians decided to construct a framework of coordination with the Japan Association for Clinical Engineering Technologists, related organizations, and the national and local governments as well as an information sharing system that support it.

**The Japanese Association of Dialysis Physicians** is an organization of doctors engaged in dialysis, which conducts investigation and research, education, and crisis control for dialysis treatment. This association has prefectural branches.

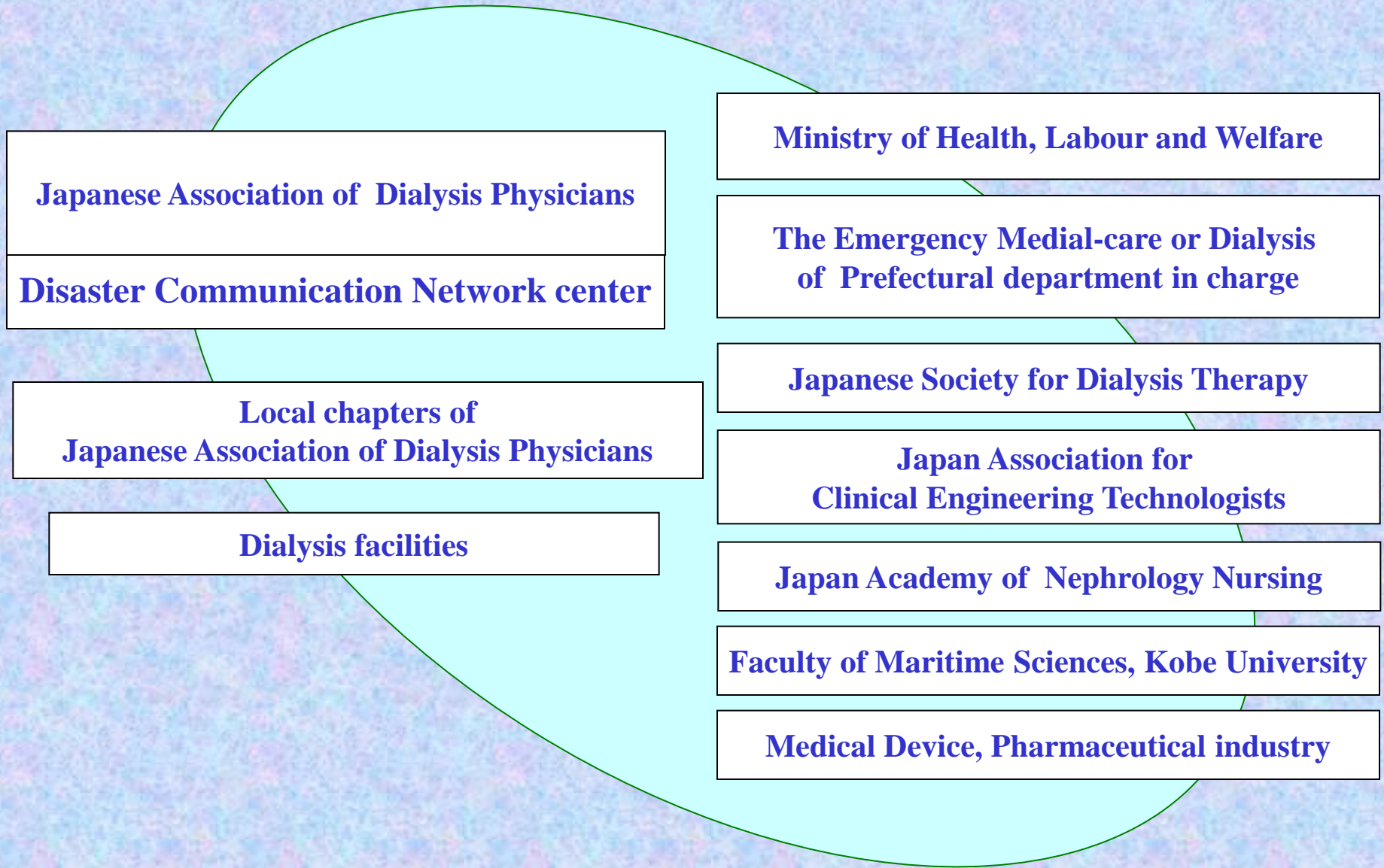
**The Japan Association for Clinical Engineering Technologists** is an organization aimed at enhancing scientific knowledge and skills, improving capabilities, and improving the reliability of medical care and welfare supported by life support systems and other medical equipment.

# **Establishing a Framework of Coordination**

- **We called for establishment of disaster recovery measures among local dialysis facilities in units of prefectures.**
- **We organized a "Disaster Information Network" consisting of doctors and clinical engineers commissioned by prefectural branches of the Japanese Association of Dialysis Physicians.**
- **We promoted a system of liaison with the national and local governments and dialysis-related organizations and companies.**



# Disaster Communication Network





# The Superiority of the Internet after Disasters

We should assume that, just after a disaster strikes, affected facilities will not be able to communicate any information to the outside. Rather, it is important that unaffected facilities send out information. If this information can be quickly collected, summarized, and distributed, we will be able to quickly identify the affected facilities and give dialysis treatment to the patients of the affected facilities elsewhere.

There is also a possibility that telephones and facsimiles in and around the affected area will not be easily connected because of damages on communication equipment and incoming calls to the affected area from all over the country.



**So we decided to use Web sites and e-mail on the Internet, which are generally less susceptible to these problems.**

# Web Site for Sharing Disaster Information

<http://www.saigai-touseki.net/>

日本透析医会災害時情報ネットワーク - Microsoft Internet Explorer

ファイル(E) 編集(E) 表示(V) お気に入り(A) ツール(T) ヘルプ(H)

戻る 進む 印刷 検索 お気に入り メディア

アドレス http://www.saigai-touseki.net/ 移動 リンク

## 日本透析医会災害時情報伝達

● トップページ

### お知らせ 連絡事項

☆2004年10月28日17時43分:災害対策本部  
明日(10月29日)の患者様の透析状況について情報がはいりましたのでお知らせします。  
小千谷総合病院の患者様は28日に予定どおり移送されました。  
また、29日は透析は休みます。30日(土)に47人喜多町診療所で手配済みです。  
来週からは1クール25人で自病院で再開する予定です。

☆2004年10月27日19時22分:災害対策本部  
お願い  
新潟中越地震の被災地では、余震が続く中、透析不能でした3施設のうち2施設が、本日より透析可能となりました。  
しかしなお他施設の患者様を引き受けている施設もあり、スタッフの不足が続いております。  
今週木曜日や土曜日にもボランティア派遣の要請はありましたが、現時点では、組織だった派遣ができておらず、引き受けが少なくなった施設においても、余震の続くなかでスタッフの心労はいかばかりか想像を絶しております。ご迷惑をおかけしております。ご迷惑をおかけしております。ご迷惑をおかけしております。  
休息のためにも、ボランティア派遣は必要になると考えています。  
災害時情報NWへの登録は極めて少ない状況です。  
ボランティア登録を募集いたします。

お問い合わせ | 別

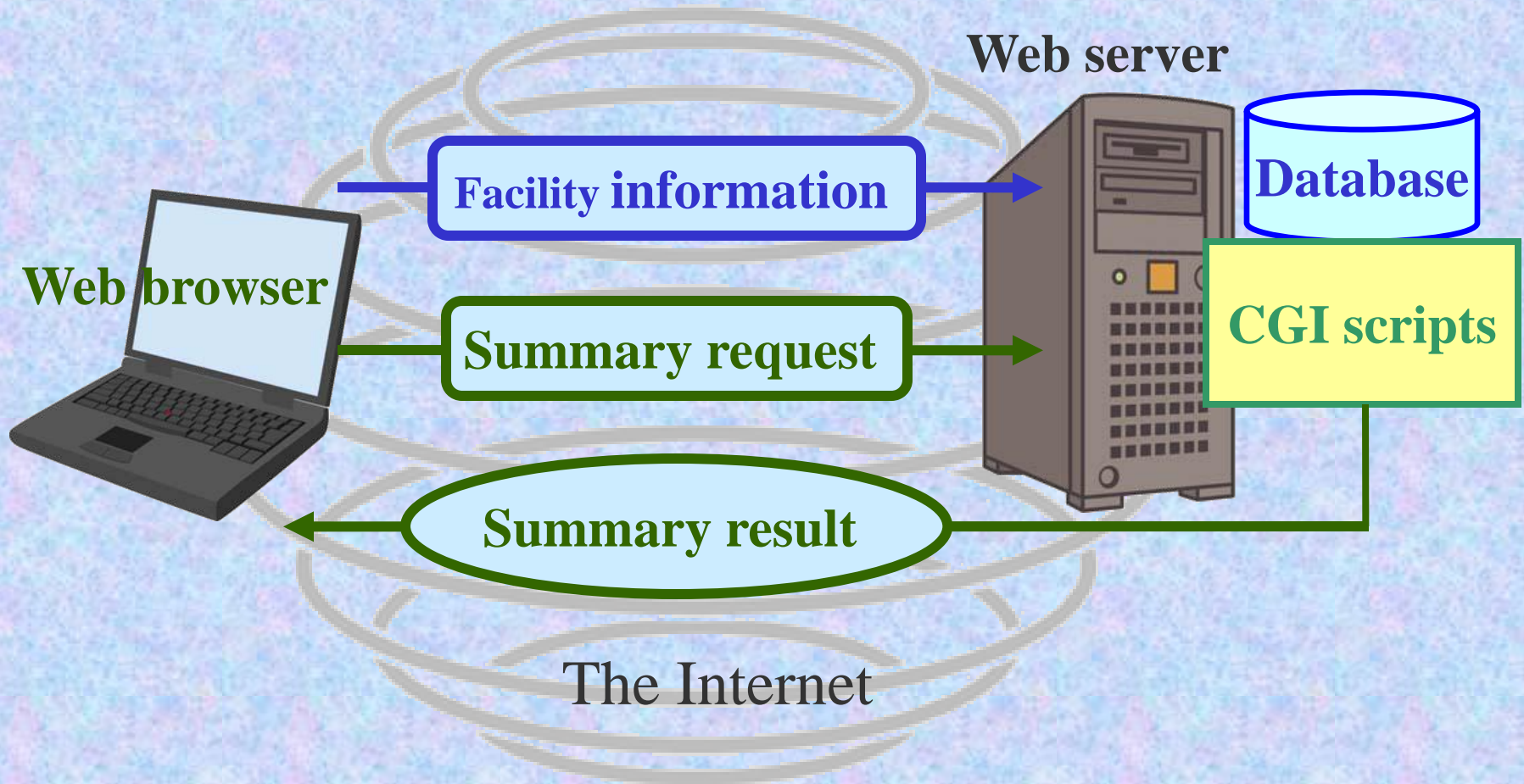
インターネット

# **Dialysis Information Items to Be Collected for Information Sharing**

- **Prefecture and region**
- **Facility name**
- **Person in charge**
- **Conditions of the affected facility**
  - 1) **Building conditions**
  - 2) **Lifeline conditions**
  - 3) **Dialysis systems conditions**
- **Things mainly in short supply (such as dialyzers, extracorporeal circuits, and dialysate concentrate)**
- **Number of beds that you can spare in the dialysis room**
- **Number of dialysis patients that you can accept (in three days starting from the date of sending this information)**
- **Number of dialysis patients you want other facilities to accept (in three days starting from the date of sending this information)**
- **Means of transporting patients**
- **Number of volunteers that you can dispatch (such as doctors, clinical engineers, and nurses)**
- **Other necessary articles, messages, etc.**



# Use of CGI



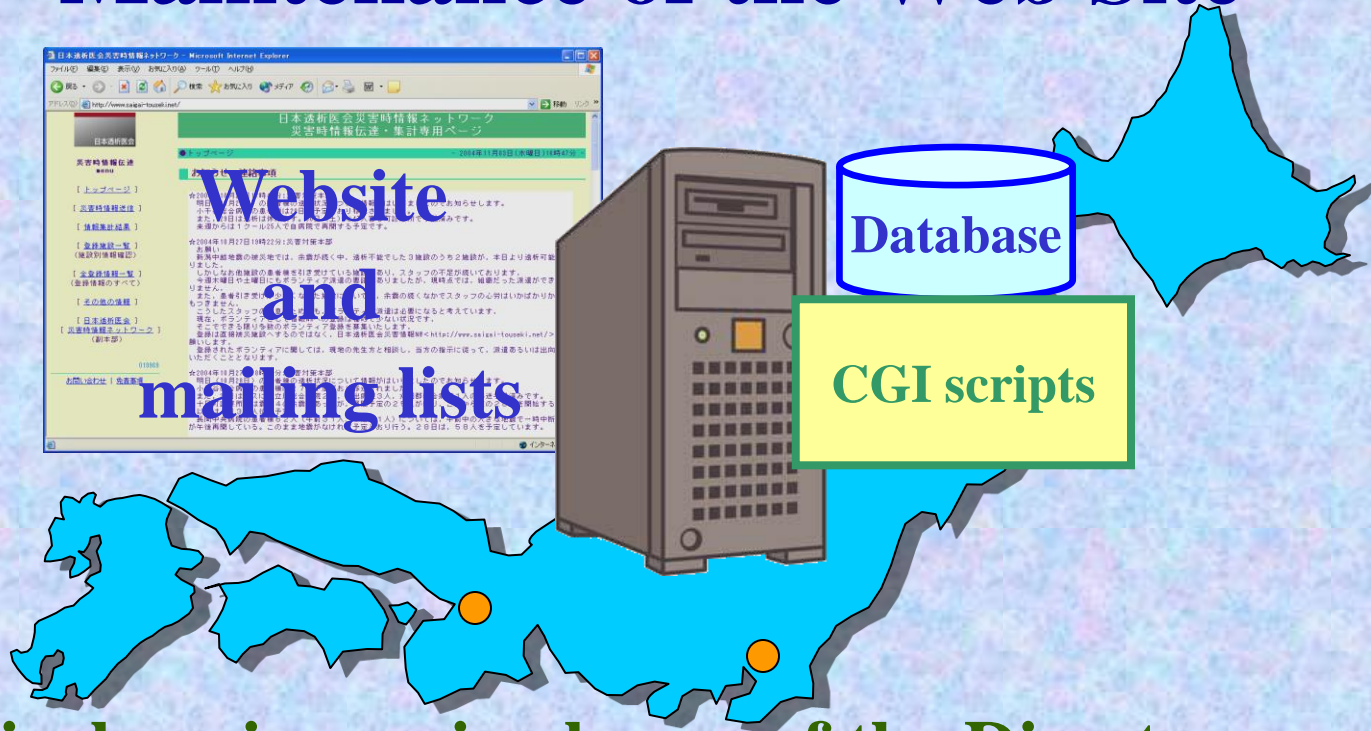
**What's CGI?** CGI or Common Gateway Interface is defined as a standard for running external programs from a World-Wide Web HTTP server.

# **E-Mail Communication Network**

## **- Mailing Lists -**

- **A mailing list consisting of dialysis facilities and related organizations as members; aimed at extensively calling for supply of information**
- **A mailing list consisting of related organizations and persons in charge of disaster recovery at the Ministry of Health, Labor and Welfare and local governments; aimed at holding disaster recovery meetings after a disaster strikes**

# Maintenance of the Web Site



- ✧ Clinical engineers in charge of the Disaster Information Network Center make Web pages and CGI scripts and upgrade systems including mailing lists.
- ✧ This Web site is constructed on servers at two locations, Tokyo and Osaka, so that at least one of them will survive when a disaster strikes.

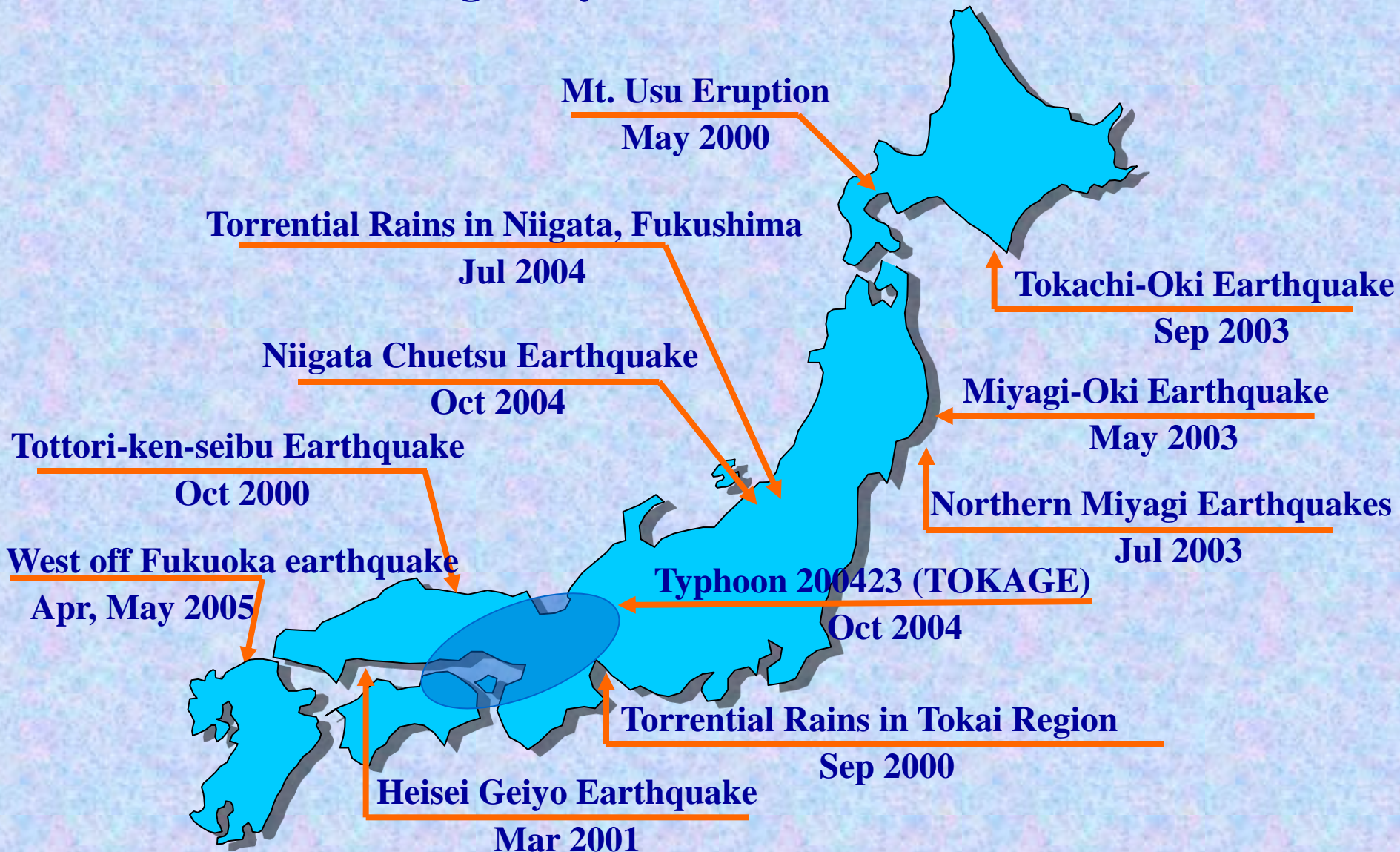


# **Report on Major Operations in the Past - Meeting and Training -**

- **Disaster Information Network meeting**
  - ◆ Once every year, the members of the Disaster Information Network have a meeting to report their operations.
- **Information exchange training**
  - ◆ Once every year, information exchange training is held.
  - ◆ A total of 1,797 facilities in 28 of 47 prefectures took part in this training.

# Major Operations in the Past

## - Disasters Affecting Dialysis Facilities in and after Year 2000 -





**As a example of our actual activities of “Information Sharing System” against “Niigata Chuetu Earthquake”,occured on oct.2004, I wished to explain the details this time.**

**However, because of lack of time and my poor english, it is impossible to explain the details.**

**Therefore, I enclosed these informations into my“Hand-Out”, and if you will be able to check it, it is appreciated.**



# **Conclusion**

**For the future, we are determined to improve the availability of this information sharing system through training, making most of the lessons we learned from the disaster recovery.**