

事務部

総務課

The Office Department

The General Affairs Division

はじめに

2011年3月11日午後2時46分頃、宮城県沖を震源とするマグニチュード9.0の大地震と、それに引き続いて襲来した10mをはるかに越える大津波。千年に一度といわれている東日本大震災が当地方に甚大な被害をもたらしました。災害拠点病院として、宮城県地域災害医療センター（平成9年3月31日）に指定されていた気仙沼市立病院は、気仙沼医療圏の基幹病院として機能しましたが、直面した多くの課題に対して検証を行わなければならないと考えています。

Introduction

Around 14:46 on March 11, 2011, a great earthquake of magnitude 9.0 with its epicenter off the coast of Miyagi Prefecture occurred, and gigantic tsunamis with heights exceeding 10m had subsequently struck our city. The Great East Japan Earthquake, which is said to occur once every thousand years, had brought enormous damage to our region. As a disaster base hospital, which has been designated as one of the Miyagi Prefecture Disaster Medical Centers (March 31, 1997), Kesennuma City Hospital worked as a key hospital in the Kesennuma Medical Zone, but we think that we must probe the many challenges we have faced.

私たち病院事務部は、ライフラインが途絶され、通信手段や物流も制約された状況で病院機能を維持する困難さを経験し、果たしてきた役割を記録として整理しました。「縁の下の力持ち」という事務方の立場から携わった災害医療活動が、今後、多くの医療機関において災害対策の一助になれば幸いです。

Our hospital's office department to which we belong to, had experienced difficulty in maintaining hospital functions in such a situation where lifelines were disrupted, and communication means and logistics were also constrained; we summarized our roles as a document. We hope the disaster medical activities of our department, in which we look in from the standpoint of office workers, or the "hard workers in the background", will be insightful for disaster measures of many medical institutions in the future.

病院の概要

敷地面積 27,690.96m² 海拔 3.12m～29.20m

構造・規模 RC(鉄筋コンクリート)造、一部S(鉄骨)造 地上5階／地下1階／塔屋2階建
構成

病棟・管理診療棟・増築棟

病床 一般病床447床・感染症病床4床

築年数47年

耐震構造一部あり

附属看護専門学校3階建

職員会館2階建

附属看護専門学校寄宿舍2階建

医師住宅33棟

駐車場 (5箇所)

職員数 489名

学校職員数10名

The outlines of our hospital

Site area: 27,690.96m²

The height above the sea level: 3.12m ~ 29.20m

Structure and scale: RC (reinforced concrete) structure, including S (steel) structure in some parts, 5 stories above the ground/ 1 story under the ground/ with a 2-storied penthouse.

Constitution

Hospital wards, a management and clinic building, and extension buildings

The number of hospital beds: 447 general-hospital beds, 4 hospital-beds for infectious diseases

The age of building: 47 years old

Including some parts with earthquake-proof construction

An affiliated nursing school with 3-stories

A 2-storied staff hall

A 2-storied dormitory of the affiliated nursing school

33 doctors' houses

5 parking areas

The number of staff members: 489

The number of school staff members: 10

主な建物の被害 被害総額：約1億1千万円

構造的には機能に大きな損傷は無い。



- 屋上手摺及び外壁コンクリート剥落、建具破損、内壁・床（廊下・病室）ひび割れの発生
- 病棟接続部への亀裂、煙突耐火レンガの崩落
- 敷地部分に地盤沈下・亀裂発生
- スプリンクラー配管ずれによる漏水
- 津波による浸水被害により、第2、3、6駐車場に汚泥・ガレキ・車両の流入及びこれに伴う清算システム破損

The damage of main buildings - the grand total of damage: about 110 million yen

There was no major structural damage to the functions of our hospital.

- The peeling-off of handrails on rooftops and outer concrete walls, the breakage of fixtures, and the cracking-up of inner walls and floors (in hallways and hospital rooms) occurred.
- Some cracks at hospital ward connections and the collapse of chimney firebricks occurred.
- Land subsidence and cracks occurred at some places in the site of the hospital.
- Some water leaks occurred due to the misalignment of sprinkler piping.
- Flood damage caused by the tsunami include, sludge, debris and vehicles flowing into the 2nd , 3rd, 6th parking lots, which consequently broke the clearing systems.

東日本大震災院内被害状況（抜粋）

<省略>

The damage situation of the inside of the hospital at the time of the Great East Japan Earthquake (excerpt)

救急室前入口（建物と駐車場とのすれ）



2階エキスパン（破損・ひび割れ）



管理棟一病棟渡り廊下接続部
（外壁の開き、崩落）



外壁崩落状況（ボイラー室出入口より）



1階病棟中央エレベーター（沈下）



3階東病棟処置室内壁・床面（破壊・崩落）



3階外壁（破壊・崩落）



4階天井（崩落）



津波

病院は海岸から直線距離で約2.5km離れているにもかかわらず、病院をはさむように位置する大川と神山川を遡上してきた津波が、建物脇の道路にまで襲来した。病院周辺は取り囲まれるように腰上の高さまで冠水した。

Tsunami

In spite of our hospital being located about 2.5 km in a crow line off the coast, the tsunami that was brewing in the Okawa River and the Kamiyamagawa River; the hospital is located between them, invaded the roads around the foot of a hill on which the buildings of our hospital was located. The surrounding area of the hospital was flooded at a height passed the waist, the hospital and was surrounded by water.



災害対策本部

正面玄関から動線が長いとの意見もあったが、市の災害対策本部との連絡を確実なものにするために、災害対策本部は5階総務課とした。3月20日から毎日午後6時に各部の所属長が集まりミーティングを行い、院内全体の情報共有に努めた。

The Head Office of Disaster Countermeasures

Although there were opinions that the route from the front entrance to the General Affairs Division was too long, we set the Head Office of Disaster Countermeasures of our hospital there to communicate easier with the Head Office of Disaster Countermeasures of the City. From March 20, the supervisors of each division gathered, had a meeting at 6:00 in the afternoon every day and tried to share the

information of our entire hospital.

避難者に対する対応

気仙沼市立病院は高台に立地し、地震による倒壊や津波浸水も免れたため、大勢の市民が病院を目指して避難を始めた。外来待合ホールは人であふれ、ごったがえすようになり、病院機能に支障を来すことが危惧された。病院より高い位置にある避難所への誘導を開始したが、時刻は夕刻に迫り、暗闇の中の移動は危険を伴うことも予想されたため、敷地内にある看護専門学校を開放し一時的に避難者を集約した。翌日、市立病院から市災害対策本部へ申し入れをし、宮城交通バスに依頼して、市内最大の避難所となった総合体育館（ケーウェーブ）と病院の定期便を運行してもらって、病院への避難者を移送した。

Our response to evacuees

As Kesennuma City Hospital is located on a hill and had escaped not only collapse caused by the earthquake but also tsunami inundation, a large number of citizens began to evacuate aiming to get to the hospital. The outpatient-waiting hall ended up crowded with people, and it made us feel that it may hinder the hospitals functions. We started to guide them to other shelters on higher ground, but the evening was approaching and it was expected to be dangerous for us to move in the dark as well. Therefore, we temporarily opened the nursing school located within the hospital site, in which we gathered the evacuees. The next day, the City Hospital made a proposal to the Head Office of Disaster Countermeasures of the City, and then the office asked Miyagi Bus Transport to provide a scheduled service between the City General Gymnasium (K-Wave), which had become the city's largest shelter, and our hospital; they transported the evacuees to the hospital.

職員について

- 病院職員は全員無事。
- 家屋の被害 212戸（全壊・半壊・一部損壊含む）
- 家族の被害 死亡11人、行方不明15人
- 車輛の被害161台（水没・流出・故障）

職員の多くは病院近隣に駐車していたため、勤務中の職員の自家用車は多数流出水没した。

With respect to the staff of the hospital

- All the staff members of the hospital were safe.
- The damage situation of their house: 212 houses were damaged (including entirely, half or partially damaged).
- The damage situation of their families: 11 people died and 15 people are still missing.
- The damage situation of their car: 161 cars (submerged, washed away or broken)

Because many of the staff had parked their car in the neighborhood of the hospital, a number of private cars of the staff members on duty were washed away or submerged.

エレベーター

5機すべてのエレベーターが震災後に停止（閉じ込め者なし）。

点検後3月15日18時40分全面復旧した。

津波の襲来にそなえて、歩ける人は独歩で、車椅子の人は背負って、担送の人は担架やマット・シーツを担架替わりにし階段や病院脇の坂を経由して上層階へ搬送誘導した。資材の運搬については、階段に職員や居合わせた業者を一列に並べ、バケツリレーの要領により手渡しで運んだ。



Elevators

All 5 elevators stopped after the earthquake (no persons were stuck inside).

After checking, they were all restored at 18:40 on March 15.

In preparation of the tsunami, we transferred and led patients via stair cases or a slope beside one of the hospital buildings; people who were able to walk moved on foot by themselves, others in a wheelchair were piggybacked and stretcher-patients were transferred via mats or sheets instead of a stretcher. Staff and contract workers who were there at the time formed a line on the staircase and carried materials by hand like that of a relay.

酸素

当院の液化酸素タンクは3,600m³の酸素を備えられる。平時の1日平均使用量が約200～300m³であり、通常は週毎に補充を行っていた。

発災後、酸素の備蓄量は別表の通りだが、急性期には1日酸素使用量が約400～500m³と通常1.5～2.5倍に増量した。3月14日、提携業者である高圧ガス工業（株）大阪本社及び同東京営業所、ならびに同郡山営業所と交信が可能になり、3月15日に郡山営業所が福島液酸（株）に残っていた液化酸素の供給を受けて、1,900m³

	酸素残量(m ³)	補 充
3月11日	3,000	
3月12日	2,600	
3月13日	2,100	
3月14日	1,700	
3月15日	3,600	高圧ガス工業(株)

（フルタンク）補充した。震災後数日間の使用量から換算して、4日毎の補充体制に切り替えた。また、3月15日には7,000L酸素ボンベ120本をバックアップ用に補完していただくこと

ができた。この補完にあたっては、倉庫が津波で浸水した気仙沼酸素株式会社に多大なご尽力をいただいた。

Oxygen

The liquefied oxygen tank of our hospital can stock 3,600 m³ of oxygen. Its average daily usage in peacetime is about 200 to 300 m³; we usually had it refilled every week.

	The Residual Volume of Oxygen	Supply
March 11	3,000	
March 12	2,600	
March 13	2,100	
March 14	1,700	
March 15	3,600	High Pressure Gas Industry Corp.

The stockpiles of oxygen after the disaster appear in the following table, and oxygen usage per day in the acute phase increased to about 400 to 500 m³, 1.5 to 2.5 times of the norm. On March 14, we became able to communicate with associate companies, the Osaka Headquarters, the Tokyo Office and the Koriyama Office of the Koatsu Gas Kogyo Corporation, and, on March 15, the Koriyama Office accepted liquefied oxygen that had remained at the Fukushima Liquefied Oxygen Corporation and replenished the oxygen tanks of our hospital with 1,900 m³ of liquefied oxygen (a full tank). Converting the amount having been used for several days after the earthquake, we switched the weekly replenishment system to a 4-day one. In addition, on March 15, we were fortunate to have 120 cylinders each containing 7,000 L of oxygen supplemented to us for backup purposes. Kesennuma Oxygen Co., Ltd., whose warehouse was flooded by the tsunami, made a great effort to supplement us.

重油と電力

当院には二つの電気室系統の中に、高圧自家発電設備一機（625 kVA）と低圧自家発電設備二機（250 kVA、220 kVA）が常設されている。重油タンク容量は10kℓが二つ（ボイラー設備用とNo.1 低圧自家発電設備の兼用）と1.95kℓが二つ（No.2 高圧自家発電設備とNo.3 低圧自家発電設備用）、合わせて23.9kℓの重油の備蓄が可能である。停電とともに自家発電に切り替わったが、高圧自家発電機については、重油残量から発電稼動可能時間は約16時間しかなかった。

Heavy oil and electric power

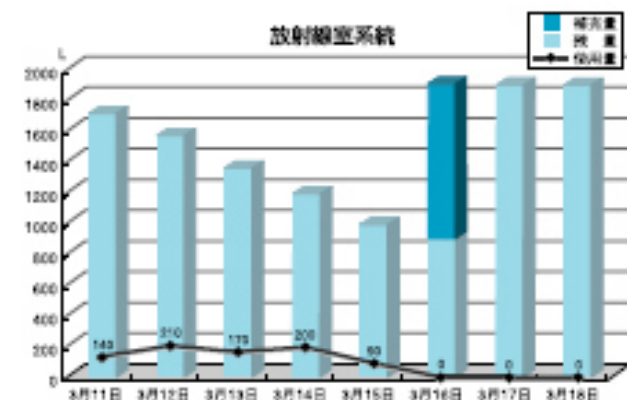
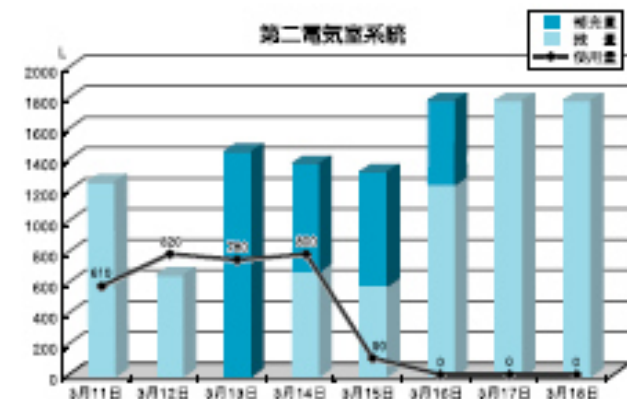
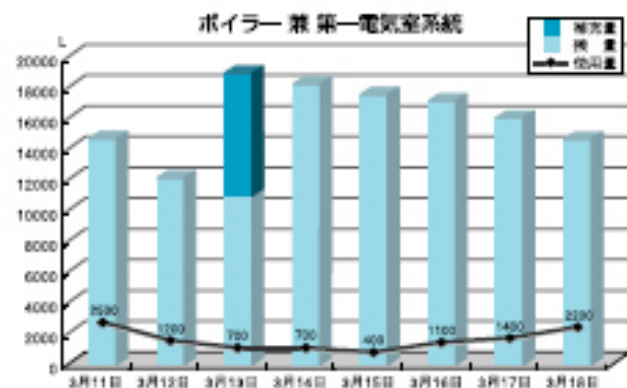
In two electrical rooms of our hospital, we have one high-pressure in-house power generation facility (625 kVA) and two low-pressure in-house power generation facilities (250 kVA and 220 kVA, respectively) on a permanent basis. We have two heavy oil tanks with a capacity of 10 kL (used for both boiler facilities and No. 1 low-pressure in-house power generation facility) and two with a capacity of 1.95 kL (used for No. 2 high-pressure in-house power generation facility and No. 3 low-pressure in-house power generation facility), making it possible to stockpile 23.9

kL of heavy oil in total. Although electrical power was switched to in-house power generation simultaneously in times of a power failure, the high-pressure in-house power generator's operable time was estimated to be only around 16 hours with the remaining amount of heavy oil.

重油の確保が急務であったが、業者に連絡しようにも携帯、固定電話ともに不通である。職員が街中を走り回り、幸運にも病院に給油のために来たものの地震のために近くのスーパー駐車場に乗り捨てられていたタンク車を見つけて、事後承諾でタンク内の重油を抜き取って枯渇を逃れることができた。また、市内業者の千葉金株式会社より1キロリットルの寄附をいただいた。今回の震災により重油取り扱いの業者5社のうち4社が被災している。

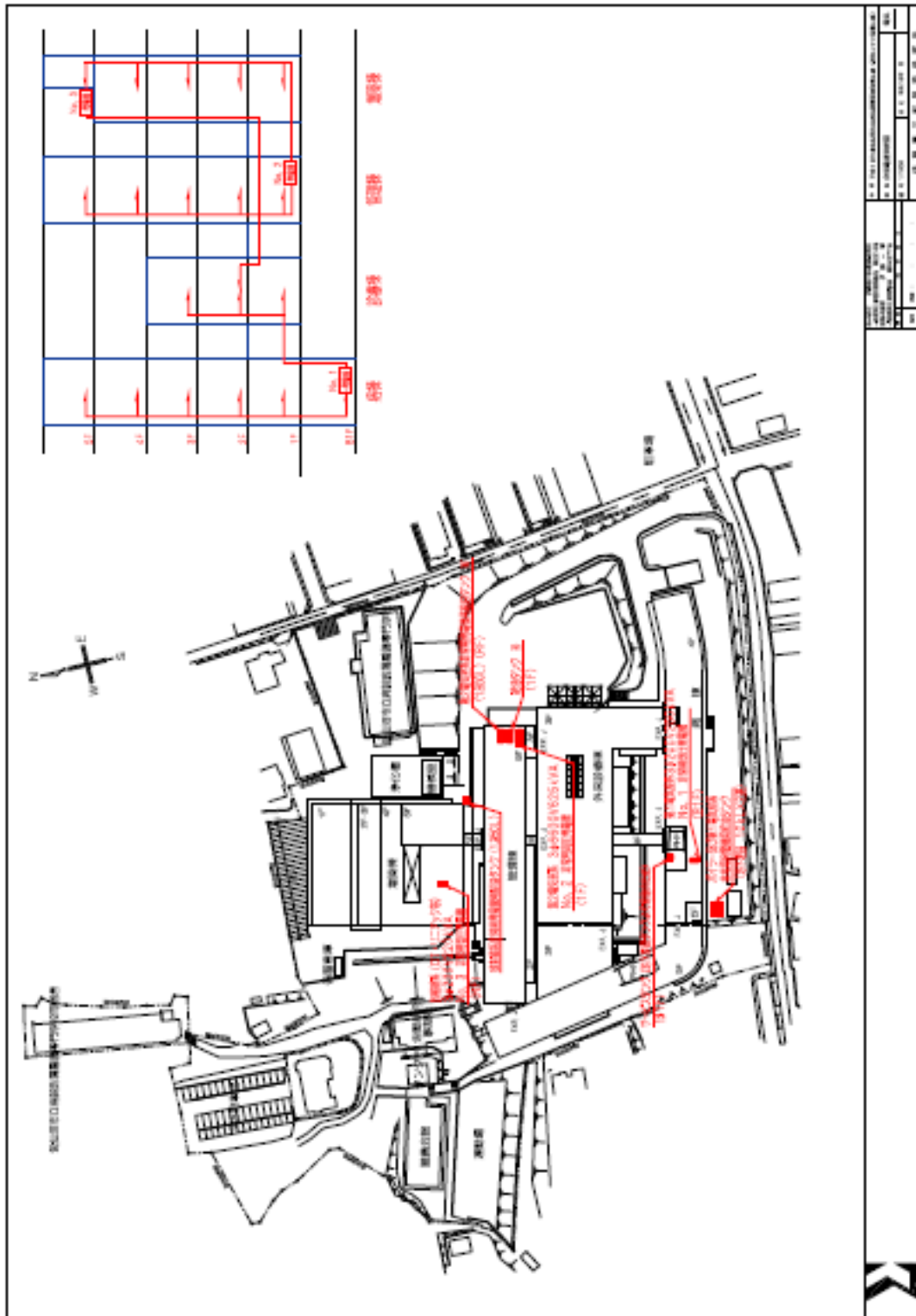
While it was urgent to secure heavy oil, both mobile phones and fixed telephones were not working even though we tried to contact suppliers. Some of our staff ran around the city and luckily found a tank truck that had come to the hospital for refueling but had been left in the parking lot of a nearby supermarket due to the earthquake; some of our staff drew out heavy oil in the tank which saved us from depletion of heavy oil. In addition, we gratefully received the donation of 1 kL of heavy oil from the city's Chiba Kin Corporation. Four out of five heavy oil handling companies in the city had been affected by the earthquake disaster.

県医療整備課の要請により救援物資として重油が到着したのは、3月12日20時42分になってからであった。各電気室系統の重油残量、補充量ならびに使用量は右に掲載する通りである。

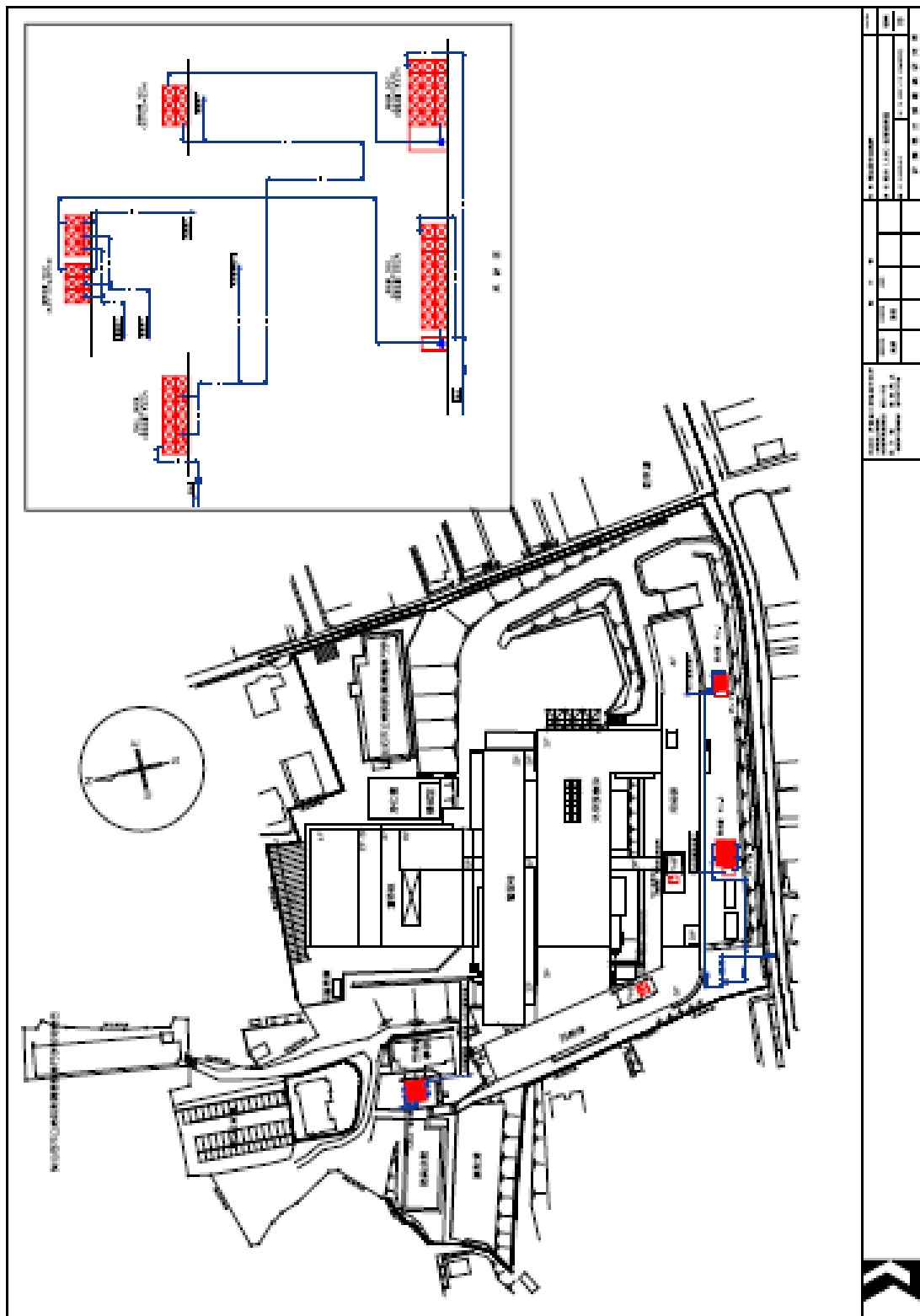


It was not until 20:42 on March 12 that heavy oil arrived as a relief good by the request of the Medical Maintenance Division of Miyagi Prefecture. The remaining amount, replenishment amount and used amount of heavy oil of each electrical room system are as shown on the right.

非常電源供給図



給水（上水）配管経路図



停電

地震直後停電となり自家発電装置（第1電気室系・第2電気室系・放射線室系の3基）を稼働させた。（自家発電稼働時間 約92時間）

3月15日 5:43 第1電気室系（旧病棟・外来等関係）を一旦停止
（5時43分～8時45分自家発電機オーバーヒート防止のため）
8:45 再稼働

3月15日 13:00 通電復旧

3月30日（10:30～14:00）停電（電力送電系統故障による）

4月7日 23:30～4月8日 17:10 停電（地震による）

Power outage

Power failure occurred immediately after the earthquake, so the in-house power generation facilities came on (3 facilities: the 1st Electric Room System, the 2nd Electric Room System and the Radiation Room System). (The operating time of in-house power generation: about 92 hours)

March 15 5:43 We temporarily stopped the 1st Electric Room System (old wards, outpatient clinics and others involved)
(5:43 to 8:45 in order to prevent the burnout of the in-house power generator)

8:45 Restarting

March 15 13:00 Restoration of electrification

March 30 (10:30 to 14:00)

Power failure (power grid failure)

April 7 23: 30 to April 8 17:10

Power failure (due to an earthquake)

一般ガス供給

震災後停止、4月7日全館復旧。

都市ガスから供給されていたガスは震災後に供給停止した。給食には、備蓄してあったカセットボンベを用いて対応した。3月13日、市ガス局が津波で流された「LPガス都市ガス変換器」を修理して病院に設置（ボンベ5本）。栄養科のみに送気を開始した。3月28日には支援物資で気仙沼に届いた新品の「LPガス都市ガス変換器」に交換。3月30日、点検後に都市ガスを一部（食堂）再開。4月7日に全面復旧した。

General gas supply

The supply of general gas was stopped after the earthquake, and was restored in our entire buildings on April 7.

The supply of general gas that was supplied from the city gas discontinued after the earthquake. We managed to prepare hospital meals by using cassette gas cylinders that had been stockpiled. On March 13, a LP Gas - City Gas Converter that had been swept away by the tsunami was repaired and installed in the hospital by the City Gas

Office (5 cylinders). Fuel gas supply started up in the Nutrition Department only. On March 28, the converter was replaced with a new LP Gas - City Gas Converter that arrived at Kesennuma as one of the relief supplies. On March 30, the city gas supply resumed partially (to the cafeteria) after inspection. The supply was fully restored on April 7.

ボイラー稼働状況

3月11日 地震により給湯・暖房停止

3月12日～14日 病棟へ給湯のみ供給

3月15日 全館給湯再開

3月16日 一部外来及び全病棟へ給湯・暖房再開

3月18日 給湯・暖房全面復旧

The operating status of the boilers

March 11 Hot water supply and heating were stopped due to the earthquake.

March 12 - 14 Hot water was supplied only to the hospital wards

March 15 Hot water supply was resumed in the entire hospital.

March 16 Hot water supply and heating were resumed in some parts of the outpatient clinics and all wards.

March 18 Hot water supply and heating were fully restored.

断水

気仙沼市には二つの浄水場があり、市立病院に給水していた新月浄水場が震災により自家発電設備を稼働し送水していたが、燃料切れが発生し一時送水できない事態となった。市立病院では、まだ少し余裕があったが透析への供給もあることや、送水再開が危ぶまれたことから、市水道課に依頼して給水車で2,000ℓ補給した。その後、新月浄水場の自家発電設備への燃料補給完了を経て、3月11日21時30分に送水再開となった。

Water outage

There are two water purification plants in Kesennuma, and the Niitsuki Water Purification Plant, which has been supplying water to the City Hospital, was conveying water by using its in-house power generation facility because of the earthquake. However, the situation developed into one where the plant ran short of the fuel of its in-house power generator and could not convey water temporarily. The City Hospital still had some water stored, but we also had to supply water to the Dialysis Center, and there was a risk in resuming the water supply, so we asked the City Water Department to replenish 2,000 L with a water truck. After completion of refueling the in-house power generation facility of the Niitsuki Water Purification Plant, water conveying was resumed on 21:30 on March 11.

リネンの供給等

リネンは被災当日、病院在庫分をすべて各部所に払出し、15日まで対応した。3月15日寝具類（掛敷布団等）の補充後、通常業務を再開した。また、日用品については、地元業者が被災したために支援品に頼ることになった。

The supply of linen and others

The linen of our hospital stocks was delivered to every section on the day of the disaster, with which we were able to respond to the situation until March 15. After we refilled bedclothes (quilts, mattresses etc.) on March 15, we restarted business as normal. As for the commodities, we decided to rely on relief supplies due to the local suppliers having been affected.

通信

宮城県災害時医療情報網として、当院には衛星携帯電話が配備されていた。ところが、受信は可能だが発信が出来ないという不具合に見舞われた。後から判明したことだが、原因は停電と同時に衛星携帯電話が初期設定となったためだったのだが、混乱期にはそのことに気づく職員はいなかった。

Communication system

As the Disaster Medical Information Network of Miyagi Prefecture, a satellite portable telephone had been deployed in our hospital. However, we went through a malfunction in which the telephone was able to receive but unable to make calls. It turned out later, it was due to the setting of the satellite phone became initialized simultaneously during the power failure, something which none our staff could have realized in the turmoil.

3月12日夕から気仙沼に参集し始めた災害医療支援チームの中で、東京DMATが所持していた衛星携帯電話が利用可能であり、また、移動基地局を気仙沼に配備したKDDIにより市内の一部でこれを利用可能となったのが3月14日になってからである。気仙沼市役所に県庁災害対策本部とのホットラインが1基開設されていて、これを利用して1日2回（8時30分、18時）の定時連絡を行い、以後電話回線が復旧するまでこのシステムを利用して外部との交信を行った。院内連絡用には気仙沼で利用可能となったau携帯を30台契約購入した。

通信ツールは多重化した整備と、さらには、平時から細やかなメンテナンスが必要であると考えられた。

Among Disaster Medical Assistance Teams (DMATs), which began to gather in Kesennuma from the evening of March 12, a satellite portable telephone of the Tokyo DMAT was available. And, thanks to KDDI Co., which deployed a mobile base station in Kesennuma, it was from March 14 that mobile telephones became available in some areas in the city. One hot line with the Disaster Countermeasures Office in the prefectural office had been established in the Kesennuma City Hall, so we used

the line twice a day (at 8:30 and 18:00), made scheduled contact with the prefectural office and thereafter carried out communication with the outside by utilizing this system until the telephone line was restored. We contracted and purchased 30 Au mobile telephones, which had become available in Kesennuma, for our inside-hospital communication.

It was considered necessary that there be many types of communication tools and moreover, that they are carefully maintained even under ordinary circumstances.

震災後に事務部が担当した業務

- 被害状況確認報告
- 損壊部分の現場確認
- 備蓄倉庫から簡易ベッド、毛布、発電機等の運び出し
- 収納係窓口現金の保管
- トリアージテントにて患者受付
- 受診者トリアージカード受取、名簿作成、受診者名の問合せの対応
- 支援物資対応（搬入、リスト作成、払出し）
- 職員（医局、診療部、総務課職員）用炊き出し
- 掲示物（震災状況等）の貼り出しと各部署への配付

Duties that the Office Department took charge of after the earthquake disaster

- Reporting the confirmation of damage situations
- Confirming the sites where some parts were damaged
- Carrying simple beds, blankets, portable power generators and others out of the stockpile warehouses
- Securing the cash of the receiver window
- Receiving patients at triage tents
- Receiving triage cards from medical examinees, making lists and responding to multiple inquiries about examinees' names from visitors
- Responding to relief supplies (carrying-in, creating lists and serving)
- Supplying boiled rice to staff (the Medical Office, the Department of Medical Examination and Treatment and the staff of the General Affairs Division)
- Posting bulletins on walls (the situations of the earthquake, etc.) and distributing them to each department

- 処方薬引き渡し補助
- 患者搬送補助
- 収容者の安否問い合わせ補助
- 電源（自家発電）、給湯、暖房供給
- 一時的避難場所（看護専門学校）の提供及び管理

- 自動販売機の開放
- 市・県・国の災害対策本部及び機関並びに東北大学をはじめとする他医療機関等との連絡及び協議
- マスコミ対応
- Giving support in handing patients their prescribed medications
- Supporting patient transfer
- Supporting safety inquiries about their inmates
- Power supply (in-house power generation), hot water and heating supply
- Permitting use of and managing our affiliated nursing school as a temporary shelter
- Opening-up vending machines
- Contacting and consulting with the Disaster Response Headquarters and the agencies of the city, the prefecture and the nation, and other medical institutions and others including Tohoku University Hospital
- Responding to the mass media

【課題】

- 総括、各部門担当責任者（医局、看護部、救急、栄養科をはじめとするパラメディカル部門等）の縦横役割分担と配置
- 記録担当の人員配置が必要
- 事務職員の休息時間や場所の確保
- 受診者の避難所等へ帰宅手段や場所の共通認識が必要
- ボランティアを統括できる人員や部署の確保
- 支援物資の保管場所の確保（各部署に分散して一時的に保管したが、診療開始とともに物資を移動する作業が生じた）
- 課内ミーティングの必要性を再認識

The Challenges

- We should make a summary, and should also assign vertical and horizontal roles among chiefs responsible for departments (the Medical Office, the Nursing Department, the Emergency Room and the Paramedical Departments including the Nutrition Department) and set each role.
- It is necessary to have staff in charge of recording.
- We should ensure rest time and areas for office workers.
- We need to share information on the examinees' returning means to and the locations of their shelters, etc.
- We should secure staff and a department that can supervise volunteers.
- We should secure storage spaces for relief supplies. (Though we had temporarily stored them in each department in a dispersed manner, we had to transfer those supplies soon after the start of medical treatment.)

- We again recognized the necessity of department meetings.

おわりに

生涯忘れることのできないあの日からもう8ヶ月が過ぎてしまいました。いいえ、まだ8ヶ月でしょうか。

国道45号線には、現在も津波浸水想定区域という注意標識があります。この気仙沼には、必ず大地震そして大津波がくるものと思いながら生活していました。しかし、3月11日の「東日本大震災」は想像を超えたあまりにも無常なものでした。ふるさとの景色は様変わりし、心が折れてしまいそうな時が何度もありました。わたしたちは、無我夢中で走りつづけてきました。あの日から活動してきた職務はどうだったのか、思いはめぐります。

これから前をまっすぐ見つめながら歩いていくこと、また、後世に伝えていくことが生き残ったわたしたちの使命だと思っています。

最後に、ご支援いただいた多くの皆様に心より感謝申し上げます。ありがとうございました。

In Conclusion

8 months have passed since *that day* that we haven't forgotten about it ever since. It might be better to say that it has still only been 8 months.

The National Route 45 still has many cautionary sign boards of the assumed area of tsunami inundation. We lived here in Kesennuma while thinking that we would inevitably suffer a major earthquake and tsunami. However, "The Great East Japan Earthquake on March 11" was far beyond our imagination, bringing about the uncertainty of life. The scenery of our hometown changed dramatically, which often made us disheartened. We have feverishly been going through difficulties. We think back to whether our duties since that day have been appropriate or not.

We sincerely think that it is our vocation, as we have survived the disaster, to walk straight, looking forward and also to hand down our experiences to future generations.

Lastly, we would like to thank many people who had supported us from the bottom of our hearts. Thank you very much for your support and cooperation.

今回の震災に関し、医事課としてのかかわりについて（報告）

The Office Department
The Medical Affairs Division

Our involvement in this earthquake disaster as the Medical Affairs Division (Report)

はじめに

今回の東日本大震災では、近隣の医療機関が被災した為、多くの患者さんが当院に集中した。

停電の為、オーダーリング・医事システムともに、フル稼働させることが出来ず、又、電話・インターネットが使用できなかった為、情報の入手が困難な状況下にあった。

そのような状況の中で、医事課として行ったことを、大きく分けると

- 1 診療の補助活動
- 2 オーダーリングと医事システムの点検と保守
- 3 震災下での医事対応

に分けられた。

それぞれについて、記録として、以下に記す。（表1参照）

Introduction

During the Great East Japan Earthquake, many patients concentrated to our hospital because the nearby medical institutions were damaged.

Due to power failure, both the ordering system and the medical affairs system could not fulfill their operations, and the telephone and the Internet were not available, therefore, we found it difficult to gather information.

In such circumstances, what we did as the Medical Affairs Division can be roughly divided into the following.

1. Supporting activities of medical care
2. Inspection and maintenance of the ordering system and the medical affairs system
3. Responding to medical matters around the earthquake disaster

Each of them was written below in this document as a record of the disaster. (See Table 1)

表1 震災時の医事課の対応（省略）

表1 震災時の医事課の対応

	診療体制	診療の補助活動について	オーダーリングと医事システムの点検と保守について	震災下での医事対応について
3月11日 (金)	<p>○トリアージポストを救急</p> <ul style="list-style-type: none"> ●外來入り口に設置 ●緑(軽症):内科外來ホール ●黄(中等症):内視鏡前 ●赤(重症):救急室 ●黒(死亡):感染病棟 <p>○トリアージ・タッグを使用した診療</p> <p>○トリアージポストは事務職全員で交替で対応</p>	<p>○トリアージポストに職員配置</p> <p>○防災センター内にシステムトラブル時の対応、及び患者ID確認の為医事課の職員を22日朝まで配置した。 (来院患者さんの2割程度に、当院の医事システムに登録されてある、氏名・生年月日・住所と患者さんからの申し出と相違有)</p> <p>○18時以降は、3名ずつ3交替でトリアージに対応</p>	<p>○サーバと空調設備の状況確認(自家発電回路から電気が供給されている事と空調を確認)</p> <p>○各部門システムとの連携確認 旧ネットワーク(通信網)を使用している部門は、OAタッグを使用し、自家発電回路からハブ(通信機器)の電源を取り直した。</p> <p>○各クライアントの状況確認 ※節電の為、下記の通りとした。 イ 医事システムは患者さんの受診歴等の問合せのみ ロ オーダーリングシステムは病棟のみの使用 ハ カルテ抽出機(内科、外科、整形外科、泌尿器)は使用せず</p> <p>○自家発電の停止に備え、過去1年間の患者さんの受診歴(アクセス)、入退院歴(エクセル)、処方内容(アクセス)を、ノート型パソコン4台にコピーした。</p>	

	診療体制	診療の補助活動について	オーダーリングと医事システムの 点検と保守について	震災下での 医事対応について
3月12日 (土)	○急患のみの対応	○市役所からの依頼で新塚 小学校における死体検案 作業への手伝いとして、 18時まで医事課職員3 名を交替で派遣		
3月13日 (日)	○急患のみの対応	○翌日からの診療に対応す る為、患者さん用の整理 券（当院が他院で薬をもら っているか）作成		
3月14日 (月)	○通常の外来診療は休診 ○急患のみの対応 ○投薬のみの患者さんにつ いては対応 （医師の手書き処方）	○朝から並んでいる患者さ んへの診療体制の説明 ○薬が欲しい患者さんに対 し、当院がかりつけと他 院がかりつけの窓口を設 け、整理券を配布する。 ○他院通院中の患者さんに、 新薬申し込み用紙を渡し、 記載の手伝いを行う。 ○診療室には職員を配置し、 診療後の、薬の引き換え 方法を説明する。 ○混乱をさける為、一人一 人の業務を簡素化して配 置した。		
3月15日 (火)	○自家発電機が停止した為、 救急患者のみの対応	○未明からの市内の火災の 為、患者さんの避難・誘 導を行った。 ○ 本日の休診の説明をする。 ○ 翌日からの診療に対応 する為、患者さん用の整 理券の作成	○5:30 自家発電装置が停止 オーダー・医事サーバーが停止 ○10:00 自家発電装置復旧 ○オーダー・医事サーバー復旧 ○各システム・クライアント の確認 ○13:00 東北電力からの電 気の供給再開 ○各システム・クライアント の再確認	
3月16日 (水)	○救急患者と薬の対応 （内科外来で当院がかりつ け、循環器外来で他院か かりつけの処方を実施） ○投薬はオーダーリングシ ステムを使用 ○震災発生後72時間を経 過したことから夜間のト リアージポストの事務職 員の配置を縮小	○朝から並んでいる患者さ んへの診療体制の説明 ○10名ずつ院内に患者さ んを誘導 ○総合受付でIDを確認し、 受付票を渡す。 ○医師がオーダー入力後、 配置された職員が薬の引 換方法を説明	○当院のオーダーリングシ ステムは、各病室の定数を越 えて入院登録ができない為、 各病棟を回り、入院患者 のリスト作成	
3月17日 (木)	○8:00 トリアージポスト の撤去 ○日中のトリアージポスト は総合受付 ○救急患者と薬の対応 （内科外来で当院がかりつ け、循環器外来で他院か かりつけの処方を実施） ○投薬はオーダーリングシ ステムを使用 ○夜間のトリアージは看護 者とし、補助に事務職員 を配置	○朝から並んでいる患者さ んへの診療体制の説明 ○10名ずつ院内に患者さ んを誘導 ○総合受付でIDを確認し、 受付票を渡す。 ○医師がオーダー入力後、 配置された職員が薬の引 換方法を説明		

	診療体制	診療の補助活動について	オーダーリングと医事システムの点検と保守について	震災下での医事対応について
3月18日 (金)	○診療体制は前日と同じ ○8:30に固定電話が復旧	○固定電話が復旧、防災センターに電話対応の職員を午前中配置		○コンピューター会社と連絡を取り、被保険者証を提示できない患者さんおよび一部負担金領受の対応をリモートで行った。 尚、レセプトの記載については、厚生労働省の通知がでないため、後日の対応(4月6日に実施)とした。
3月19日 (土)	○急患のみの対応 日中はトリアージ担当に5名配置 夜間は当直者が対応			
3月20日 (日)	○前日と同じ体制			
3月21日 (月)	○前日と同じ体制			
3月22日 (火)	○一部の診療科で通常の診療 ○トリアージ・タグの使用はやめ通常通りカルテ使用に切り替える。	○外来スタッフ(委託職員)の確保が困難なことから、外来の診療会計は行わず、後日の会計とした。 ○診療券を紛失した方もいたため、再来受付機は使用せず、全て総合受付を通してID番号の確認を行い、受付処理を行った。		
3月23日 (水)		○再来受付機の使用再開		○医師事務作業補助者が、トリアージ・タグと処方箋を管理 ○入院については、病棟担当者が時間をさいて、請求業務を再開する。
3月24日 (木)		○外来診療会計の再開 ○早朝より39名の患者搬送があり、9:00まで内科ホールへの立ち入りを制限した。 ○一部負担金の免状の説明開始		

Table 1 The Responses of the Medical Affairs Division during the time of the Earthquake Disaster (skipped)

1. 診療の補助活動について

3月11日(金) (14:46 地震発生)

- ① 救急室前に緊急車両受け入れスペースを確保
- ② 緊急車両・患者搬送車両の誘導及び一般車両の進入制限

③ トリアージポストを設置（救急外来入り口）（15：00）

病院周辺の道路が遮断され、車輛での正面玄関への出入が困難となった。

通行が可能だったのは、地下1階・ボイラー室前から国道45号線バイパスに接続する県道、徒歩による気仙沼高校から4階北病棟の出入口までの道路（車輛は通行不可）、病院北側透析センター前駐車場に通ずる市道だった。

その為、救急患者の受入窓口は救急室入口のほかに、地下1階ボイラー室前、4階病棟出入口に副トリアージポストを設置し患者受け入れに備えた。（図1）

水が引き、救急室前トリアージポストが機能したのは19時であった。

④ トリアージポストでは事務職員全員で、2～3時間交替で対応した。

⑤ 夜間のトリアージポストは事務職員5～7名、2～3時間交替とし、この体制で14日8時まで対応した。

1. Supporting activities of medical care

March 11 (Fri) (14:46 the occurrence of the earthquake)

1) Securing a space for emergency vehicles in front of the Emergency Room

2) Guiding emergency vehicles and patient-transferring vehicles, and restricting the entry of general vehicles

3) Setting a triage post at the Emergency Room Entrance (15:00)

All roads around the hospital had been blocked, so entering and exiting the front gate by vehicle became impossible.

Drivable roads were as follows: the Prefectural Route connecting the front of our boiler room on the 1st basement and the National Route 45 Bypass, a pedestrian path from the doorway of the 4th Floor North Ward to the Kesennuma Senior High School (impassable for vehicles) and the municipal road leading to the parking area in front of the Dialysis Center located at the north side of the hospital.

Therefore, in addition to the entrance to the emergency room, a deputy triage post was set up in front of the boiler room on the 1st basement floor and at the entrance to the ward on the 4th floor to prepare for patient reception. (Figure 1)

1)

It was 19:00 when the water receded and the triage post in front of the emergency room functioned. (Figure 1)

4) At the triage posts, every office worker was responding on a 2-3 hour rotation.

5) At night-time triage posts, we decided to assign 5-7 office workers on a 2-3 hours rotation, and we were going by this system until 8:00 A.M. on March 14.

図1 浸水エリアとトリアージ設置場所（省略）



Figure 1 Flooded areas and the Triage Post Locations (skipped)

3月12日（土）

- ① 自衛隊・消防隊がトリアージ用テントを設置。
- ② 下記の照会に対応する窓口を総合受付前に設置した。
 - イ 被災等による入院患者の照会
 - ロ 診察終了後の患者の帰宅経路や行方不明の方の受診状況など
- ③ 市役所からの依頼で、新城小学校における死体検案作業への手伝いとして、18時まで医事課職員3名を交替で派遣した。（当日のみ）

March 12 (Sat)

- 1) The members of the Self-Defense Forces and fire brigades set up tents for the triage posts.
- 2) We set up a window to respond to the following inquiries in front of the General Front Desk.
 - a) Inquiries about hospitalized patients victimized by the disaster, etc.

b) Return routes of patients after their medical examination, and the consultation status of missing persons.

3) At the request of the city hall, three medical staff members were dispatched to help with corpse inspection work at Shinjo Elementary School until 18:00. (Only on the day)

3月13日（日）

① 翌日からの薬処方希望者の受付に、整理券（当院かかりつけか、他の医療機関にかかりつけかで色分け）を用いた誘導を行うこととし、準備作成を行った。

3月14日（月）

診療申し込みの混乱回避の為、以下の配置を行った。

① 当院かかりつけと他院かかりつけの患者申し込み窓口を各々設けた。

② 他院かかりつけ患者には新患申し込み用紙を渡し、記載方法などの説明、又は代理記載を行った。

③ 診察室に、医事課職員を配置し、診察後に薬の引き換え方法を説明した。

④ 夜間におけるトリアージポストの事務職員の配置は、震災発生から72時間を経過したことから職員数を2～4名 2～3時間交替と縮小した。

March 13 (Sun.)

1) From the next day, we decided to use numbered tickets (color-coded according to whether the patient is a member of our hospital or a member of another medical facility) at the reception desk of drug prescription applicants, and made preparations.

March 14 (Mon.)

To avoid confusion in application to medical consultation, arrangements were made as follows:

1) We set up separate application booths for our patients and patients of other hospitals.

2) A new patient application form was given to patients of other hospitals, and explanations such as how to fill it out were given; we were proxies for those who couldn't.

3) Medical Matter Division staff were assigned to the examination room to explain how to redeem medicine after examinations.

4) Regarding the allocation of workers at night, the number of clerical staff at the triage post was reduced to 2 to 4 people and 2 to 3 hours, as 72 hours had passed since the earthquake.



3月15日（火）

- ① 診療体制は前日と同じ対応を予定していたが、5：30から自家発電機が停止。また、市内の脇地区の火災の延焼と拡大で、患者に避難・誘導が生じたことから、診療は救急患者のみとし薬処方希望者に対する対応を休止した。
- ② 5：30に自家発電装置が停止。以後、以下の如く、電力の供給が復旧した。
- ③ 10：00に自家発電装置が復旧
- ④ 13：00に東北電力から電気の供給が再開

March 15 (Tue.)

- 1) Although we had planned the same response as the previous day regarding the medical care system of our hospital, the in-house generator stopped at 5:30. In addition, the spread and expansion of fires in the Nainowaki Area forced us to prepare for evacuation and guide our patients. Our medical care was restricted only to emergency patients, and our response to patients who wanted their prescribed medications was remitted.
- 2) The in-house generator stopped at 5:30. Thereafter, the power supply was restored as follows:
- 3) The in-house generator was recovered at 10:00
- 4) Power supply from the Tohoku Electric Power Company was resumed at 13:00.



3月16日（水）

- ① 電力が復旧したことから、薬処方希望者への対応を再開した。
 - 診療は救急患者のみ。
 - 当院にかかりつけ、他院にかかりつけの両方に対応し、薬の処方オーダーリングシステムを使用する。

8：00 整理券配布開始

内科外来で当院かかりつけに対応

循環器外来で他院かかりつけに対応

- ② 8：30から、医事課職員が来院患者を10名ずつ院内に誘導し、総合受付で患者番号を検索し整理券に転記した。
- ③ 他院かかりつけ患者には新患申し込み用紙を渡し、記載方法などの説明、又は代理記載を行った。
- ④ 当院に受診歴の無い方には、新患登録を行い、ID番号を作成した。
- ⑤ 診察室に、医事課職員を配置し、医師がオーダ入力後に、薬の引き換え番号を記載した整理券を渡し、薬の引き換え方法を説明した。

March 16 (Wed.)

1) As the power supply was restored, the response to patients who wanted their prescribed medications was resumed.

- Medical care was restricted only to emergency patients.
- We responded to both our hospital's patients and other hospitals' patients; we determined use of the ordering system for prescribing medications.

At 8:00, we started to distribute numbered tickets.

We responded to our hospital's patients at the outpatient clinic of internal medicine.

We responded to the other hospitals' patients at the outpatient clinic of cardiology.

- 2) From 8:30, the staff members of the Medical Affairs Division guided 10 patients at a time into the hospital, searched their Patient-ID Number on the system and copied it on a numbered ticket at the General Front Desk.
- 3) For other hospitals' patients, we handed out new patient application forms, and explained how to fill them out or stood in as a proxy for patients.
- 4) For those who hadn't had a history of coming to our hospital, we registered them as new patients and created an ID number.
- 5) We allocated the staff members of the Medical Affairs Division to the examination room, and after the doctor entered the order, he handed a numbered ticket with the medicine redemption number and explained how to redeem the medication.

3月17日（木）

- ① 6:00にトリアージテントの撤去、日中のトリアージポストは総合受付に変更。夜間のトリアージは宿直者が行い、その補助に事務職員（総務課・医事課）を交替で配置した。
- ② 診療体制は前日と同じ。

3月18日（金）

- ① 8:30に固定電話が利用できるようになった。
- ② 診療体制は前日と同じ。

3月19日（土）

休日における救急体制

- ① 日中は、トリアージ担当に5名、総合受付2名、案内2名を配置、夜間は宿直者が対応した。

March 17 (Thu.)

- 1) The triage tents were removed at 6:00, and the function of the daytime triage posts shifted to the General Front Desk. The night shift staff performed the nighttime triage, and some administrative staff members (General Affairs Section and Medical Affairs Section) were assigned to assist them.
- 2) The medical care system was the same as the previous day.

March 18 (Fri.)

- 1) Fixed telephones became available at 8:30.
- 2) The medical care system was the same as the previous day.

March 19 (Sat.)

The holiday emergency system was set.

- 1) During the daytime, we assigned five members to the triage, two to the General Front Desk and two as guides, and night watchers responding during the nighttime.

3月20日（日）

前日と同じ体制

3月21日（月）（休日）

前日と同じ体制

3月22日（火）

外来診療を再開。

トリアージ・タグの使用はやめ、通常通りにカルテを使用することになった。

診療会計は外来事務のスタッフの確保の見通しが立たないことから行わず、後日の会計とした

患者の受付 8：00～11：00（7：50整理券発行）

診察券を紛失・流失した方が多数いた為、再来受付機は使用せず全ての受付を総合受付を通させ、患者ID番号の確認を行い、受付を行った。また、カルテ抽出機を稼働させた。

診療開始 9：00

救急診療・薬処方は全科で対応。制限を設けず診療を再開させたのは小児科、眼科、耳鼻科、皮膚科、歯科で、制限付で外科は一部の抗がん剤治療について、整形外科はリウマチ治療を主として、産婦人科では産科を受け入れることにした

（一般診療を行わない診療科：内科、呼吸器科、循環器科、脳外科、泌尿器科）。

March 20 (Sun.)

The medical care system was the same as the previous day.

March 21 (Mon.) (holiday)

The medical care system was the same as the previous day.

March 22 (Tue.)

Outpatient medical care was resumed.

We stopped using triage tags, and we decided to use medical records as usual.

Medical accounting was not carried out because we could not identify when we would be able to staff the office workers of the outpatient clinics; the accounting was postponed.

8:00 to 11:00: Patient acceptance (we put out numbered tickets on 7:50.)

Many patients had lost their consultation tickets (such as by them being swept away), we did not re-issue via the re-examination ticketing machines, every acceptance was handled at the General Reception where patient ID numbers were confirmed. We also operated medical record extraction machines.

9:00: Medical practice started.

Every outpatient clinic responded to emergency medical care and the prescription of medications. Outpatient clinics that resumed their medical care without restrictions were those of pediatrics, ophthalmology, otolaryngology,

dermatology and dentistry. It was decided that other outpatient clinics should accept patients with some restrictions: the outpatient clinic of surgery for certain chemotherapies, the outpatient clinic of orthopedics mainly for the treatment of rheumatism and the outpatient clinic of obstetrics and gynecology for the medical care of obstetrics (some sections of outpatient clinics did not carry out general medical care: internal medicine, pulmonary medicine, cardiology, neurosurgery and urology).

3月23日（水）

診療体制（前日に引き続く）

受付では再来受け付機を使用

一般診療は前日に加え、呼吸器科、循環器科、外科が行うことになった。

3月24日（木）

診療体制（前日に引き続く）

外来診療会計の発行を開始。また、一部負担金の支払猶予の制度の案内も行った。

一般診療は前日と同じ。

翌日からの現金収納に備え、つり銭用の両替を一関市千厩町の銀行で行った。

March 23 (Wed.)

The medical care system was the same as the previous.

The front desk started using the re-examination ticketing machine.

It was decided that general medical practice should start at the outpatient clinics of pulmonary medicine, cardiology and surgery in addition to those of the previous day.

March 24 (Thu.)

The medical care system was the same as the previous day

The accounting of outpatient care was restarted.

In addition, we provided information on grace schemes of deferring partial payments.

General practice was the same as previous day.

In preparation for receiving cash from the next day, we carried out a money exchange for change at a bank in Senmaya, Ichinoseki.

2. オータリングと医事システムの保守、点検について

当院の平時のオーダリングは、処方オーダ・移動（入退院・部屋移動）オーダ・給食オーダの範囲である。

3月11日（金） 14：46地震発生

① 電算室の状況を確認したところ、自家発電装置が作動しており、サーバー及び空調システムに異常はなかった。

- ② 各外来、病棟を巡回し、使用可能な端末を確認した。
- ③ 各部門（薬局、栄養課、検査）間とのデータの送受信状況を確認したところ、各部門では、平成19年以前の旧システムで使用していたネットワーク（通信網）を利用している部署もありそれに繋がるハブ（通信機器）の電源が、自家発電につながっていない為、OAタップを利用し、電源の取り直しを行った。

尚、節電の為、オーダーリングは病棟のみの使用とし、外来は問い合わせ用に医事システムの端末1台のみの使用とした。

2. Regarding the maintenance and checking of the ordering system and the medical affairs system

The ordering system of our hospital in normal circumstances includes prescription ordering, transfer ordering (hospitalization-discharge, patient-transfer inside the hospital) and hospital meal ordering.

March 11 (Fri.) 14:46 the earthquake occurred.

- 1) When we confirmed the situation of the computer room, the equipment of in-house power generation was on, and we could not find any problems with the computer server and the air conditioning system.
- 2) We went around every outpatient clinic and hospital ward, and made sure of available terminals.
- 3) When we confirmed the situation of data communication among each division (Pharmacy, Nutrition Division, and Clinical Laboratory), some sections of those divisions were using an old communication network system, one in use before 2007. Since the outlet hubs (communication devices) connected to the network were not connected to the in-house power generation, we took power supply from another route using OA taps.

In order to save power, we decided to use the ordering system only in the hospital wards and only one terminal of the medical affairs system for inquiry in every outpatient clinic.

- ④ 急なシステムの停止に備え、医事会計のデータより、過去1年間の受診歴・処方履歴をアクセスで、入退院歴をエクセルで作成・圧縮し、ノート型パソコン4台にデータをコピーした。
- ⑤ 申し出の名前・生年月日が、当院のシステムに登録されているデータとの食い違いが2割程度あった為、医事課の男性職員を1名、防災センター（夜間受付）に配置し、患者確認を徹底した。
- ⑥ 新患登録をする必要が増える可能性がある為、新患登録用の仮IDを50名分作成した。

- 4) In preparation for a sudden system failure, we created and compressed patients' consultation histories and prescription histories during the past year

with Access® (a database application), the hospitalization-discharge histories during the past year with Excel® (a spreadsheet application) from the data of the medical affairs accounting, and then copied them into four lap-top personal computers.

5) Since the number of differences between their name and date of birth they offered and those having been registered in the system of our hospital was about 20%, we staffed one male staff member of the Medical Affairs Division to the Disaster Preparedness Center (the night-time window) and did thorough patient identification.

6) As new patient registrations could increase, we created 50 temporary ID's for registering new patients.

⑦ 3月15日5:00より、電算室に電源を供給している自家発電装置が不安定になり、瞬電が頻発した。オーダ・医事のサーバーには、UPS（無停電装置）が付いているが、空調は瞬電の度に停止する為、その都度、電源の再投入を行った。

⑧ 3月15日5:30 自家発電装置が停止し、オーダ・医事のサーバーも停止した。

⑨ 3月15日10:00 自家発電装置が復旧し、サーバーも無事に再起動したが、念のため、システムの再点検を行った。

⑩ 3月15日13:00 東北電力からの電気供給が再開され、システムの再点検を実施、翌日以降の診療に備えた。

7) From 5:00 on March 15, one of our in-house power generators, which was supplying power to the computer room became unstable, and momentary power failures occurred frequently. Although a UPS (uninterruptible power supply unit) was attached to each server of the ordering system and the medical affairs system, since the air conditioning stopped every time there was a momentary power failure, the power had to be turned on again each time.

8) At 5:30 on March 15, the in-house power generator stopped, and the servers of the ordering system and the medical affairs system also stopped.

9) At 10:00 on March 15, the in-house power generator was recovered, and we were also able to restart the servers without mishap. However, just to be sure, we inspected the systems again.

10) From 13:00 on March 15, the electricity supply of the Tohoku Electric Power Company was resumed, and we inspected the systems again and prepared for medical care from the next day.

⑪ 当院のオーダーリングシステムは、病室の定数を越えて入院登録ができない為、

正確な入院患者リストを作成する為、3月16日から、各病棟（9病棟）を廻り、入退院名簿を作成した。

⑫ その後、深夜や休日において、余震や東北電力の点検作業に停電が発生、その都度、点検を行った。

⑬ 当院は電算室の管理（システムの停止、再起動）を委託しているが、24時間対応していない為、緊急時には不慣れな職員でも、安全にサーバーを停止させることが出来る様、プログラムの作成をコンピューター会社に依頼し、シミュレーションを実施した。

11) Because the ordering system of our hospital could not register hospitalization beyond a fixed number of hospital rooms, we went around every ward (9 wards in total) from March 16 and created a name list of hospitalized and discharged patients to create an accurate inpatient lists.

12) After that, we carried out inspections late at night and on holidays each time power failure occurred at an aftershock and when inspection work of the Tohoku Electric Power Company was underway.

13) Our hospital had entrusted the management of the computer room (stopping and restarting the system), which had not been responding at all times. Therefore, we asked our computer company to create a program so that it allowed even an inexperienced staff member to make a safe stop of the servers in an emergency and carried out its simulation.

3. 震災下での医事対応について

1) トリアージ・タグ使用時の請求について

当院は外来業務（新患受付、各科外来の窓口、料金計算、保険請求業務）を地元の業者に委託しているが、委託職員55名のほぼ全員の通勤用の車が津波で流出してしまい、ガソリン不足もあり、職員・委託職員の確保が困難な状況であった。

電力不足と患者の集中による混乱などの為に、平時同様のカルテ使用ができず、トリアージ・タグを使用した診療（3月22日8：30まで）を行った。

3月18日までは、電話やインターネットが使用出来ない状況に有り、震災時の医事対応についての情報を入手できなかった。

3. Regarding the response of medical affairs under the circumstances of the earthquake disaster

1) Accounting when we used triage tags

Our hospital had entrusted outpatient services (new patient acceptance, services at the window of each outpatient clinic, fee calculation and insurance billing) to a local contractor, but almost all commuting cars of the 55 contractor-workers had been washed away by the tsunami and gasoline was still scarce, which made it difficult to secure staff members and contractor-workers.

Due to confusion and other complications because of power shortage and the large amount of patients congregating to the hospital, we could not make usual use of medical records like we did in normal circumstances, so we carried out medical care using triage tags (until 8:30 on March 22).

Until March 18 we could not use phones or the Internet, so we could barely obtain any information about how to respond to medical situations at the time of earthquake disaster.

3月11日の震災直後から22日早朝までのトリアージ・タグを使用した外来診療の患者数は3,773人（実人数3,361人）で診療費は24,676,080円、医師が直接患者さんから聞き取って処方した人数1,482人分及び避難所に払い出した薬剤費用は6,322,342円で合計30,998,422円になった。

尚、トリアージ・タグの記載漏れや、近所の方が患者を連れて来た等の理由で、個人を特定出来なかったケースが107件あった。

The number of patients given triage tags from immediately after the earthquake on March 11 until the early morning of March 22 at our outpatient clinics was 3,773 (the real number was 3,361) and the medical expenses came to 24,676,080 yen. The number of prescriptions that our doctors had prescribed by directly asking patients about their medication was 1,482, and the cost of medications having also been provided to shelters came to 6,322,342 yen, totaling 30,998,422 yen.

In addition, due to reasons including triage tags having been omitted and patients having been taken to the hospital by their neighbor, there were 107 cases which we had not been able to identify.

4月になり30,998,422円の請求方法について保険請求か災害救助法かの照会を市及び県におこなった。さらに7月に厚生労働省に電話で照会をおこなっているが、未だに対応策は明確になっていない。

Once April came, we inquired to both city and prefectural departments about whether billing methods came under insurance claims or complied with the Disaster Relief Act regarding 30,998,422 yen. In addition, we further inquired to the Ministry of Health, Labor and Welfare by phone in July, but the solution has yet to be clarified.

照会してわかったことは、

- ① トリアージだけは、保険診療の対象外である。ただし、トリアージ後、処置を行い、その内容を診療録に記載した場合にあっては、保険診療の対象となる。
- ② 医療機関への災害救助法の適用は前提として建物が崩壊などし、保険診療が行えなかったことを想定している。
- ③ 被災後に診療を行った場合の保険診療に係る概算による請求方法は、通常の手続きに

よる請求を行うことが困難な場合である。

以上の3点である。

Three things that we found out by inquiring are as follows:

- 1) The triage itself is outside the scope of insurance practice. However, if treatment is performed after triage and the details are documented in a medical record, it is covered by insurance.
- 2) The application of the Disaster Relief Act to the medical institution is based on the premise that the building collapsed and health care services provided by health insurance could not be provided.
- 3) The approximate billing method of insurance practice in the cases of medical care having been performed after the disaster, can be taken only when it's difficult to claim insurance by normal procedures.

2) トリアージ期間外の診療の請求について

被保険証等を提示できない方への対応や、一部負担金を免除する通知が、インターネット掲載されていたことを3月18日に確認する。

一部負担金の猶予については、この通知が病院宛の通知ではなく、保険者宛の通知文であった為、病院で「一部負担金を猶予」すべきかものかどうか、判断に迷いが生じてしまった。

2) For claims for insurance of medical practice during the period other than the triage

On March 18 we confirmed notifications regarding the response to patients who could not present their insurance cards and the remission of co-payment were posted on the Internet.

Regarding the remission of co-payment, because the notification was not addressed to the hospital but to the insurers, we hesitated whether or not our hospital should remit co-payment.

患者への「一部負担金の猶予」に該当するかどうかの広報の為に、人員を配置し対応したが、当院の説明不足の為、或いは患者に理解されず、4月になってから、新たに「自分はそれに該当する」との申し出が多く、1,000件を超えたレセプトの返礼を行った。

3月18日に、「被保険証等を提示できない患者や一部負担金の免除」に対応する為、コンピューター会社と連絡を取り、会計入力ができる様にプログラム（法別）を追加した。

In order to inform our patients whether the remission of their co-payment was applicable or not, we had staff members respond to the task. However, because of our insufficient explanation or because patients did not fully understand, in the beginning of April, many requests came in from people claiming to be eligible, and we had to return over 1,000 receipts.

On March 18, to respond to patients who could not present their insurance card, and the remission of co-payments, we communicated with our computer company and had them add a program so that accounting input could be possible from our end.

3月29日付で、厚生労働省から「電子レセプトの記録に係る留意事項」が通知されたが、レセプトの提出日までの期間が短い為、コンピューター会社よりシステム・エンジニアを病院に直接派遣してもらい、レセプトの記載方法及び債権（病院の保険請求額の計算）のシステム変更を行った。尚、システムでは対応できない「保険者を特定できない場合には患者の連絡先を明細書の欄外上部に記載する」という部分については、基金及び国保連合会に確認し、「患者の連絡先をレセプトの摘要欄に記載する」という当院の要望を受け入れていただき、提出日に間に合わせた。

As of March 29, the Ministry of Health, Labor and Welfare notified to us of ‘points to be considered relating to the recording of electronic receipts’, however, because of the short submission deadline of receipts, we asked the computer company to directly dispatch a system engineer to our hospital, and had him modify the system of the description method of receipts and bonds (the calculation of insurance billings of our hospital). Furthermore, concerning a part of the notification instructing us to ‘mention the contact address of the patient on the upper margin of a bill in the case it is not possible to identify his/her insurance company’, to which our system could not handle. We confirmed with insurance funds and the Federation of National Health Insurance to have the contact address of the patient be mentioned on the remarks column of his/her receipt. We managed to meet the submission deadline.

3) トリアージ・タグの整理

3月23日より医師事務作業補助者により、分散していたトリアージ・タグと処方箋を五十音順に整理し、患者番号を検索した。（写真1・2）

入力（会計入力）については、災害救助法かレセプト請求かがあいまいなことと、外来スタッフの確保が困難な為、5月16日より、仮の診療科を設定し入力作業をはじめ、5月末までに作業を終了させた。

3月11日～3月21日の外来患者数

延べ3,773人（実3,361人）

3) Setting the triage tags in order

From March 23, doctors’ office work assistants arranged the triage tags and prescriptions that had been dispersed were arranged in the order of the Japanese syllabary, and they searched and confirmed triage tags with their patient numbers. (Photo 1 and 2)

Regarding the input of information (accounting), since it was unclear whether we should go by the Disaster Relief Act or by an ordinary receipt claim and as it was

difficult for us to secure outpatient clinic staff, a temporary clinical department to deal with inputting was set up from May 16, and the work was completed by the end of May.

The number of the outpatients from March 11 through March 21:
Total 3,773 (the actual number 3,361)

写真1 Photo1



写真1 Photo2



最後に

本大震災における課題として、以下のことが特に重要と考えられる。

- ① 非常時の情報収集及び伝達（院内・院外）
- ② 事務職員の確保（人数、休憩場所、食事）
- ③ 患者の誘導方法及び待合スペース
- ④ システムの24時間保守
- ⑤ データの保存・閲覧（検索）方法

⑥ 経過の記録（写真を含む）

⑦ 電力の確保

である。

又、インターネット上に掲載された、厚生労働省の通知については、あいまいな表現が多かったことと、情報の発信が遅く、対応に苦慮した。

In conclusion

Within the challenges of this earthquake disaster, I consider the following to be of particular importance.

- 1) Information gathering and its transmission in case of emergency (inside and outside the hospital)
- 2) Securing office workers (the number of workers, as well as securing their resting places and meals)
- 3) The way of managing patients and their waiting spaces
- 4) 24-hour maintenance of the computer systems
- 5) Saving and browsing method of data
- 6) Recording the course of events, including photos
- 7) Ensuring electricity

In addition, the notifications of the Ministry of Health, Labor and Welfare which had been posted on the Internet had used many ambiguous expressions, and the transmission of information was very delayed, which made it difficult to respond to situations.

気仙沼市立病院附属看護専門学校の 東日本大震災時における活動

The Kesennuma City Hospital Affiliated Nursing School

The activities of Kesennuma City Hospital Affiliated Nursing School around the time of the Great East Japan Earthquake

学校概要

気仙沼市立病院附属看護専門学校は、学生定員120名（各学年40名）、3年課程（医療専門課程）の専修学校です。気仙沼市田中地区に位置し、母体病院である気仙沼市立病院と同じ敷地内に設置されています。昭和43年9月公立気仙沼高等看護学校・進学コースとして設立され、昭和48年4月には3年課程の各種学校に変更されました。平成13年4月に専修学校の設置をはかり公立気仙沼看護専門学校に校名を変更、平成18年3月31日気仙沼市と唐桑町の合併に伴い、気仙沼市立病院附属看護専門学校に校名変更となり、現在に至ります。

The overview of the school

The Kesennuma City Hospital Affiliated Nursing School provides 3-year courses (Medical Care Specialty Course). The technical school has a student capacity of 120 (40 students in each year). It is located in the Tanaka Area in Kesennuma and was also placed at the same site as Kesennuma City Hospital, its mother hospital. It was established as the Public Kesennuma High Nursing School, Preparatory Course, in September, 1968 and was changed to a 3-year vocational school in April, 1973. A plan to make a special vocational school was established, and its name was changed to the Public Kesennuma Nursing Vocational School and was further changed to the Kesennuma City Hospital Affiliated Nursing School when Kesennuma City and the town of Karakuwa were amalgamated on March 31, 2006; the name has been used up to now.

発災から避難（気仙沼高校）まで〈2011年3月11日（金）午後2時46分東日本大震災発生〉

この日校内には、育児休暇1名、病気休暇1名、年次休暇2名を除く職員6名と嘱託職員1名、模擬試験を受けている2年生38名と自主学習のために登校していた1年生10数名がいました。1年生は前日と2班に分かれて気仙沼本吉広域消防署にて上級救急救命講習を受けており、

震災発生時も19名が消防署にいました。3年生は3月6日に卒業式を終えて学校にはいませんでした。

From the occurrence of the disaster until the evacuation (to the Kesennuma High School) <The East Japan Great Earthquake Disaster occurred at 14:46, March 11, 2011 (Friday) >

On that day in the school, there were 6 staff members except one on maternity leave, one on sick leave and two on a yearly paid holiday, one part-time worker, 38 students of their 2nd-year, who were taking a practice examination, and about 10 students of their 1st-year having come to school for self-study. The first years were divided into two groups from the previous day and were undertaking advanced paramedic training at the Kesennuma Motoyoshi Wide Area Fire Department, and 19 students were at the fire department even when the earthquake struck. The 3rd-year students had already finished their graduation ceremony on March 6 and were not at the school.

地震は3分間揺れ続け、段階を追って強くなり、学校が倒壊してしまうのではと思う程、今まで体験したことのない大きな揺れでした。

2年生は全員3階の教室におり、安全を心配した教員に対して3階に行くように指示しましたが、階段の手すりが大きく揺れて立っていることが出来ず、這って階段を上ったと後で聞きました。

The shaking continued for 3 minutes, gradually getting stronger, so strong that we thought the school building would collapse. We had never experienced such a strong earthquake.

All 2nd-year students were in a classroom on the 3rd floor, and I instructed teachers, who were concerned about students' safety, to go onto the 3rd floor; I later heard that the railing of the stairs shook so much that they couldn't stand and crawled up the stairs.

揺れが少し弱くなるのを見計らい、教員の誘導で2年生は1階の玄関に向かって階段を一斉に降りて来ました。泣いている学生もいて同級生に励まされていました。3階の教員は残っている生徒の確認をしてから一階に避難しました。教務室の中の書棚は倒れ書類が山のように散乱し、足の踏み場もない状況になっていました。

When the shaking weakened, the 2nd-year students came down the stairs together toward the entrance of the 1st floor following the teachers' instructions. Some were crying and their classmates were trying to give them courage. The teachers on the 3rd floor confirmed if there were remaining students or not and then evacuated to the 1st floor. Some bookcases in the school affairs room fell down, and the documents were scattered and piled up, bringing about a situation in which the room had no open floor space to put our feet.

何度も強い余震が続く中、私たちは学校玄関前の駐車場に退避し、学生寮から避難してきた1年生と共に、60名程の塊となって、治まらない余震に恐怖を感じながらその場に待機しました。間もなく、市内に出かけていた1年生の寮生もあわてる様子で学校に避難してきました。この日はとても寒く、気がつけば学生はコートも羽織らず避難したため、お互いの体を寄せ合い寒さをしのいでいました。学生は携帯電話や財布も持たずに避難したので、余震が続いてはいましたが、3階の教室から貴重品や上着を取って来るように指示し教員と共に戻りました。

While many strong aftershocks followed, we evacuated to the parking area in front of the school entrance. About 60 students along with the 1st-year students who had evacuated from the dormitory were tense as the aftershocks did not subside. As moments passed, the 1st-year dormitory students having gone out to the city came back, evacuating into the school building in a state of panic. That day, it was very cold. The students didn't realize they had not put on a coat when evacuating, and they tried to keep warm by huddling with each other. They had evacuated without their mobile phones and wallets. Though aftershocks were continuing, we instructed them to go and get their valuables and jackets from the classroom on the 3rd floor, and they came back together with the teachers.

今にも雪が降りそうな凍りつく寒さをしのぐため、駐車場にあるプレハブの車庫の中に移動しましたが、強い余震でプレハブは大きな音をたてて揺れるので恐怖はさらに強くなりました。なかなか治まらない余震と寒さを防ぐため、さらに安全な病院北入り口の駐車場に学生を移動させました。学生は保護者や同級生に安否の確認を始めたり、ラジオで情報を得ようとしていました。通話は出来ませんでした。メールの送受信はまだ可能でしたので、そこで初めて消防署で講習中の1年生がそのまま避難している事が確認できました。

To overcome the freezing cold in which snow was likely to fall at any moment, we had moved into a prefabricated garage in the parking area. Strong aftershocks shook the prefabricated garage loudly, which frightened us even more. In order to guard ourselves against persistent aftershocks and the cold, we made the students move to a more secure parking lot at the north entrance of the hospital. The students began to notify their safety to their parents and classmates and tried to obtain information on



津波は学校校門まで押し寄せた

The tsunami had surged up to the school

the radio. As it was not possible to talk by telephone but still possible to send or receive e-mail, we were able to confirm for the first time there, that the 1st-year students training at the fire station taken refuge as they were.

市内の防災無線が大津波の襲来を叫ぶ中、間もなく学校の目の前の田谷公園まで津波が押し寄せてきました。それを見た教員の「津波だ！」との声に、学生と教職員は高台にある気仙沼高校を目指し避難することにしました。気仙沼高校の校庭にはすでに大勢の市民が避難して来ていました。指示された武道場に学生を誘導し終えた時には夕暮れ時となっていて、雪もちらつき始めていました。その時市内では大規模火災が発生し、その煙と炎はすぐ目の前が燃えているような錯覚を起こすほど暗闇を赤々と照らしていました。

While the wireless-activated disaster warning system in the city alerted of the incoming tsunami, it soon surged up to Taya Park in front of the school. When a teacher said “Tsunami!”, the students and faculty members decided to evacuate heading up to Kesennuma Senior High School which was on a hill. A large number of citizens had already evacuated to the schoolyard of Kesennuma Senior High School. It had already become evening when we finished guiding our students to the martial art gym of the school where we had been designated to go, and snow started to lightly



3月11日の夜に降り積もった雪

The snow that had laid deep on the ground at the night of March 11

fall. At the time, a large-scale fire had occurred in the city, the smoke and flames were casting red light into the darkness causing an illusion as if it were burning right before our very eyes.

気仙沼高校に学生を避難させた後、囑託の職員1名を学生と共にその場に残し、教務主任と教員5名は病院の救済活動に参加するため母体病院に向かいました。当日の夜は搬送困難なためか、怪我などで来院する市民はあまり多くありませんでした。外来ホールのテレビの前には人だかりができ、気仙沼市の火災が大きく取り上げられていました。私達はそこで初めて自分が置かれている被災の状況が分かりました。

教務主任と教員1名が病院に残り3名の教員は気仙沼高校の避難場所に戻って、学生と共にまんじりとしめない中、朝を迎えました。

After we evacuated students to Kesennuma Senior High School and left a part-time worker with the students, the school affairs chief and 5 teachers went to the mother hospital to participate in the relief efforts of the hospital. There weren't many citizens who came to the hospital because of injuries, and supposedly because of difficulties to

do with transporting them that night. People were crowding around a TV in the outpatient hall, and the fire of Kesennuma was widely reported on. For the first time, we understood the severity of the suffering that had been placed upon us.

The school affairs chief and a teacher remained in the hospital, and the other three faculty members went back to the shelter at Kesennuma Senior High School. Without sleep, we welcomed the morning along with the students.

避難場所としての学校

翌日12日朝6時、総務課長より、学校を避難場所にするので準備をするようにとの指示があり、すぐに準備に取りかかりました。8時には気仙沼高校に避難していた教員も学校に駆けつけて準備に加わりました。

The school as a shelter

At 6 o'clock the following morning, March 12, a decision was made that the school would be used as a shelter. We promptly started on preparations by the instruction of the general affairs manager. By 6 o'clock in the morning, some teachers who had taken shelter in the Kesennuma Senior High School also rushed to the nursing school and participated in the preparations.

本校が避難場所となった期間は2日間でしたが、延べ120名の市民が避難してきました。その中には、近隣の住民の方だけでなく、気仙沼市立病院のトリアージポストで緑のタグをつけられた方、傷を負ったが自力で歩行できる方、津波にのまれ全身へドロまみれの方、一晩中車内で水に漬かり動けなくなっているところを救助され低体温症になっている方などさまざまな方が運ばれてきました。車から救出され全身ずぶ濡れの50代くらいの女性を教室に案内しましたが、「私だけ助かりました。一緒に乗っていた娘はどこに行ってしまったのか。」と放心したようにお話になっていました。寒い教室で暖房器具も乏しかったため、陽の当たる場所の椅子に腰掛けて頂き、冷たい手をさすることしかできませんでした。

Although our school had been used as a shelter only for 2 days, 120 citizens in total had evacuated there. Among them were not only neighboring residents but also other people had been carried to the school: people tagged with green at the triage posts of the Kesennuma City Hospital, those who had been injured but could walk on their own, those who had been swallowed up by the tsunami and covered with sludge from head to toe, those who had been rescued after being submerged in their car throughout the night and had suffered hypothermia, and those who had a variety of difficulties. As we guided a woman in her fifties who was rescued from a car and was completely soaked to a classroom, she told her story absent-mindedly “Only I was rescued. Where has my daughter gone, who was in the car with me?” Since the cold classroom had insufficient heating equipment, we had her sit on a chair in a sunny place; we

could not do anything but warm her cold hands.



12日夜の図書室・車椅子に乗った40名近くの避難者。灯りも暖房も無い中、蠟燭の火のもと一夜を明かす。

Our library at the night of March 12: a little less than 40 evacuees on wheelchairs. They had spent the night under a candle light with neither light nor heating.

教員は、次々にやってくる避難者の対応に追われました。避難者の支援と併せて名簿作成と身元確認のためガムテープに氏名を記載し胸元に貼ることを行いました。本校の災害時の位置付けは、避難所ではありませんでしたが、それだけ多くの市民が被災し行き場を失っていることが想像できました。

Our faculty members were pressed to control evacuees coming in one after another. Alongside supporting those evacuees, we made a list and wrote their names on tape and put them on their chest for the purpose of identification. Although our school had not been assigned as a shelter in the case of a disaster, the number of citizens we had accommodated made us think that were so many citizens that had been affected and had nowhere to go.

避難所としての緊急災害用の食料の備蓄はゼロに等しく、避難者に差し出せる食料はありませんでした。ただ幸いにも、この日学生を迎えに来た保護者から「我が家は被害が少なかった

ので、先生方に食べてもらいたい」と御厚意でおにぎり16個いただいたので、それぞれを4等分にしたものと、りんごを8等分にカットしたものを避難者に提供しました。震災後、避難者が初めて口にした12日午前中の食事でした。その後も十分とは言えませんが、差し入れていただいたお菓子やお茶、イオン飲料、透析室から頂いた牛乳を温めて紙コップに少しずつ配ることが出来ました。

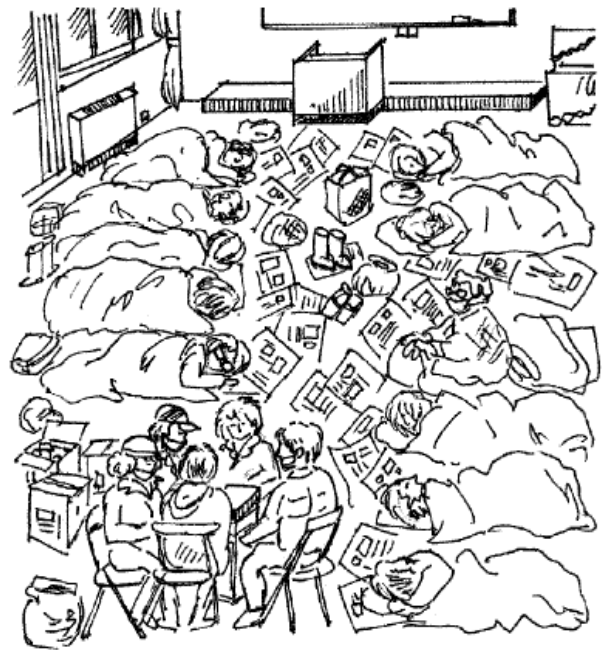
Our food stockpiles as a shelter for an urgent disaster was almost zero, and we had no food to give to the evacuees. But, fortunately, on that day, a parent coming to pick up a student said, “Our house had very little damage, so I would like the teachers to eat these foods” and gave us 16 rice balls; so we divided each rice ball into four equal portions and each apple into eight equal portions, and provided the evacuees with them. That meal on the morning of March 12 was the first the evacuees were able to have since the occurrence of the disaster. After that, although still short in supply, we were able to distribute things such as sweets, tea and sport drink that had been sent in

and heated milk that the Dialysis Center had given us.

食料を全員に行き渡らせることができないこともありました。「震災後から何も口にしていなかったのひと口でもありがたい。」と喜んで受け取ってくださる方も多かったのですが、中には、教員が自分達の事を後回しにしても一人でも多くの避難者に食べ物が提供できるように努力したにも関わらず、「学校職員は影で食べているんだ。」などの声もあり、避難者への対応の難しさを思い知らされました。又、部屋の割り当てに関しても、「この部屋より暖かい部屋に入っている人がいるけど、差別をしているのでは」と訴えてくる方もいましたが、学校にはエレベーターが無いため、自力で歩行できる方を2階・3階に、車椅子の方や高齢で歩行に不自由な方は1階に収容することにしていましたので、不公平感が生じないように教員は丁寧に対応していました。

Sometimes we did not have enough food to go around to everybody. Many people said, "I haven't eaten at all since the disaster, I welcome even a mouthful of food" and gladly received it. However, some said, "The school staff must be eating food behind our backs!" even though the staff were striving to supply food to as many evacuees as possible even while putting off eating themselves, which taught us of the incredible difficulty in responding to evacuees. In addition, regarding to the allocation of their rooms, some said, "Some people are staying in warmer rooms than this one. I suppose you are discriminating against us." However, the school staff courteously answered them so that they would not feel the sense of injustice, because we had decided to accommodate ambulatory people on the 2nd and 3rd floors, and people in wheelchairs and elderly people with difficulties moving around on the 1st floor because there is no elevator in the school.

夜になるとさらに寒さが増し、ライフラインが全て寸断されている中、電気もなく、



13日朝の講堂・・・冷え切った床に新聞紙やダンボールを敷き詰めた上に、薄いシーツを掛けただけの状態で、横になられている。

Our auditorium on the morning of March 13; the evacuees lay on sheets of newspaper and cardboard that had been carpeted on a completely cold floor, being covered only with thin bed sheets.

灯油の備蓄もストーブの台数も充分ではありませんでした。ストーブは時間を夜間だけと決めて、さらに限られた場所で点けましたので、学校は冷えきっていました。

While it became even colder during the night and the lifelines had all been cut off, we had no electricity and had neither enough stockpiles of kerosene nor enough number of heaters. We decided to light heaters only at night and further limit locations; it became completely cold in the school.

照明の代わりにキャッピングセレモニーで使用した蠟燭の残りを灯り代わりにしました。使用している教室、廊下、階段、トイレ至る所に設置し、灯火が切れないように蠟燭の交換と火災予防のために30分おきに巡回しました。排泄介助を必要とする高齢の方も多くいらっしゃいました。

In lieu of using electric lights, the candles that were used in a capping ceremony were used. We placed them everywhere such as in the classrooms, hallways, a staircase, lavatories, and patrolled every 30 minutes to check the candles for fire prevention and changed candles so that they wouldn't go out. There were also many elderly people who required toileting assistance.

看護学校という場所柄、学内演習で使用するシーツ、毛布、紙おむつなどは準備することができました。しかし120名の避難者全員に行き渡らず、寝具類もあつという間になりました。被災者には高齢の方が多く、シーツ1枚を巻いたところで寒さをしのげるはずはないのですが、教員はダンボールや新聞をかき集めて床に敷いたり、身体に巻きつけてさしあげたりしました。寒さのなか車椅子に乗ったまま一昼夜を過ごさなければならなかった方が何人もいらっしゃいました。津波にのまれ命からがら救出され運ばれてきた方の殆どはヘドロまみれでしたが、非常用物資が足りず着替えることも毛布に包むことも出来ない状況でした。ライフラインが全て寸断された中、私達に出来たことは、ストーブで沸かした湯で実習用の補液を温め、湯たんぽ代わりに当てることでした。それが十分でないことは分かっていたいますが、何もせずにはいられませんでした。

As a nursing school, we were able to prepare bed sheets, blankets, disposable paper diapers and more, which would have been used for lessons at the school. However, we could not distribute them among all of 120 evacuees and also ran out of bedclothes in no time. There were a lot of elderly people among the victims. It was impossible for them to withstand the cold with only a bed sheet so the school staff gathered lots cardboard and newspaper and laid them on the floors and helped them wrap their body with them. Some people had to spend a whole day and night while on a wheelchair in the cold. Most people who had been swallowed up by the tsunami, rescued by the string of their teeth, were transferred to our hospital covered in sludge from head to toe, but our emergency supplies were lacking; we were in such difficult circumstances that they could neither change out of their clothes nor wrap their body

with a blanket. While lifelines had all been cut off, what we could do was warm the bags of replacement fluid for training with hot water heated on a stove and to use them instead of hot-water bottles. Although we knew it would not be enough, we had to do something.

断水のため、トイレは汲み置きの水を使用して頂こうと思いましたが、不自由な身体の高齢者の方には難しいことでした。たちまち便器は排泄物であふれてしまいました。教員はトイレ掃除も手分けしてやりました。

13日の夕方、本校にいた避難者は無事に全員ケー・ウエーブ（気仙沼市総合体育館）にバスで移送されました。

Due to water outages, we intended to have evacuees use reserved water to wash their hands after they used the toilet, but it was difficult for the handicapped elderly to do so. In no time, toilet bowls were filled with excrement. The teachers also cleaned those lavatories separately.

In the evening on March 13, all the evacuees who had been in our school were safely transferred to the K-Wave (the Kesennuma City General Gymnasium) by bus.



母体病院へ救済活動参加

3月12日と13日は避難所となったため、避難者の支援に当たりましたが、避難所が解除された14日より教員は3名ずつローテーションで母体病院の救済活動に合流し、正面玄関での受付とトリアージの黄色及び緑色ブースでの看護に当たりました。それぞれのブースの担当看護師と共に補液の管理やバイタルサインの測定、フォーレ留置、浣腸、車椅子やベッドの移送などを行いました。

Participating in the relief activities of our mother hospital

On March 12 and 13, our school functioned as a shelter, so we responded to supporting the evacuees. But, from March 14, when our school was released from our duty as a shelter, our teachers joined the relief efforts of the mother hospital in groups of 3 in rotation and responded to acceptance at the front door and nursing in the yellow and green triage booths. We were managing fluid replacement therapy, measuring vital signs, indwelling Foley catheters, using enemas, transferring wheelchairs and beds, and more along with nurses taking charge of each booth.

食べ物も水も口にしていないという来院者には、外来に設置した飲料水を提供しました。「津波で薬を流されてしまい、岩手県大船渡から10時間以上もかけて歩いて病院までようやくたどり着いたの」と涙ながらにお話になり、玄関前で炊き出しをしていることを伝え

ると泣いて喜んでいた方もいました。

We provided visitors who had taken neither food nor water with some drinking water placed at the outpatient section. A visitor said with tears in her eyes, “My medication had been swept away by the tsunami, and I walked from Ofunato-City, Iwate Prefecture, taking more than 10 hours, and barely made it to the hospital”, and, when we talked to another person about food being provided in front of the entrance, he/she cried tears of joy.

正面玄関受付では、家族の安否を確認に来院する人で混雑しておりました。どの顔からも焦りと疲労がみられ、靴や長靴はドロまみれで、一縷の望みを託し道なき道を歩き続けようやくここまでたどりついたということが想像できました。結局、安否の確認が出来ずに多くの方が肩を落として病院を後にする姿に申し訳なさで一杯になりました。

The desk at the main entrance was crowded with people who had come to the hospital to confirm their family’s safety. Their faces showed impatience and fatigue, and their shoes and boots were all covered with mud, which made us imagine the struggle they had endured to get here after having walked on trackless paths with a thread of hope in their mind. I felt very sorry for the many that could not confirm their family’s safety and left the hospital with their shoulders drooped.

学校運営

この時期、後期単位修得試験を終えたばかりで、その採点と、単位認定の教育審議会を開催しなければなりませんでした。しかし、学校長、副学校長を始め、講師である病院の医師や教員が病院での救済活動を行うため、採点の作業と審議会の開催は不可能な状態でした。

1・2年生に関しては、3月22日までに全員を親元に返すことが出来ました。学校長より学生は自宅待機との指示があり、そのまま春休みに入ることになりました。在校生の始業は4月25日、新入生の登校は4月26日（入学式は中止）に決まりました。

The management of the school

During this period, students had just finished their 2nd semester tests for credits, and we had to mark papers and organize an education council to approve credits. However, because the hospital’s doctors including the school principal and the deputy school



学生を気仙沼高校に避難させた後、母体病院の救済活動に加わった。

After we made our students evacuate to the Kesennuma Senior High School, we joined the relief efforts in our mother hospital.

principal, who were the instructors of the school, and the school teachers had to assist with relief efforts at the hospital, we were unable to hold the council or mark papers.

Regarding the 1st and 2nd-year students, we were able to have every student return to their homes by March 22. The school principal gave the students instructions to stay at home; it was decided that they would enter the spring vacation. We decided the opening date of the school for current students to be April 25 and the date for new students to be April 26, respectively. The entrance ceremony was canceled.

3月17日には、平成23年度の学生実習をお願いすることにしていた外部の施設の被災状況調査を始めましたが、実習調整者は施設との連絡を取ることに苦労しました。実習施設33施設中11施設が壊滅的な被害を受けていることが分かり、学生の実習を受け入れることの出来ない状況でした。東北厚生局の指導もあり実習予定を大幅に見直し、さらにその対策も考えなければなりませんでした。

On March 17, we started to survey the disaster situation of external facilities that we were planning to reserve for the 2011 student training. Training coordinators had a hard time getting in touch with those facilities. It turned out that 11 out of 33 training facilities had been affected catastrophically. The facilities were in a difficult situation and could not accept our students for training. The Tohoku Bureau of Health and Welfare had also significantly revised the training schedule, to which we had to consider further provisions.

講師の方々には自宅や職場も罹災されている方も多く、講義をお願いできる状況ではありませんでした。学校の教員が代わって講義をしなければなりません。今年度新しい分野が始まり教員の講義時間が増えていましたが、その準備の時間も作れない状況でした。それでも教員は、4月25日の始業に向けて準備をして行くしかありませんでした。

Many of our instructors had their houses or offices damaged. We could not ask them to give lectures so the schoolteachers had to give lectures



家が流されたりするなどして実習着がなくなってしまった学生のために、全国の卒業生から送られてきた実習着。特別お願いしたわけではないのに、たくさんの実習着が届いたのです。

Practice clothes were brought from graduates all over Japan for our students who had lost them because of their houses having been washed away by the tsunami and other reasons. Although we had not requested them, many arrived.

instead. In the next fiscal year, the school was going to introduce new fields of study, and the lecture time of the teachers would increase. We had no time to prepare in this state. However, we had no choice but to prepare for the opening on April 25.

3月28日には、学生の自宅の被害状況や流失した教科書、ユニフォームの調査も始めました。ユニフォームについては、お願いしたわけではありませんでしたが、後輩を心配してくれた卒業生がきれいにクリーニングをして送ってくれたり家族の方が持って来て下さったりしてかなりの数が集まりました。さらに文房具などを送ってくれた卒業生が沢山いました。

On March 28, we also began to inquire about the damage situation of the students' homes, if their textbooks hadn't been washed away, and about their uniforms. Regarding their uniforms, although we had not intended to request them, some alumnae of the school that were worrying about their juniors thankfully sent us clean uniforms, and some families of the alumnae brought them to the school, so we were able to obtain a considerable number of them. Furthermore, a lot of graduates sent us things such as stationery.

この震災で罹災した学生は118名中33名で、そのうち気仙沼市へ授業料等の減免の申請をした学生は26名いました。

33 out of our 118 students had suffered from this earthquake disaster; 26 out of the 33 students applied for the exemption of tuition fees to the Kesenuma City Hall.

学生の安否確認

学生の安否確認は、地震直後には携帯電話のメールで連絡がとれていましたが、電波の基地局も大きな被害を受けたことから3月11日の夜には使うことができなくなりました。

本校へ入学を希望している学生とは、自宅にも出身校にも連絡がとれず生存しているのかさえ分からない状況でした。新入生全員が無事であることが分かったのは3月22日でした。

その後、3月6日の卒業生も全員無事が確認されました。学生に犠牲者はありませんでした。

Safety confirmation of the students

Regarding safety confirmation of the students, we had been able to get in contact by e-mail of mobile phones immediately after the earthquake, but those services were no longer available from the night of March 11 because the radio base station was also severely damaged.

We could not get contact with students who had wanted to enter our school through their home or their school they had graduated from; such a condition prevented us from confirming whether they were alive or not. It was not until March 22 that all the new students were found to be safe.

After that, all of our graduates who had graduated from our school on March 6 were also found to be safe. There were no student victims.

講師の安否確認

外部講師の安否確認は難航しました。4月に入ってから安否確認がようやくできた講師もいました。行方不明の講師の方もいらっしゃり、そのご家族の方とも連絡が取れないまま、新たに別の方に講師をお願いしなければなりませんでした。この被災状況のなかで新しく講師をお願いすること、また前の講師の方に対しても行方不明のまま次の講師をお願いしなければならないことは、大変申し訳ない気持ちでした。

残念なことに行方不明だった講師の方は死亡が確認されました。

Safety confirmation of our instructors

Safety confirmation of our external instructors was a slow process. We were finally able to confirm safety of some instructors after the beginning of April. Some instructors were still missing, and we could not get in contact with their family either, so we had fill those positions with other instructors. We felt terrible asking new instructors to start working in a disaster situation such as this, and to previous instructors as we had to ask others to take their job while they were still missing.

Unfortunately, the missing instructors were later found to have passed away.

避難所（気仙沼高校）の学生ボランティア

3月11日（金）気仙沼高校に避難した学生は1年生23名、2年生39名の61名でした。嘱託職員1名と学生は3月22日まで気仙沼高校に避難しました。連絡のつかない娘の安否の確認をするため山形、秋田、岩手などから何時間もかけて迎えに来た保護者もいらっしゃいましたが、3月22日までに全員が保護者のもとに帰る事ができました。

Student volunteers in the shelter (the Kesennuma Senior High School)

Our students who had evacuated to Kesennuma Senior High School on March 11 (Friday) were 23 students of their 1st-year and 39 of their 2nd-year, 61 in total. One part-time worker and the students had evacuated to Kesennuma Senior High School until March 22. Worried parents who couldn't get in touch with their daughters came from places hours away such as Yamagata, Akita, Iwate to pick up them up. Every student was able to get home by March 22.

避難所では学生は4人1組となり24時間体制で以下の活動をしました。

- ・高齢者のお世話、特に排泄・食事・歩行の介助
- ・避難者の食べ物の配給の手伝い
- ・ボランティアナースと共に、体調を崩した避難者の病院受診のお世話（昼夜問わず）
- ・体育館の掃除、トイレ掃除と水汲み
- ・体育館入口での搜索者の応対

At the shelter [Kesennuma Senior High School], our students made groups of 4 and participated in the following activities around the clock;

- Assisting the elderly: toileting assistance, meal assistance and walking
- Helping with food delivery among evacuees
- Supporting hospital visits of refugees who fell ill together with volunteer nurses (night and day)
- Cleaning the gymnasium and the lavatories and carrying water
- Responding to those searching for the missing at the entrance of the gymnasium

学生たちは、次第にボランティアの中心的存在となり、巡回してきた市の係りの方から、「自分達がやらなければいけない事を学生さんが進んでやってくれて大変助かりました。」と労いの言葉をかけて頂きました。

Our students had gradually become the central presence of volunteers, and a city clerk patrolling to the gymnasium appreciated them saying, “it was of great help that you students were able to go about the jobs that we were supposed to do.”

看護師国家試験全員合格

平成23年3月25日（金）午後2時、3月6日に卒業した37名が全員第100回看護師国家試験に合格しました。本当に嬉しいニュースでした。この結果は、先行きの見えない状況の学校職員と在校生に希望の光を燈してくれるものとなりました。

All the students passed the National Examination for nurse licensing

At 14:00 on March 25, 2011 (Friday), all of 37 students, who had graduated on March 6, passed the 100th National Examination for their nurse license. It was wonderful news. This result was a ray of hope to our staff and students in a situation in which we could not imagine our future.

学校としての災害時の問題と今後のあり方

震災時の状況をまとめるにあたり、災害発生直後の記録があまり残っていないことに気付きました。写真は倫理的に残せない状況だと判断もありましたが、その場では記録どころではない状況でした。

Problems as a school in the event of a disaster and how we should go about them in the future

When we tried to summarize the situation at the time of the earthquake disaster, we found ourselves having few records left about things that occurred immediately after the disaster. We made an ethical judgement that we could not keep photographs of such a situation. Recording was out of the question as there were far too many things to worry about.

しかし、記録に残すことの意識が薄かったことも事実です。記録は次への対策を考えるとき必要です。記録を克明に残すことの役割も大事な活動であることを学びました。

学生においては、避難時泣き続けている学生とそれを励ましている学生がいましたが、自分の身は自分で守ること、人々を守る側の職業につくという意識教育をしていく事の大切さを改めて感じました。

In addition, keeping records hadn't really crossed our minds. Records of the event will be necessary when considering the measures against the next disaster. We have learned that the role to leave records in detail is an important activity.

Among our students, some students were crying while evacuating, and others were giving encouragement. We have felt again the importance of protecting oneself, and educating awareness that they will be in a profession that protects people.

当校は、平成18年4月作成の気仙沼市立病院災害対策マニュアルにおいて遺体安置所に指定されていました。急遽避難所になり、ただ看護学校として演習用の物品があったのでそれが少しは役に立ちましたが、避難所としての対策（備蓄等）が何もない状態でした。また、母体病院と同じ敷地内にあるとはいえ、施設及び設備が独立しています。そのため、病院から数日遅れての通電（3月19日14時30分）、通水（3月18日）でした。

Our school had been designated as a morgue in the Disaster Provision Manual of Kesennuma City Hospital that was made in April 2006. Suddenly, the school became a shelter. Although there were some training supplies as a nursing school which were somewhat helpful, no provisions had been made for it to function as a shelter (stockpiling, etc.). At the same time, the school was at the same site as our mother hospital, but our facility and equipment were independent from the hospital. Therefore, the school had electricity at 14:30 on March 19 and water on March 18, a few days behind the hospital.

今後、災害時に、学生120名が学校に留まらなければならない状況になることも想定され、以下のような備えが必要と思われます。

停電対策・・・・・・・・・・自家発電機の設置、ろうそく、懐中電灯、電池の備蓄

断水対策・・・・・・・・・・飲料水・トイレ用水の確保

食料・・・・・・・・・・1日～2日分の学生と一般避難者分

寒さ対策・・・・・・・・・・灯油、毛布の備蓄、ストーブの台数の確保

一時避難場所の確保・・・・耐震性の高い母体病院の北入口と廊下周辺

収容スペースの確保・・・・被災状況により学生120名と一般避難者が収容できること

学生の安否確認方法・・・・遅れても自ら学校に何らかの方法で連絡を取ることの徹底

情報収集・・・・・・・・・・ラジオ、カメラ

記録と写真

In the future, in the event of a disaster, we can assume a situation where 120 students may have to stay in the school. We think that the following preparations will be necessary.

Measures against power outage: the installation of an in-house power generator, and the stockpiling of candles, flashlights and batteries

Measures against water outage: the securing of drinking water and toilet water

Food: food for 1 to 2 days for our students as well as general refugees

Measures against the cold: the stockpiling enough kerosene and blankets, and the securing of enough kerosene heaters

The securing of a temporary shelter: setting up a temporary shelter at the north entrance and corridor of the mother hospital as it's highly earthquake-resistant

The securing of accommodation spaces: a capacity of 120 students and general refugees depending on a disaster situation

The method of safety confirmation of the students: making efforts to get in contact with the school in some way themselves, even if late

The gathering of information: radios and cameras

Recording and taking pictures

終わりに

4月26日に新入生（39名）が初めて登校して来ました。気仙沼本吉広域消防署より指導を受け、5月9日にはワンポイント避難訓練「いかなる時・場所・状態においても自分の命は自分で守る～とっさの判断力と行動～」を実施し守られる側から守る側の人になるという意識を高めるための訓練をしました。

In Conclusion

39 new students came to school for the first time on April 26. Under the guidance of the Fire Department of the Kesenuma and Motoyoshi Wide Area, on May 9, we practiced an evacuating one-point drill titled 'Protect your life at any given time, place and situation: Spur-of-the-Moment Judgment and Action', and we did it in order to raise our awareness of changing ourselves from people who need to be protected to people who can protect others.

看護学校の教員として、震災時の役目はまずは学生の命を守ること、そして無事に保護者の元に返すことです。看護学生として、この震災はまさに生きた実習現場になるのではとの声もなかったわけではありませんでしたが、ライフラインの断たれた学校で、食料も無い状況に学生を留めておく事は出来ません。

Our role as nursing school teachers at the time of the earthquake disaster is to first of all, protect the lives of students and to make sure that they safely get home. There was an opinion that this earthquake disaster would be an effective training for nursing

students, but we could not make them stay in the school having neither lifelines nor food.

後で分かったことですが、自宅待機している学生も、それぞれの地域・避難場所などでボランティア活動をしていました。家が流失したり、家族や友人を亡くし、自分も九死に一生の体験をした学生もいます。

We found out later that our students who stayed home were also working as volunteers in shelters and other places. The houses of some students were washed away, others lost their family members and friends, and others experienced a narrow escape from death.

1000年に一度の未曾有の震災を受けた被災地の看護学校の教職員も学生もそれぞれの役割を果たしたと思っています。失うことの多かったこの震災でしたが、看護学生として学ぶことも多かったと思います。この経験をこれからの学習や実践に生かして欲しいと思います。

Within this unprecedented earthquake disaster of what is said to happen once in 1000 years, we believe that it was not only the teaching staff but also our students of this nursing school in the affected area, who had played their role. We have lost a lot in the disaster. However, we think that our nursing students have learned a lot. We hope they will be able to make use of this experience in their learning and practice in the future.

東日本大震災時における地域医療連携室の活動報告

The Room of Community Medical Care Cooperation

The report on the Activities of the Room

of Community Medical Care Cooperation

during the time of the Great East Japan Earthquake Disaster

はじめに

震災直後から、市民を取り巻く環境が激変したため、地域医療連携室のかかわりが量的質的に大きく変化した。その混乱の中で、病院が患者の避難所と化してしまい、病院本来の機能が失われることが最も心配であった。それを防ぐことが地域医療連携の中心課題と考え活動を行った。そして、その活動を記録に残し、今後の医療・介護・福祉連携がより円滑になるように役立てていきたい。

活動は以下の3つにまとめられた。

- I. 震災直後の活動。
- II. 遠方への施設入所支援活動。
- III. 復興へ向けての現在の活動。

それぞれについて以下に報告する。

Introduction

Immediately after the earthquake, the involvement of the Room of Community Medical Care Cooperation had quantitatively and qualitatively changed because the environment surrounding the citizens had changed drastically. In the confusion, what we were most worried about was that the hospital would turn into the shelter of patients, and that the hospital would not be able to fulfill its original functions. We felt that our central issue was to prevent such a concern as we started our activities. Here's an account of the activities, as we want to make good use of them so that the cooperation of medical care, long-term care and welfare will function without a hitch in the future.

We summarized our activities into the following three.

- I. Our activities immediately after the earthquake
- II. Supporting activities for patients moving to distant care institutions.
- III. Our current activities towards reconstruction.

I. 震災直後の活動・・・別紙1参照

1. 震災直後の外来部門での活動

大震災発生直後は、病棟患者の避難誘導、避難してきた市民への対応を行った。

3月12日 午前8時～3月17日 午後6時まで外来看護師と合流し、緑チームの一員として勤務した。その間、ヘリ搬送等による多人数の広域医療搬送が行われるなど入院患者の大きな移動があり、移動した患者情報の集約や、その後の問い合わせ窓口になるなどの支援の必要性を感じた。そのため、3月18日外来医療チームから離れ、地域医療連携活動を開始した。

I. Our activities immediately after the earthquake See Attached Sheet 1

1. Activities of the outpatient department immediately after the earthquake

Immediately after the earthquake, we carried out evacuation guidance of patients in the hospital wards and responded to citizens coming to evacuate.

From 8:00 on March 12 to 18:00 on March 17, we joined the nurses of outpatient clinics and were working as members of the green team of triage. During that time, a large movement of hospitalized patients such as the large number of wide-area medical transport of many patients by helicopter was carried out. We felt we needed support for things such as collecting the information of patients that had moved and being a contact point for subsequent inquiries. Therefore, on March 18, we left the outpatient medical team and started the activities of community medical care cooperation.

2. 震災直後からヘリ搬送等による広域搬送が行われたが、1週間後には「病院の体制はどのくらい回復したか？ いつ頃患者は帰れるか？」などの問い合わせがあった。搬送窓口も、院内それぞれの部署にあり混乱していた。窓口の一本化と、どこの病院に何という患者さんが搬送されたのか、気仙沼に戻って来る時の問い合わせ等への対処を、スムーズに行えるようにデータベースが必要であった。

2. Wide-area transport such as by helicopter was carried out immediately after the earthquake, but one week later, we had inquiries such as “How much has your hospital system recovered?” and “When will patients be able to return?” As for the contact point regarding transfers, each hospital department had their own, causing confusion. It was necessary to unify those contact points and to make a database so that we could smoothly deal with inquiries such as who had been transferred to what hospital, when patients return to Kesenuma.

3. 広域医療搬送患者の名簿作成・・・写真2

搬送病院は、東北大学病院84名、県立磐井病院13名、その他の病院15名だった。

＊他院への患者搬送に関する地連の活動.....別紙1◎印参照

II. 遠方の施設入所支援活動・・・別紙1参照

震災により介護養護老人ホームと介護老人保健施設のそれぞれ1施設ずつが被災し、約170人分の入所先が失われた。被災した入所者は、避難所や市内の他の施設が受け入れたため、入所定員がオーバーとなり、病院から新に施設入所をすることができなかった。

3. Making the roster of patients of wide area medical transport Photo 2

The numbers of patients transported to other hospitals were as follows; 84 to Tohoku University Hospital, 13 to the Iwate Prefectural Iwai Hospital, 15 to other hospitals.

* The activities of the Room of Community Medical Care Cooperation regarding the transport of patients to other hospitals

See Attached Sheet 1 mark ◎

II. Our supporting activities for patients moving to distant facilities

See Attached Sheet 1

The earthquake had damaged one of care nursing homes and one of long-term care elderly health facilities, and about 170 people had lost their accepting facilities. As shelters and the other facilities in the city accommodated those affected residents, those facilities became full, exceeding their accommodating capacity, and so the patients of our hospital could not move to those facilities.

1. 宮城県の斡旋で、栗原地方の施設の最大20名の予定で受け入れの調整開始(3/19)

・・・別紙1 ☆印参照

気仙沼保健所職員と、一人一人の患者の医療情報・家族の連絡先や住所等、情報の確認や聞き取り調査等を協力して行った。県との連絡調整は、朝夕の衛星電話回線で一括して行わざるを得ない状況であり、伝達内容の漏れに注意を払った。

3月24日10名施設入所(車椅子6名、ストレッチャー4名)

入所後の療養は、ベットではなく畳でもよい方が優先・搬送に耐えられること・要介護認定者であることが条件であり、実際には10名が搬送になった。

1. By mediation of the Miyagi Prefectural Office, Kurihara area facilities start adjustments for receiving up to 20 people (March 19). See Attached Sheet 1 mark ☆

We cooperated with Kesennuma Public Health Center staff to collect medical information on each patient and updated family contact information and address, etc. We had no choice but to coordinate with the prefecture by using the satellite telephone line every morning and evening and paid especially close attention to make sure information would not leak.

On March 24, 10 people moved to the facility (6 wheelchair patients, 4 stretcher patients).

Patients who were able to meet the following conditions were accepted: patients who preferred sleeping on tatami mats to sleeping on a bed, patients who could tolerate being transported, and patients who had been certified as a patient of long-term care. 10 people were transferred.

2. 豊徳会(弘前市)へ10名の予定で入所支援開始(3/25)・・・別紙1、2 ★印参照

豊徳会(弘前市)サンタハウスから、入所受け入れ可能との連絡が3月25日入った。市内のケアマネも入所できる施設の目途が全く立たない状態で困っていた。そこで豊徳会へ連絡し受け入れを支援していただけるようお願いした。これが被災地からの一番早い支援要請の連絡だったと後日豊徳会から知らされた。

2. The support of institutionalization started with 10 people scheduled to transfer to the Houtoku Association (Hirosaki in Aomori Prefecture) (March 25)

See Attached Sheet 1, 2 mark ★

Houtoko Association (Hirosaki City) Santa House contacted us on March 25 informing us that they could accept admissions. The city's care manager was struggling because there were no prospects for people to enter facilities. Therefore, I asked the Houtoku Association to make contact and to support. The Houtoku Association later informed us that this was the earliest call for assistance from the disaster area.

4月11日～6月22日までに8名が入所

家族との連絡がとれ、移動に耐えられる要介護認定者であり、被災者であることが受け入れ条件であった。弘前市は遠方だという理由から、入所に難を示す患者も多かった。遠方であっても移動し、良い環境での療養が必要である旨を、本人・家族に説明したが、納得してもらうのがなかなか難しかった。

＊ 10月30日現在も1名入所を検討中で交渉継続

Eight patients were institutionalized between April 11 and June 22.

The eligible requirements were patients whose family we could get in contact with, those who were capable of being transported, those who had been certified as a patient of long-term care and were victims of the disaster. As Hirosaki is located far from here, many patients said that their institutionalization would be difficult. We explained to them and their families that it's necessary to move, no matter how far it is and to have medical treatment in a better environment, but it was quite difficult to convince them

＊ Even as of October 30, we are continuing negotiations, as one patient is under consideration for institutionalization.

3. 徳洲会系病院・施設へ転院・入所支援開始(4/11)・・・別紙1 △印参照

搬送病院・施設入所先の確保がいよいよ困難となり困っていた時に、「徳洲会理事長から受け入れ可能であるとの申し出をいただいた。受け入れてくれそうだよ。」という当院外科医からの情報があり、徳洲会へ電話連絡し受け入れ支援をお願いした。実際の調整に

は、各地からきたボランティアの社会福祉士が対応し、患者の希望する地域の施設の空き情報など地連で情報交換した。徳洲会のボランティア社会福祉士等は、家族面談した結果で施設や病院の振り分けを行い、搬送まで行くと申し出てくれた。

3. We started admission support-transferring to the Tokushukai Hospitals and its related facilities (April 11) See Attached Sheet 1 mark △

When it became more difficult to secure a place of entry to hospitals and facilities to which they would be transported, we had word from one of our surgeons, saying, “I have received a feasible offer of institutionalization from the president of the Tokushu Association. They will probably accept our patients”, so we made contact with the Tokushu Association by telephone and asked them to support us and to accept our patients. Volunteer social welfare officers from all over the world responded to the adjustments and exchanged information with the local government, such as the details about vacant rooms in areas the patients hoped to move to. The Tokushukai volunteer social welfare staff, among others, offered to sort out the facilities and hospitals according to the results of the interviews with their families and even transported them.

4月16日～4月28日までに7名転院・入所(転院3名・施設入所4名)

被災者であり、家族と連絡（面談）ができることが条件であり、家族と連絡がとれない患者も多かったので、搬送患者の選定は限定された。徳洲会スタッフは、家族の立場になり親身に対応してくれた。リストに挙がった人の中に家族と連絡取れないでいたAさんの場合は、「グーグルでの訪ね人の中にAさんを探している人がある。同一人物であるかもしれない。任せてくれ」と、家族を発見し家族のもとへ引き継いでくれた。

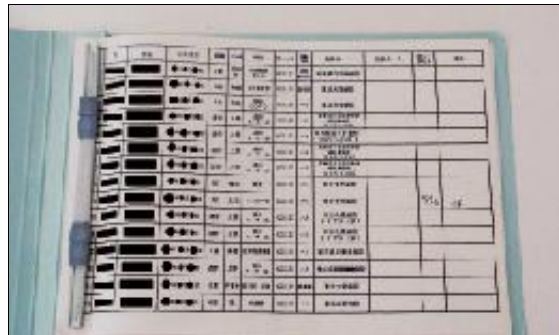
＊②豊徳会と③徳洲会は自施設・自病院の搬送車で患者の送迎に来てくれ大変助かった。

＊1. 2の患者情報の冊子を作成・管理をした（写真1、2）

写真1 Photo1



写真2 Photo2



From April 16 to April 28, 7 patients moved to other hospitals or facilities. (3 patients to other hospitals, 4 patients to other facilities)

The selection of patients to be transported was limited because many of the patients were victims of the disaster and were not able to meet with their families. The staff members of the Tokushu Association put themselves into the patient's families' shoes and kindly responded. In the case of Mr./Ms. A, who was put on the list of transport patients and had not been able to get contact with family, a staff member said, "In the list of the missing on Google, someone is looking for Mr./Ms. A. He/she might be one and the same person you want to get in touch with. I will take care of it." The staff member found the family and they were reunited.

* ② The Houtoku Association and ③ the Tokushu Association thankfully came in their own carrier vehicles from their facilities and hospitals, which was very helpful.

* We made the booklets of patient information as Photo 1 and 2 and managed them.

Ⅲ. 復興へ向けての現在の活動

1. 震災直後の退院支援状況・・・別紙2参照

震災のために転院、入所施設の確保が極めて困難であり、避難所、親せき宅・知人宅などへ退院してもらうしかなかった。退院後の患者の安全を確保するために、患者の取り巻く環境を把握する必要があった。

1) 3月19日～23日に病室にて患者に聴き取り調査を行った。

(1階・2西・3北・4北病棟合計45名。施設入所対象者64名、合計109名)

その結果、家族が行方不明、連絡がつかない、家がない等、強度の不安状態である事が判明した。

Ⅲ. Our current activities towards hospital recovery

1. The situation of our discharge support immediately after the earthquake

See Attached Sheet 2

Due to the earthquake disaster, it was extremely difficult to secure facilities for patients to be transferred or institutionalized, and we had no choice but to have them leave the hospital to a shelter, a house of their relatives or acquaintances, or the likes. In order to secure the patients' safety after discharge, we needed to understand situations surrounding each patient.

1) We carried out a survey among the patients in the hospital rooms from March 19 to March 23.

(45 patients in total of the 1st Floor Ward, the 2nd Floor West Ward, the 3rd Floor North Ward and the 4th Floor North Ward and 64 patients as the subjects of institutionalization, 109 in total)



写真3 Photo 3

It was apparent that they had extreme anxiety because of reasons including their family being missing or not being in contact, or due to losing their residence.

3月31日、看護部長を通して全病棟へ、次の2点を要請した。

- ① 退院先の安全（家族の安否、住居、ライフライン）が確保できるか確認すること。
- ② 地連へ退院患者の退院先を連絡すること。

On March 31, we requested the following two points through our nursing director to all the hospital wards.

- ① Confirming whether patients were able to secure the safety of their destination after discharge (the safety of each family, house and life lines)
- ② Reporting their discharging destination to the Room of Community Medical Care Cooperation

2) 退院支援に当たっては、「入院前にいた場所へ戻ってもらう。安全を確保できるように退院支援をする。」を基本方針に据えた。

- ① 避難所へ帰る人・・・患者の医療ニーズや注意事項を災害医療班に伝える
- ② 自宅へ帰る人
 - ・ 家族の安否、住環境の安全を確認すること（退院連絡があった患者名簿：写真3）
 - ・ 不安または介護ニーズのある人・・・気仙沼巡回療養支援隊（JRS）やボランティアセンターへ注意事項を申し送り、在宅支援をお願いした。（支援隊を通した患者：写真4）

2) In assisting their discharge, we set a basic policy: To try to have every patient get back to a place where he/she was before hospitalization and give support toward their discharge to secure their safety.

- ① Patients going to their shelter: we must tell disaster medical teams about their medical needs and precautions.

② Patients going home

We must confirm the safety of their family and the security of their living environments. (The roster of patients who were reported to leave the hospital: Photo 3)

・ Patients with anxiety or needing care: We handed over points to note to the Kesennuma Round Supporting Team of Medical Care (JRS) or the Volunteer Center, and also asked

写真4 Photo 4



them for home support. (The reporting sheet of a patient leaving the hospital by way of the Support Team: Photo 4)

2. 地域との連携強化

患者さんの在宅での療養生活には、地域の被災状況などの情報が必要であった。病院に訪れる担当ケアマネからの情報だけでは、地域の被災状況や介護現場がどのようになっているのか、十分に把握できなかった。巡回療養支援隊（JRS）からの勧めもあり、「すこやか」で行われる在宅療養支援隊のミーティングに4月1日より参加した。JRSのローラー作戦により、地域における医療・介護ニーズが細やかに把握されていた。

2. The strengthening of partnership with the local community

For patients' with medical treatment at home, it was necessary to get information such as disaster situations out in their own area. With only the information from responsible care-managers visiting our hospital, we could not fully understand what had become of the disaster situation and the care fields of those areas. There was also a recommendation from the Round Supporting Team of Medical Care (JSR), so we participated in some meetings of home care support teams being held at “Sukoyaka” (one of the health centers in the city) from April 1. By the search operation of the JRS, we were able to finely understand medical and nursing care needs in the areas.

1) JRSとの連携・・・別紙1、2 ♡マーク参照

① JRSが行う「すこやか」でのミーティングへ参加（4／1～5／13）

JRSによる在宅医療が行われていたが、褥創の悪化や家族の介護疲れがある等で、入院が必要な患者の診療情報提供書（地域医療連携室専用）を、FAXにて入退院調整を行った。

1) Our collaboration with the JRS

See Attached Sheet 1, 2 mark ♡

① Our participation in the meetings at “Sukoyaka” being held by the JRS (April 1 - May 13)

Although the JRS had been carrying out home care, we made the adjustment of hospitalization and discharge by sending through referral documents via fax (only in the use of the Room of Community Medical Care Cooperation) of some patients in need of hospitalization due to their pressure sores getting worse, their families having nursing fatigue among other situations.

②JRSが撤退した後の気仙沼の在宅医療を考える

JRSが撤退した後、気仙沼地域の在宅医療が震災前よりも充実しているように、どのような仕組み作りが必要なのか、事務局ボランティア医師等とカンファレンスを行った。

- ・ 5／9 JRSボランティア医師、Dr. 村岡、室長、横山等で情報交換
- ・ 6／3 身障手帳の申請について

- ・ 6/13 気仙沼における在宅医療の課題について

② Thinking about home care in Kesennuma after withdrawal of the JRS

We held some conferences with some volunteer doctors and others of the JRS secretariat on what kind of mechanism we would need so that home medical care in the Kesennuma area would become better than that of before the earthquake disaster after the JRS's withdrawal.

- ・ May 9: the exchange of information among some JRS volunteer doctors, Dr. Muraoka, the chief of the Room of Community Medical Care Cooperation, Dr. Yokoyama and others.
- ・ June 3: on the application of Physical Disability Certificates
- ・ June 13: on the challenges of home medical care in Kesennuma

③JRS主催の勉強会の広報と参加

JRS主催の勉強会に会議室の借用や広報を行いながら研修に参加した。

- ・ 6/15 4階会議室 在宅療養ワンポイントレッスン
- ・ 6/28 4階会議室 訪問看護担当者勉強会1
- ・ 7/8 4階会議室 訪問看護担当者勉強会2
- ・ 7/23 すこやか 傷の正しい治し方
- ・ 8/27 すこやか IPE研修会

④入退院患者さんの情報交換

訪問診療や訪問看護等が必要な患者さんの退院については、事前にJRSと診療情報提供書にて情報交換し在宅医療・介護につなげた。

③ Participating in public study meetings held by the JRS

We borrowed conference rooms for study meetings held by the JRS and publicized them. We also participated in the meetings.

- ・ June 15 The 4th Floor Conference Room (of our hospital): One-Point Lesson of Home Care
- ・ June 28 The 4th Floor Conference Room (of our hospital): Study Meeting for Visiting-Care Staff Members 1
- ・ July 8 The 4th Floor Conference Room (of our hospital): Study Meeting for Visiting-Care Staff Members 2
- ・ July 23 *Sukoyaka* [the health care management center of the city]: How to Cure Injuries Correctly
- ・ August 27 *Sukoyaka*: IPE Workshop

④ Exchanging information of patients being hospitalized and discharged

With regard to the hospital discharge of patients in need of care including visiting medical care, visiting nursing etc., information was exchanged with the JRS in

advance using a medical information provision form, which linked hospital care to home medical care and nursing.

2) 医療・在宅介護・福祉関係機関との連携・・・別紙1 ♡マーク参照

①被災地地域福祉・医療連携会議へ出席（4／1、4／4、4／11）

被災した施設や事業所も多く、この困難な状況をどのように克服するかについて、現状報告と意見交換が行われた。参加者は、多職種が連携し情報共有することが大事であるという認識で一致した。4月4日の会議では、当院の現状について報告を行った。

②退院時ケア会議の強化（当院退院患者は、必ず退院時ケア会議を行うことを地連スタッフ間で申し合わせ）

・10／28 主治医と在宅医が同席しての初のケア会議開催

2) Our collaboration with medical care, home care and welfare agencies

See Attached Sheet 1 mark ♡

① Our attendance at the Community Welfare and Medical Cooperation Meetings of the Disaster Area (April 1, April 4 and April 11)

Many facilities and offices had been affected, each current condition was reported, and views on how to overcome the difficult situations were exchanged. The participants at the meetings agreed that it was important for multidisciplinary staff members to cooperate with each other and to share information. In the meeting on April 4, we reported the current status of our hospital.

② Reinforcement of care conferences at hospital discharge (for patients being discharged from our hospital, we arranged among the staff members of the Room of Community Medical Care Cooperation that a care conference at their discharge should be held.)

・October 28: the first care conference was held, in which attending physicians and home doctors were both in attendance.

③ 8／24 第1回気仙沼・南三陸地域在宅医療福祉推進委員会が発足し、委員として参加。
医師会・行政・市立病院・ケアマネ協会・施設関係者等で在宅医療・介護・福祉の推進強化のための委員会が発足し、今後の活動方針が決まった。

④8／31 認知症疾患医療連携協議会への参加（三峰病院にて）

⑤10／22 宮城県地域医療推進協議会への参加（仙台）

③ August 24: The 1st Home Medical Care and Welfare Promotion Committee of Kesennuma and Minamisanriku Areas were launched, in which we participated as committee members.

A committee for promoting and strengthening home medical care, nursing care and welfare had started among the Kesennuma Medical Society, the city administration, Kesennuma City Hospital, the association of care-managers, many staff members of

some facilities and future activities were decided.

④ August 31: We participated in the Medical Cooperation Conference of Dementia Disease (at the Mitsumine Hospital).

⑤ October 22: We participated in the Medical Care Promotion Conference of the Miyagi Prefecture Region (in Sendai).

3) 地域医療連携室主催勉強会の開催と研修会参加・・・別紙2 顔マーク参照

円滑な医療・介護・福祉連携を実現するために、「顔の見える関係」の構築が必要と考え、勉強会を開催した。

- ・ 6/8 どうすれば入院患者は在宅療養を決断できるか (54名参加)
- ・ 7/11 ケアマネ協会と打合せ
- ・ 7/12 震災以後の医療・介護連携について (ケアマネ協会と共催) (78名参加)
- ・ 9/20・27 1階・2西病棟勉強会 介護保険と退院調整
- ・ 10/25 顔の見える関係づくり (75名参加)
- ・ 10/27～28 退院調整者看護師研修会 (東京)

4) 院内職員の退院支援への理解を促す

退院調整が必要な患者は早めに地連へ連絡してもらうように、病棟看護師・医師へ呼びかけを行った。

3) Holding workshops organized by the Room of Community Medical Care Cooperation and participating in study meetings See Attached Sheet 2 Face Mark

In order to realize smooth cooperation among medical care, nursing care and welfare, we considered it necessary to establish in-person relationships, so we held some workshops.

・ June 8: Theme “What will make in-patients decide to receive home medical care?” (54 participants)

・ July 11: A meeting with the Care-Manager Association

・ July 12: Theme “Cooperation of Medical Care and Nursing Care after the Earthquake Disaster (held by the Care-Manager Association and the Room of Community Medical Care Cooperation) (78 participants)

・ September 20, 27: Study meetings of the 1st Floor Ward and the 2nd Floor West Ward, “Nursing-Care Insurance and the Adjustment of Hospital Discharge”

・ October 25: “Building in person relationships” (75 participants)

・ October 27-28: “The Workshop among Discharge Coordinators and Nurses” (in Tokyo)

4) We promoted the hospital staff’s understanding of discharge support

In regards to patients in need of adjustment of hospital discharge, we contacted doctors and nurses of our hospital wards so that they could get in contact with the Room of Community Medical Care Cooperation in advance.

3. 気仙沼地域の介護施設・事業所の回復状況アンケート調査を実施・・・[別紙3参照](#)

介護施設・事業所の回復状況把握し、今後の退院支援の方向性の参考にするため実施した。結果については下記の通り。

①震災直後から66施設中13施設は完全に稼働し、6ヶ月後には61施設（全体の92%）が、震災前と同様に業務を行うことができていた。・・・[別紙3 グラフ1参照](#)

②利用者減は、81% 50施設にのぼった。主な要因は、介護サービスをボランティア利用に変えたためだった。一方増加理由は、津波のため住居が流されたなど住環境の変化によるものが目立った。・・・[別紙3 グラフ2参照](#)

3. Conducting a survey on the recovery situation of nursing facilities and establishments in the Kesennuma area [See Attached Sheet 3](#)

A survey was conducted to understand the status of restoration of nursing facilities and establishments and to use it as reference for future discharge support. The results were as follows.

① Immediately after the earthquake, 13 facilities out of 66 were fully operational; and after 6 months, 61 facilities (92% of the total) were able to perform the same services as before the earthquake disaster. [See Attached Sheet 3 Graph 1](#)

② The number of facilities with a decrease in clients amounted to 50, 81% of the total. The main factor was that nursing care services had been changed to voluntary work. On the other hand, one of the reasons for the increase was due to the change in the living environment such as residences having been taken by the tsunami.

[See Attached Sheet 3 Graph 2](#)

③被災施設（特養1、老健1）あり、定員が170人減少。被災グループホームの入所者は、同グループ事業所が職員と入所者を受け入れ、事業展開したため定員数に変化がなかった。特養は、現在（平成23年10月）でも、常時10～15%入所定員オーバーでの受け入れが続いている。・・・[別紙3 グラフ3参照](#)

④自由記載欄には、当院に対しての要望が数多く見られ、中でも、研修会の内容や退院時等の介護連携に関するものが多かった。

③ A few facilities were affected (One Special Nursing Home and one Geriatric Health Services Facility), and their accommodating capacity was reduced to 170. As for the residents of the affected group homes, the offices of the same group accepted both the staff members and the residents of those affected facilities and restarted their service, which allowed them to keep the occupant capacity of residents. The acceptance of residents in those Special Nursing Homes, even as of now (October, 2011), is always overcrowded by 10% to 15%. [See Attached Sheet 3 Graph 3](#)

④ There appeared to be a lot of requests to our hospital in a free comment column; among them, they requested many things related to the contents of workshops and

nursing care coordination on hospital discharges and more.

4. 退院支援の状況と結果・・・別紙4参照

震災後の退院支援状況を項目ごとに示した。

1) 退院支援新規患者依頼数・・・表1 グラフ4参照

① 新規依頼患者数は、昨年1年間と比べ震災後は約2倍に増加した。・・・グラフ4参照

② 肺炎患者が増加したため、呼吸器系疾患患者の依頼が増えた。・・・グラフ4参照

4. The situation and results of discharge support

See Attached Sheet 4

Shown is the situation of discharge support after the earthquake disaster. Headings are as follows.

1) The number of patients newly requesting discharge support See Table 1 Graph 4

① The number of those patients had approximately doubled after the earthquake compared with the last year. Graph 4

② Because of the increase of pneumonia patients, the requests from patients with respiratory diseases had increased. Graph 4

2) 退院患者数・・・表1参照

①施設への退院が昨年の約1.5倍と増えたが、そのほとんどが入退院を繰り返す人であった。

②月別退院患者延べ人数は、震災後4月・5月は少なかったが、その後は、昨年の1.5～2.0倍に増加した。・・・グラフ5、6参照

③気仙沼市内への転院・施設入所は、新規では困難だった。

・・・別紙5 グラフ7、8参照

2) The number of discharged patients

See Table 1

① Although hospital-discharges to facilities had increased by about 1.5 times compared with that of the last year, most of them were patients who had been repeating hospitalizations and discharges.

② After the earthquake disaster, the monthly total numbers of discharged patients were small in April and May, but it had thereafter increased 1.5 to 2.0 times compared with that of the last year. See Graph 5, 6

③ It was difficult to transfer new patients to other hospitals or facilities in Kesennuma City. See Attached Sheet 5 Graph 7, 8

3) 退院支援患者の平均入院期間・・・別紙5 表2参照

①支援開始から退院まで30日かからなかった患者は226名、平均入院期間は約28日。

②支援から退院まで30日以上長期を要した患者は86名、平均入院期間は約83日であった。

入院から介入開始となった日数を比較すると、上記2群でほとんど差はない（①17.0日：②18.4日）。退院調整が長期化する事例では以下に掲げる様々な理由を抱えていると考えら



れた。

3) Average length of stay for patients with discharge support

See Attachment 5 Table 2

① The number of patients who had taken fewer than 30 days from the start of discharge support was 226, and the average length of hospitalization was about 28 days.

② The number of patients who required long-term hospitalization of 30 days or more from the start to discharge was 86, and the average length of their hospital stay was about 83 days.

When comparing the numbers of days from hospitalization to the start of our intervention, there was little differences between the two groups mentioned above (① 17.0 days: ② 18.4 days). Concerning the prolonged cases of discharge adjustment, it was considered that those cases had a variety of reasons as listed below.

4) 退院調整が長期化した理由として（23年7月～10月）・・・別紙6 グラフ9参照

①病状の悪化や改善の繰り返し等の医学的理由（約40%）

②ADL低下やそれに伴うリハビリ不十分等（約20%）

③病院・施設の空き待ちの長期化（約15%）

④その他、介護者の問題や住居環境によるもの等であった。

①～④の結果から、入院期間の短縮には、医学的理由を除くと、ADLの低下や生活不活発をいかに防止し改善に向かわせるかが重要であることが分かる。同時に介護者の問題や住環境に配慮した支援が重要であることを示している。

4) The reasons for prolonged discharge adjustment are as follows.

(July-October, 2011)

See Attachment 6 Graph 9

① Medical reasons such as the repeating of “deterioration and improvement” of symptoms (about 40%)

② Decrease in ADL and inadequate rehabilitation (20%)

③ Prolonged waiting for vacant rooms of other hospitals and facilities (about 15%)

④ Others were due to problems caused by caregivers and living environment

From the results of ① to ④, it can be seen that in order to shorten the hospitalization period, excluding medical reasons, that it's important to prevent ADL decline, to manage and improve ADL-deterioration and life inactivity. At the same time, it also suggests that it is important to provide support in consideration of caregiver problems and living environment.

5) 長期入院患者数の推移・・・別紙6 グラフ10参照

①入院60日以上超える長期入院患者は、平成22年4月の地域医療連携室活動開始後、徐々に減少し、震災直前には、平均40人／日前後となっていた。

②地域医療連携室の活動は、病院が被災した患者さんたちの避難所にならないようにすることを、目標として活動してきた。震災発生後、退院支援活動を行った結果、長期入院患者は増えることなく経過している。このことは目標に叶う結果であると考えている。

5) The changes in the number of long-term hospitalized patients

See Attachment 6 Graph 10

① The number of long-term hospitalized patients of 60 days or more had gradually decreased since the installment of the Regional Medical Liaison Office in April, 2010, having an average of 40 people/day or thereabout just before the earthquake.

②The Regional Medical Liaison Office has been working with the goal of preventing the hospital from becoming the evacuation shelter of affected patients. As a result of discharge support activities after the earthquake, the number of long-term inpatients has remained stable without increase, which we consider to be a result favorable to our target.

5. 今後の課題と方向性

今回の震災時において、広域搬送による転院・施設入所時、気仙沼市立病院からの搬送車は1台の救急車しか用いることができず、転院可能者が数多くいても対応困難であった。その点、豊徳会や徳洲会との連携においては、送迎についても対応していただいたので当方は退院調整に専念できた。今後の連携ネットワーク作りに、例えば介護タクシー会社等と協力体制を整備する、遠方の介護施設と非常時の連携体制を組むなどの方策も考慮すべきと考えた。また常に、地域の医療・介護・福祉関係機関と密な連絡を取り合うことが重要であり、更に「顔の見える関係づくり」を進めていきたいと考えている。

5. Our future challenges and our direction going forward

At the time of the earthquake disaster, when patients were transferred to other hospitals or facilities by wide area medical evacuation, we could only use one ambulance as a transport vehicle from Kesennuma City Hospital; it was very difficult to respond and there were still many patients that were to be transferred to other hospitals. In that regard, thankfully in cooperating with the Houtoku Association and the Tokushu Association, we were able to concentrate on discharge adjustments as the two associations responded to pick-up those patients. We thought of measures that should be taken into consideration when creating a future network, such as establishing a system with elderly-care taxi companies, and forming an emergency cooperation system with a distant care facilities. Also, it is important to always mutually keep in close contact with organizations related to medical care, nursing care

and welfare in this area, and we hope to further promote making ‘face-to-face relationships’.

おわりに

今回、震災で亡くなられた方々に対し、深く哀悼の意を表します。また、「震災後の地域医療連携」をまとめるにあたり、ご協力いただいた皆様に感謝いたします。

In Conclusion

We would like to express our deepest condolences to those who lost their life in the disaster. We would also like to thank all who cooperated in compiling the “Community Medical Care Cooperation after the Earthquake Disaster” report.

研修会の様子

10月25日

「顔の見える関係」

The Situation of Our Workshop Oct. 25

“The Relationships of Face-to-Face Nature”



地域医療連携室 震災時の記録

日 時	地 域 医 療 連 携 室 業 務							備 考
	転 院	搬 送	入 所	退 院	退 院	退 院	退 院	
3.11								医師等・入院患者の避難誘導、一般市民で避難して来た方の誘導と収容施設
3.12								
3.13								
3.14								→緑ゾーン（緑地）
3.15								外来ナースチームに入りシフトを踏み置
3.16								
3.17								
3.18								本日より地域医療連携室稼働
3.19								☆県を通しての施設入所要員開始（連絡は、総機電話回線を使用）
3.20								→被災状況確認作業
3.21								（1階・2階・3階・4北病棟計45名、施設入所約64名、合計109名）
3.22								県立三井病院搬送患者7名の受け合わせあり（預け場所、被災の有無、連絡先等）
3.23								○県立中央病院への転院者リスト作成（内科5名、内科5名）
3.24								○県立中央病院への転院者リスト作成（内科5名、内科5名）
3.25								○県立中央病院への転院者リスト作成（内科5名、内科5名）
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4.30								○県立中央病院への転院者リスト作成（内科5名、内科5名）

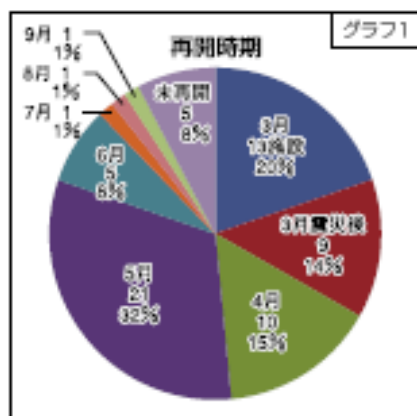
日 時	地 域 医 療 連 携 室 業 務						備 考
	転 院	寄 設 入 所	要 援 支 援	放 送 会	本 来 医 療		
5. 2						☐	つなぐ第5号発行
5. 9							在宅療養支援隊(水戸、山形、秋田、岩手、青森、山梨、長野、新潟、富山、石川、福井、滋賀、京都、大阪、兵庫、奈良、和歌山、徳島、高松、香川、愛媛、高知、福岡、佐賀、大分、熊本、鹿児島、沖縄)との合同
5.11		☆				♥	巡回療養支援隊の今後について
5.13						♥	特別看護老人ホーム桂葉(栗原地方)より転院の問い合わせあり
5.26						☐	JRSミーティング参加終了とする(12日間参加)
5.30							院内と関係機関へ発送(第3回地連研修会について)
6. 3						♥	厚生労働省より退院支援状況について電話で問い合わせあり
6. 8						♥	在宅療養支援隊とミーティング(身体障害者手帳申請について)
6.14						☺	TBS、NHK、日経BP社取材あり
6.15		★					第3回地連研修会:どうすれば入院患者は在宅療養を再開できるか(54名参加あり)
6.17						♥	豊徳会へ看護サマリー送信
6.22						♥	訪問看護ステーション施設会4F会議室(在宅療養ワンポイントレッスン)
6.28		★				♥	JRS今後の方針と課題について、地連にて相談
7. 1						♥	豊徳会へ1名入所
7. 8						♥	訪問看護ステーション施設会(4F会議室準備と参加)
7.11						☺	地域医療連携室に本日から看護士1名配置
7.12						☺	訪問看護ステーション施設会(4F会議室準備と参加)
7.13						☺	翌日の研修会についてケアマネ協会と打合せ(今後の在宅医療と看護)
7.14						☺	第4回地連研修会 テーマ:震災以後の医療・介護連携について
7.19		★				☐	院内へ広報(JRS施設会 テーマ:療の正しい治し方)
7.20		★					豊徳会へ入所した方が、退所の意向である。と連絡があり。
7.23		★				♥	豊徳会と電話で調整:退所希望の受け入れ態勢について
7.25		★				♥	豊徳会退所者の件を主治医と交渉し、7月25日とする。
8. 1						☐	JRS施設会 テーマ:療の正しい治し方(地連2名参加)
8.17						☐	豊徳会から1名入院
8.24						☐	つなぐ第8号発行
8.27						☐	院内広報(JRS施設会テーマ:IFE研修会、すこやかにて)
8.31						☐	第1回 気仙沼・南三陸地域在宅医療福祉推進委員会出席
9. 1						♥	JRS施設会テーマ:IFE研修会、すこやかにて(地連2名参加)
9. 2						☺	認知症専門研修会・認知症医療連携協議会(三陸病院)3名出席
9.15						☺	巡回療養支援隊解散
9.16						☺	22年度版外科入院患者病名・退院先調査
9.20						☺	3.11震災後の福祉関係施設稼働状況調査(アンケート送付、9月20日締め切り)
9.21						☺	院内施設会:2西病棟介護保険と退院調整(講師:阿部)
9.27						☺	3.11震災後稼働状況調査(アンケート回収)につき再連絡
10. 1		★					院内施設会:1西病棟介護サービスと退院調整(講師:戸羽)
10. 5						☐	豊徳会から来所(職員2名)、家族からの聞き取り調査のため面談
10.14		★					院内と関係機関へ発送(第5回地連研修会 テーマ:顔の見える関係)
10.17		★					3北入院中の患者さんについて入所の相談
10.22						☺	3北入院中の患者さんの看護サマリー FAX送信
10.25						☺	宮城県地域医療連携協議会(仙台)3名出席
10.26						☺	第5回地連研修会 テーマ:顔の見える関係(75名の参加あり)
10.27						☺	平成22年度急性病棟入院患者数・病名調べ
10.28							27日~29日まで退院調整看護研修会(東京)1名出席
10.31							退院前ケア会議に主治医と在宅医が参加(当該で初の出来事)

1. 震災後から4月まで ・転 院 ○徳井病院へ7名 栗原中央病院へ2名
 ・施設入所 ☆栗原地方5施設へ10名入所 △松州会7名入所 ★豊徳会8名入所(入所先で1名死亡)
2. 5月9日より定例ミーティング開催(毎週月曜日9時~9時30分)
3. 震災後施設会(地域医療連携室開催)5回。次回は、24年2月開催予定。
4. 豊徳会(弘前の老人保健施設)とのやり取りは、現在も進行中。冬通りの患者さんも入所可能。
5. 職員配置により増員 4月:社会福祉士1名 7月:看護士1名

気仙沼地域の介護施設・事業所の回復状況アンケート調査

〈調査期間：23年9月15日～9月末日〉

1. 在宅サービス



1) 再開時期

- 震災直後から活動していた施設は、13施設である。
- 震災後9月末時点で、再開できたのは61施設で92%である。

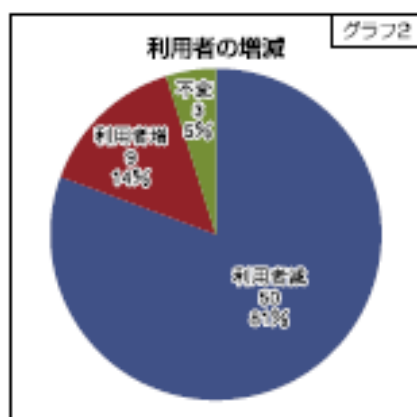
2) 利用者の増減

減少の理由

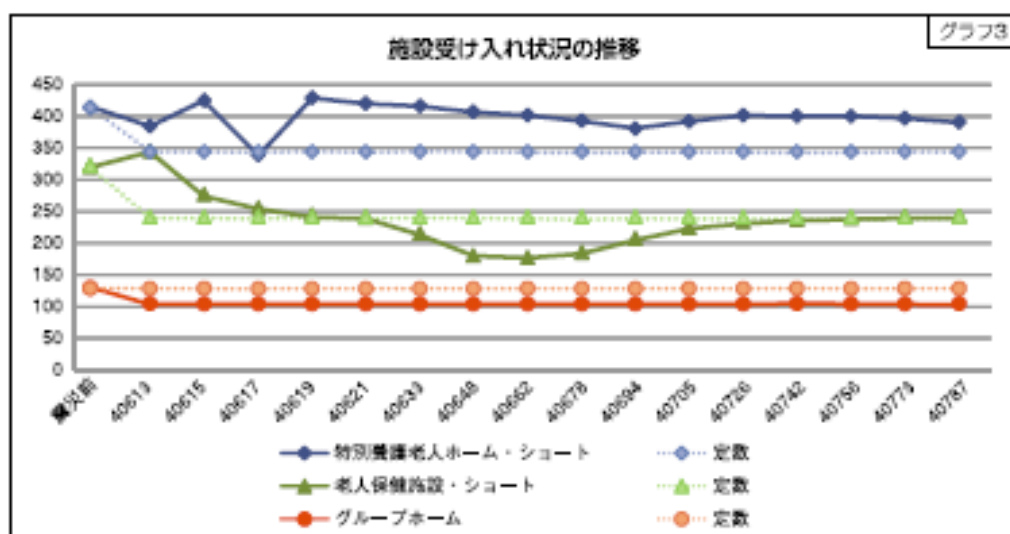
- 一時的に各事業所がストップし、サービス利用ができなかった。
- 避難所のボランティア等が対応したため、サービス利用を中止した。
- 家族の経済的理由で利用を中止した。

増加の理由

- 独居宅に被災した身内が同居することになった。
- 他事業所の被災、被災者家族のニーズ
- 被災により相談が増加



2. 施設サービス



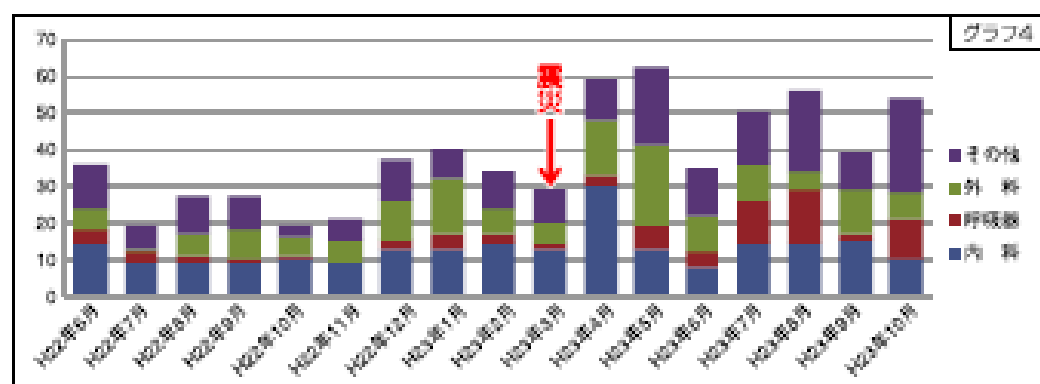
別紙4

H23年 退院支援業務

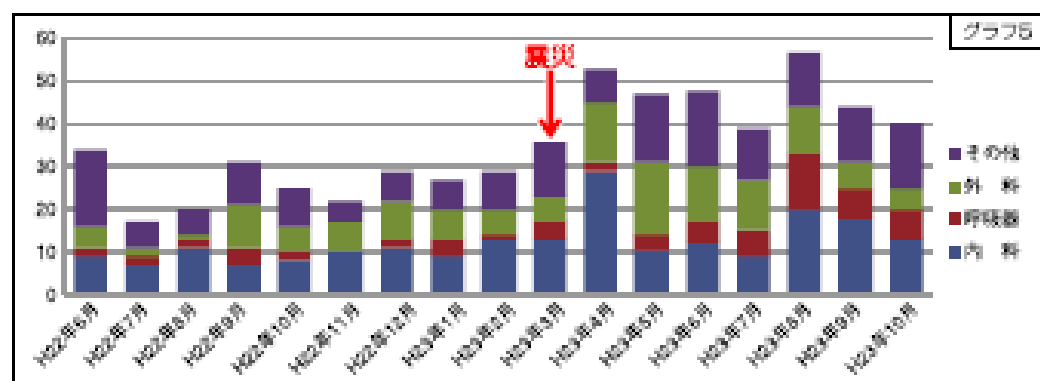
表1

項目 月	援助者	新規患者数		退 院 先						退院患者 数	退院時 カンファ レンス
		一般病棟	急性性病床	自 宅 一般病棟	自 宅 急性性病床	転 院	産 院	死 亡	その他		
3月	364	27	1	19	4	4	6	7	1	41	2
4月	240	59	6	21	3	4	21	4	0	53	0
5月	272	62	6	29	2	3	10	7	0	51	3
6月	332	36	1	21	3	11	13	4	0	52	5
7月	365	52	5	24	2	1	8	7	0	42	5
8月	367	57	5	24	4	9	18	7	0	62	6
9月	275	38	3	19	6	4	14	7	0	50	2
10月	401	54	6	20	5	5	7	7	0	44	12
11月											
12月											
合 計	2747	385	33	177	29	41	97	50	1	385	23
昨年 度 合 計	2880	328	46	145	48	46	63	50	5	357	145

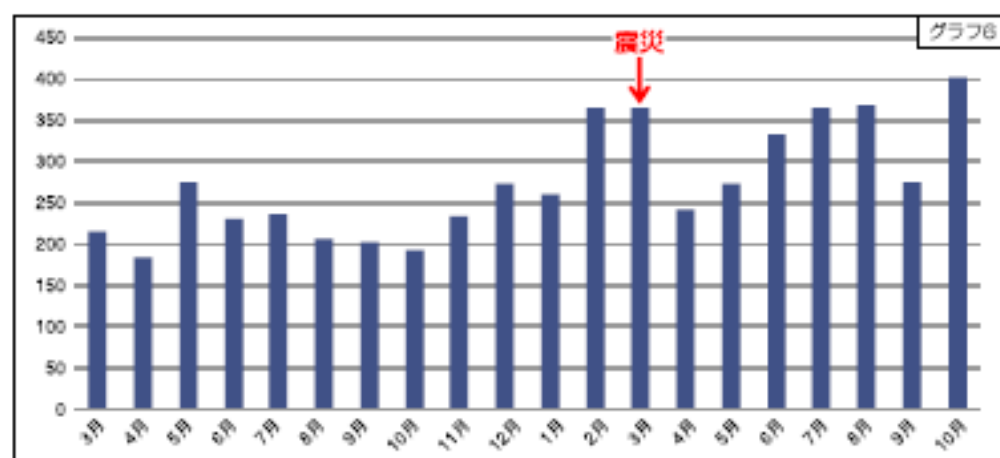
新規患者依頼数



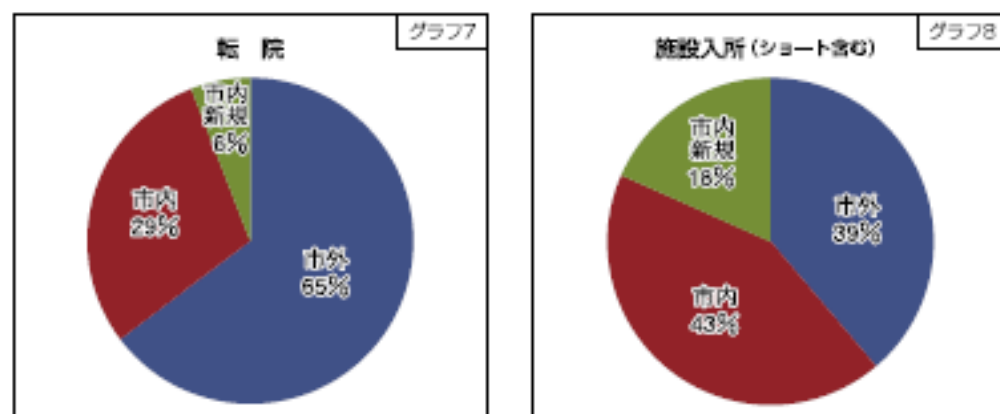
退院患者推移



月別退院支援延人数推移



震災後 3月11日～6月30日までの転院・施設入所の詳細内訳

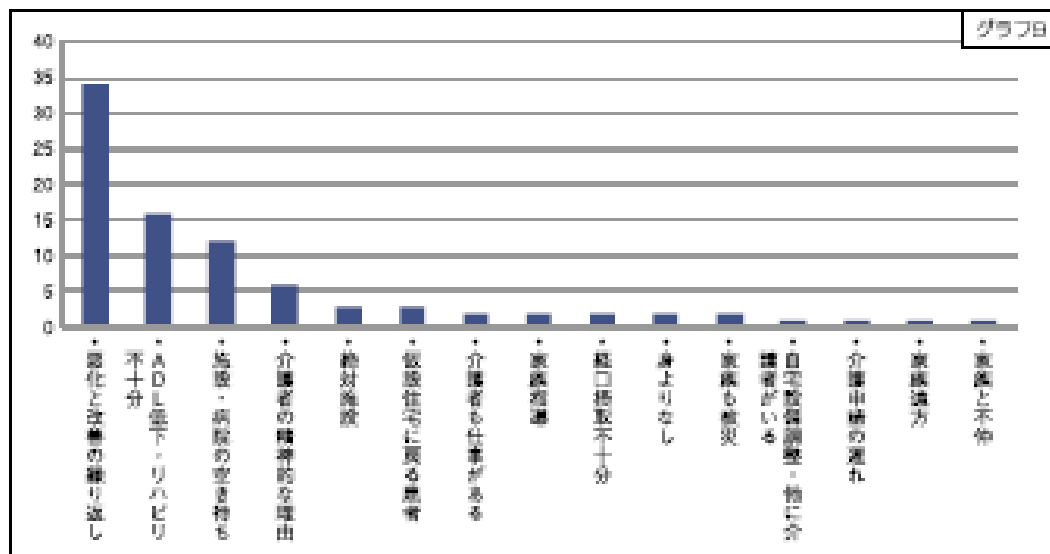


平均入院日数

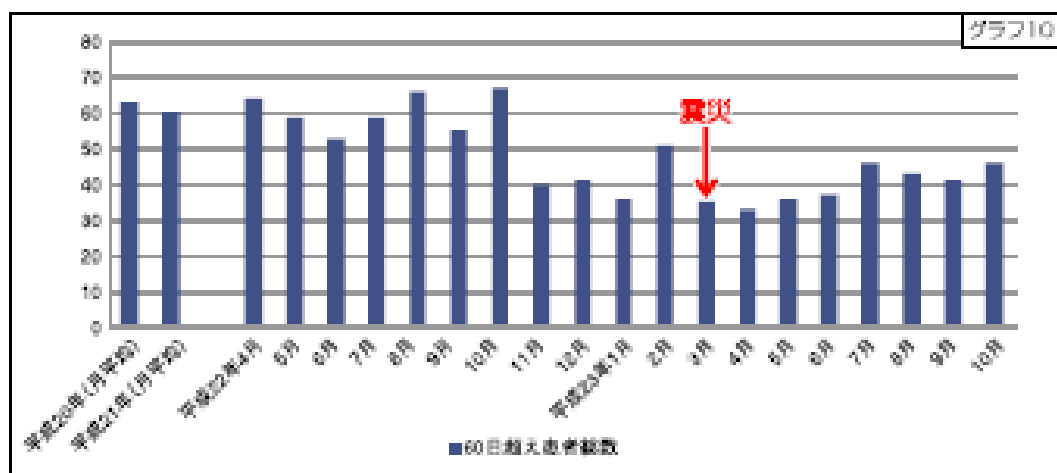
表2

	3月	4月	5月	6月	7月	8月	9月	10月	合計
○退院患者数	37	53	47	48	39	58	44	40	366
(死)	8	5	7	4	9	7	7	7	54
○支援開始～退院まで 30日未満	13	39	37	28	23	37	26	23	226
●入院～依頼(日)	14.3	11.6	31.9	17.9	20.2	17.9	16	6.5	17.0
●依頼～退院(日)	15	10.9	10.1	13.3	11.8	10.8	9.4	13	11.8
●入院期間(日)	29.3	22.4	41.9	31.2	32.1	28.8	25.4	19.5	28.8
○支援開始～退院まで 30日以上	16	9	3	16	7	14	11	10	86
●入院～依頼(日)	11.3	42.6	11	14.9	22.6	24.9	6.5	13.6	18.4
●依頼～退院(日)	57.6	61.4	81.3	59.3	49.7	72.6	58.3	76	64.5
●入院期間(日)	68.9	104.1	92.3	74.1	72.8	97.4	64.8	89.6	83.0

支援から退院まで30日以上経過した理由



60日超え患者総数



おわりに

豊饒の海が牙を剥き、大地が鳴動して全てが始まった3月11日。

気仙沼は壊滅的な被害を受けましたが、病院は小高い丘の上に建っていたため津波や火災の難を逃れました。

職員は奇跡的に全員無事でしたが4人に1人は家を流されたり家族を亡くしてしまいました。通信や電気などのインフラが途絶し被災状況が全く把握できない中、直後よりトリアージ体制を執りました。

なによりも有難かったのは、被災早期より全国の数多くの応援チームから強力なご支援をいただいたことです。

In conclusion

It was on March 11 when the fertile sea bared its fangs, the earth rumbled, and everything began.

Kesennuma suffered catastrophic damage, but since the hospital was built on a small hill, it escaped the tsunami and fire.

Miraculously, every staff member was safe, but one in four had had their house swept away or had lost family members. While infrastructure such as telecommunication and electricity had been disrupted, which prevented us from grasping the disaster situation, we took upon a triage system immediately after the earthquake.

I am grateful that we received strong support from a number of support teams across the country since the early days of the disaster.

特に、東北大学病院の里見進院長先生始め各科の先生方には手厚いサポートを頂き、当院のスタッフの疲弊も最小限に抑えられ、なんとか拠点病院としての役割を果たすことが出来たのではなかったかと思います。

ご支援いただいた皆様に厚く御礼申し上げます。

この冊子には、震災後の気仙沼市立病院の記録と記憶が凝縮されています。後世の為、復興の為、ご熟読ください。

最後に、震災でお亡くなりになられた方々のご冥福をお祈り申し上げますとともに、今も避難を余儀なくされている方々に心よりお見舞いを申し上げます。

We in particular, received generous support from doctors of every medical department including Dr. Susumu Satomi, the director of Tohoku University Hospital, who kept the exhaustion of the staff of our hospital to a minimum. I think that was how we could manage the role of being a base hospital.

I am extremely grateful to everyone who supported us.

In this booklet, the records and tributes of Kesennuma City Hospital after the

earthquake disaster were condensed. For future generations, for the reconstruction, I would like you to peruse this booklet.

Finally, along with praying for the souls of those who have passed away in the earthquake disaster, I extend my deepest sympathy to those who are still evacuees.

気仙沼市立病院 副院長

安 海 清

Dr. Kiyoshi Azumi

The vice-director of Kesennuma City Hospital

編集後記

震災から1年が経ちますが、この間被災地では人口の流出に歯止めをかけることができません。地域医療を担う医師や看護師の流出も深刻で、基幹病院である当院でさえ職員が去って行きます。政治の対応の遅れ、雇用の問題、精神心理的な疲労、家族の生活の問題など理由は様々あると思います。その中で、私たち医療人に出来ることは、やむを得ず気仙沼を離れることになりながらも故郷での生活再建を望む人々や、被災地に残って復興を目指す市民にとって、安心して生活し子孫を築き上げていくことができるような医療福祉体制を整備しておくことではないかと考えています。これの充実が図れば被災地の復興を強力に後押しすることにもなるでしょう。

Editor's note

One year has passed since the earthquake, during which, however, the affected areas have not been able to suppress the outflow of their population. The outflow of doctors and nurses responsible for regional healthcare has also been serious, even at this hospital, one of the core hospitals. I believe that there are a variety of reasons such as slow political responses, employment problems, mental or psychological fatigue and problems within family life. In such a situation, for people having been forced to leave Kesennuma but hoping to recover their livelihood in their hometowns and for those citizens remaining in the affected areas and also aiming to restore their life, I think that we should establish a medical welfare system that enables us to live with peace of mind and support our offspring. If this can be realized, it will also strongly boost the reconstruction of the affected areas.

この記録集の副題を「今を生きる、ともに未来へ」といたしました。気仙沼では、震災を契機に医療福祉に携わる人々の地域医療に対する問題意識が確実に高まっており、今後直面するであろう多くの課題に対して様々な新しい取り組みが着手されています。当院はその中心的な役割を果たすことが求められています。新しい歴史に向かって歩みはゆっくりでも確実に、そして、市民とともに前へ進んでいくことが私達の使命であり、気仙沼で文化や経済を支えてきた先人達への恩返しになるのだらうと感じています。

We decided to subtitle this collection of our records “Living in the present, advancing into the future together”. In Kesennuma, people involved in medical welfare are steadily raising their awareness of regional medical issues following the Great East Japan Earthquake, and various new initiatives have been undertaken to address many of the issues that may be faced in the future. Our hospital is required to play a central role in those efforts. It is our mission to slowly but surely write a new page of history and proceed ahead along with the citizens, which we feel is a way to return a favor to our predecessors, who have supported the culture and economy of Kesennuma.

活動記録には、家族や親類、友人の安否を気遣いながら懸命に災害医療を支えた職員の

想いが凝縮されております。医療というものは科学的根拠のもとに成立する行為です。従いまして、編集する立場としては、感情を抑えて鳥たちが海山を俯瞰するように、可能な限り客観的に活動内容を評価するように努めました。編纂を進めていく中で、震災当時の記憶が蘇るとき、昂る感情を抑えきれなくなることもありました。どうぞ、心情をお汲み取りください。

The thoughts of our staff members, who exerted themselves to support disaster medical care while fearing for the safety of their family, relatives and friends, were condensed into this record of their activities. What we call medical care, is set up on the basis of scientific evidence. Therefore, as an editor, I tried to suppress my emotions and objectively evaluate the contents as best as I could, like that of the birds that overlook the sea and the mountains. However, when memories of the time of the earthquake disaster were revisited for this compilation, I sometimes could barely control my surging emotions. I ask for your understanding.

最後になりましたが、この記録集を発刊するにあたり、貴重な資料の掲載を快諾いただきました東北大学大学院工学研究科准教授越村俊一先生、写真を提供下さいました東北大学病院脳神経外科大沢伸一郎医師、当院泌尿器科大久保鉄平医師に心から謝意を表するとともに、編集にご尽力いただきました三陸印刷株式会社村上智氏をはじめ関係者各位に厚く御礼申し上げます。

気仙沼市立病院 外科

横 山 成 邦

Last but not least, as we publish this collection of records, we would like to express our deepest gratitude to Mr. Shunichi Koshimura, Ph.D., the associate professor of the Graduate School of Engineering of Tohoku University for giving us his willing consent to publish his valuable materials in this book, to Dr. Shin-ichiro Osawa of the Neurosurgery Department of Tohoku University Hospital and Dr. Teppei Okubo of the Urology Department of our hospital for providing us with many photographs. We also express our sincere gratitude to Mr. Satoshi Murakami of the Sanriku Printing Co., Ltd. and everyone who made great contributions to the compilation of this book.

Dr. Shigekuni Yokoyama
The Department of Surgery
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