

The 3<sup>rd</sup> UN World Conference on Disaster Risk Reduction Public Forum  
Activities of Japanese Nursing Academies related to recovery from the Great East Japan Earthquake and Tsunami, and restoration of daily living  
第 3 回国連防災世界会議パブリックフォーラム「東日本大震災からの復興と生活再建のための看護系学会の活動」 March 14, 2015, 17:30-19:30, Sendai, Japan

## Japan Academy of Diabetes Education and Nursing

### The status of diabetes nursing in disasters, and a “Manual for diabetes nursing in times of disaster”

一般社団法人日本糖尿病教育・看護学会

災害時の糖尿病看護の現状と災害時の糖尿病看護マニュアル

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S1

The Great East Japan Earthquake that occurred on March 11, 2011 caused tremendous damage. Now even 4 years later, there are many areas that are still in the process of recovery. Support must be given to help residents in these areas as they strive to return to a normal life. In the field of diabetes nursing, this earthquake raised the major issue of “diabetes nursing during a disaster”.

S 1

2011年3月11日に発生した東日本大震災は、甚大な被害をもたらしました。4年経った今、まだまだ復興の途中にある地域も多く、人々は元の生活をとり戻そうと突き進む姿に支援をせずにはいられません。この震災は、糖尿病看護の中に「災害時の糖尿病看護」として大きな課題を与えました。

<p><b>東日本大震災時の糖尿病患者の状況</b></p> <ul style="list-style-type: none"> <li>インスリンや血糖測定器を持ち出せず、服用している薬を覚えていない患者がいた。</li> <li>いつ食事ができるか分からない状況で、インスリンや内服薬の調節が困難であった。</li> <li>発災時に現地に赴いた看護師の多くは、糖尿病看護の経験が少なく、対応に限界があった。</li> </ul>	<p><b>Situation of diabetic patients during the Great East Japan Earthquake disaster</b></p> <ul style="list-style-type: none"> <li>Some patients were not able to take their insulin or glucose monitors with them, and some did not remember what medications they were taking.</li> <li>It was difficult to adjust insulin doses and oral medications not knowing when they were going to be able to eat.</li> <li>Many of the nurses who went to the affected areas had little experience in diabetes nursing, and there were limitations to what they could do.</li> </ul>
<p><b>糖尿病患者の緊急度や優先度を判断し、対応できるマニュアルの作成が急務!</b></p>	<p>Development of a manual that enables assessment of the urgencies and priorities of diabetic patients as well as appropriate responses is urgent!</p>

S2

The Japan Academy of Diabetes Education and Nursing (JADEN) network committee received information by e-mail about areas affected by the disaster right after the earthquake occurred. The information included messages to the effect that medical personnel were occupied with efforts to help the large number of disaster victims, that it had taken time for them to determine the condition of diabetic patients who usually visited their facilities for care, and that they could only pray for the patients' well-being. Nurses located away from the areas affected by the disaster were, needless to say, consumed with thoughts such as "Are the patients alright?" and "We too must do something."

The information being received everyday indicated a state of confusion among both patients and nurses. Amid circumstances in which lifelines had been cut and fears about aftershocks continued, there were patients who had not been able to take their insulin injections or glucose monitors with them, and those who did not understand what medications they had been taking. There was also some confusion over how oral medications and insulin injections should be used when eating emergency food, with no certainties about when patients would be able to have meals.

It was reported that many of the nurses who provided support in areas affected by the disaster were not routinely involved in diabetes nursing, and that there were limitations to their activities in shelters. Based on the need for nurses who went to affected areas to be able to assess the urgencies and priorities of diabetic patients living in shelters and to take appropriate measures, we decided to develop a "Manual for Diabetes Nursing in Times of Disaster".

S2

日本糖尿病教育・看護学会ネットワーク委員会のeメールには発災直後から被災地の情報が寄せられ、その内容は、多くの被災者の対応に追われ自分の施設に通う糖尿病患者さんの様子を知るまでには時間がかかり、ただただ、無事を祈るばかりだったそうです。被災地から離れた場所にいる看護師は「患者さんたちは大丈夫だろうか?」「私たちも何かをしなれば」という気持ちにかられたことは言うまでもありません。日々寄せられる情報から、ライフラインが寸断され、余震の恐怖が続くなか、インスリン注射や血糖測定器などを持ち出せず、飲んでいる内服薬を覚えていない患者さんや、いつ食事ができるかわからない状況で、非常食に対して内服薬やインスリン注射はどのように使用したらよいか?など、患者さんも看護師も混乱していたことを知りました。

被災地支援を行った看護職は、日頃から糖尿病看護に関わっていないものも多く避難所での活動に限界があったという報告がありました。そこで被災地に赴く看護師が、避難生活をしている糖尿病患者の緊急度や優先度を判断し、対応できるものが必要だという回想が契機となり『災害時の糖尿病看護マニュアル』を作成することになりました。

**マニュアル作成の経緯**

- ネットワーク委員会「災害時の糖尿病看護マニュアル」作成ワーキンググループが招集された。
- 全国の糖尿病看護認定看護師から、災害の体験や災害時に必要な糖尿病看護について、意見を収集。
- 収集した意見を文献検討等をもとにカテゴリー別に分け、マニュアルの内容を検討。
- 2013.7.31「災害時の糖尿病看護マニュアル」発行

**Development of the manual**

- The network committee established a working group to develop a “Manual for Diabetes Nursing in Times of Disaster”.
- Opinions were gathered from certified diabetes nurses nationwide regarding their disaster relief experience and diabetes nursing required in times of disaster.
- Their comments were categorized based on literature reviews, etc., and the content of the manual was discussed.
- The “Manual for Diabetes Nursing in Times of Disaster” was published on July 31, 2013.

S3

At the 16th Annual Meeting of JADEN in September 2011, the year of the Great East Japan Earthquake, a special program for “diabetes treatment and response in times of disaster” was organized, and concerns were shared about diabetes nursing in times of disaster. In response to this, among JADEN network committee members, a working group was summoned to develop the “Manual for Diabetes Nursing in Times of Disaster”. The members included those experienced in disaster relief, nurses in the affected areas, and nurses who had never been

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involved with disasters. To avoid bias in content among this diverse group of members, opinions were sought from certified diabetes nurses nationwide with regard to disaster nursing experience and the diabetes nursing necessary during a disaster. The comments received were categorized based on literature reviews, and content of the manual was discussed.

During a discussion group at the 17th Annual Meeting, working group members gathered to facilitate a draft of the “Manual for Diabetes Nursing in Times of Disaster”, and opinions were exchanged among participants. Many nurses attended this discussion group, and opinions were shared about the significance, meaning, and content of the manual. The comments made at this discussion group were also reflected in the manual, with further refinement of topics of high interest. From the time this manual was proposed until it was finished, the Board of Directors met three times, and their opinions were also included.

The content was thoroughly reviewed, and the manual was published on July 31, 2013.

S 3

東日本大震災があった2011年9月、第16回日本糖尿病教育・看護学会学術集会において、特別企画「糖尿病療養と災害時の対応」が生まれ、災害発生時の糖尿病看護について関心を共有しました。これを受けて、本学会のネットワーク委員会の中で「災害時の糖尿病看護マニュアル」作成ワーキンググループが招集されました。このメンバーは災害救護の経験者、被災地の看護師、まったく災害に縁のない看護師と様々なメンバーの集まりであったため、内容の偏りをさけるために災害看護の経験や災害時に必要な糖尿病看護について、全国の糖尿病看護認定看護師より意見を収集しました。収集した意見は文献検討等をもとにカテゴリー別に分け、マニュアルの内容を検討しました。

第17回学術集会の交流集会では、「災害時の糖尿病看護マニュアル」の（案）をもとにワーキンググループメンバーがファシリテートして、参加者とともに意見交換を行いました。交流集会にはたくさんの方が参加してくださり、マニュアル作成の意義や意味、内容について共有しました。交流集会で出された意見もマニュアルに反映させ、とくに関心の高かった内容については、さらに精度をあげました。マニュアル作成決定から校了するまでに、3回の理事会があり、理事からの意見も反映させました。

内容を十分に検討し、2013年7月31日にマニュアルの発行に至りました。

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S4

Here is the cover page and some of the content in the manual. The color of the cover is symbolic of JADEN, and the contents are in two-color print, with shading to clarify important points. Illustrations have also been added with the hope of helping ease the mood in settings of confusion.

S4

こちらがマニュアルの表紙と内容の一部です。

表紙の色調は日本糖尿病教育・看護学会を象徴するカラーを使用し、中身は2色刷りですが、濃淡にしてポイントを明確にしています。

また、イラストを入れることで、混乱している現場では気持ちが穏やかになれることと期待しています。



S5

Relief activities were conducted in the affected areas immediately after the disaster, followed by subsequent long-term support. As mentioned previously, however, it was reported that many of the nurses who went to the disaster sites were not routinely involved in diabetes nursing, and there were limitations to their activities at shelters. For example, the timing of insulin injections varies depending on the type of insulin preparation, broadly speaking either just before eating or 30 minutes before eating. However, many nurses said that they “did not know the proper timing of injections” or “did not know how to use a portable blood glucose monitor”. In addition, the recent advent of GLP-1 receptor agonists, which are similar to insulin preparations but have different pharmacological actions, led to even more confusion.

Insulin injections and glucose monitoring are self-care practices routinely performed by diabetic patients. However, in extraordinary circumstances such as a disaster shelter, where meal and sleeping times may become irregular, and where many patients experience anxiety, self-care may often be difficult. Thus, “How should nurses offering support provide care for diabetic patients?” was identified as an issue.

S5

被災地では発災直後の救護活動と、その後も長期にわたり被災地支援が行われました。しかし、前述したように被災地へ赴く看護師には、日頃から糖尿病看護に関わっていない看護師も多く、避難所での活動に限界があったことが報告されました。例えば、インスリン注射は種類により注射のタイミングを大きく分け食直前もしくは30分前に注射しますが、「どのタイミングで注射するのかわからない」「簡易血糖測定器の使用方法がわからない」などが多く上げられました。また、最近では、イン

スリン製剤と類似するデバイスでも薬理作用が異なるGLP-1受容体作動薬の出現によりさらに混乱を招いていました。

インスリン注射や血糖測定は、糖尿病患者さんがセルフケアとして日常行うことですが、避難所では非日常環境のため食事の時間、睡眠時間などが定まらず、また精神的な不安を抱えて自分では行えない患者さんが多く、支援する看護師はどのように対応するべきか？が、課題となりました。

**マニュアルの構成**  
**第1部**  
**「糖尿病患者への災害時支援のポイント」**  
緊急度、優先度に着目し、被災地での糖尿病患者の支援内容の具体が記載されている。  
• 全体のフロー図  
• 糖尿病の治療薬の指導/高血糖・低血糖への対処  
• 避難生活の注意点  
• 妊婦への対応  
• 心理面への支援

**Structure of the manual**  
**Part 1**  
**“Points about support to diabetic patients in times of disaster”**  
Focuses on urgencies and priorities, and specifically discusses the types of support needed by diabetic patients in affected areas.  
• Overall flowchart  
• Diabetes treatment drug guidance/Management of hyperglycemia, hypoglycemia  
• Precautions about living in shelters  
• Care for pregnant women  
• Psychological support

S6

The disaster manual consists of two parts.

The first part is “Points about support to diabetic patients in times of disaster”, which focuses on urgencies and priorities, and specifically discusses the types of support needed by diabetic patients in affected areas.

We used a flowchart to summarize support during a disaster in order to enable a prompt response in a limited amount of time. The manual then describes following points, so that anyone reading it can provide support to diabetic patients.

- Guidance on diabetes treatment drugs and management of hyperglycemia and hypoglycemia.
- Precautions about living in shelters, which can tend to be less-than-ideal environments.
- Care for pregnant women.
- Psychological support, which becomes more important with prolongation of disaster recovery.

S6

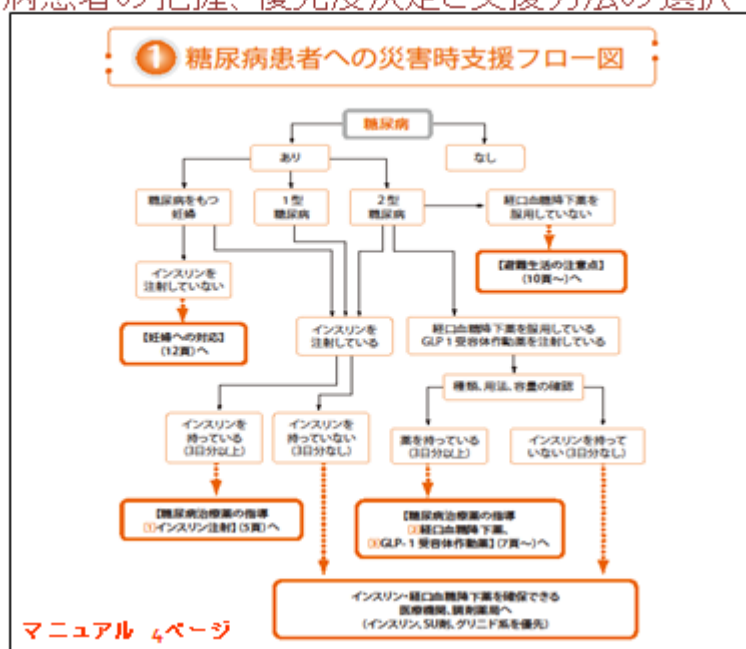
災害マニュアルは2部構成となっています。

第1部 は「糖尿病患者への災害時支援ポイント」とし、緊急度、優先度に着目し、被災地での糖尿病患者の支援内容の具体策が記載されています。

限られた時間の中で早急に対応できるよう、災害時支援をフロー図で示しました。その後、以下の点について、誰もが糖尿病患者さんをサポートできるよう記載されています。

- ・糖尿病治療薬の指導や高血糖・低血糖への対処について
- ・環境が悪くなりがちな避難生活の注意点について
- ・妊婦への対応
- ・心理面への支援について、で、これは、震災復興が長引くほど重要な項目となります。

### 糖尿病患者の把握、優先度決定と支援方法の選択



マニュアル 4ページ

S7

This is the flowchart included in the manual. By following the arrows, the reader is able to understand the support procedures and priorities. This process is described on the next slide.

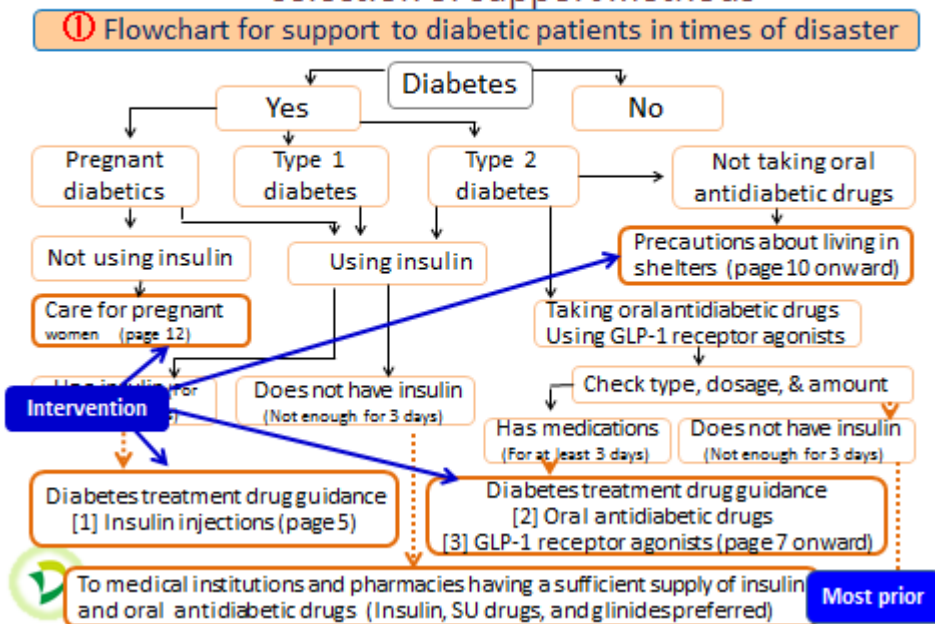
S7

こちらが、マニュアルに掲載されているフロー図です。

矢印に沿って進むと支援の方法、優先度が明確となります。この過程を次に示します。



## Assessing diabetic patients, deciding priorities, and selection of support methods



S8


The light orange boxes are points about assessment, and the dark orange boxes are support procedures.

The first thing that must be determined is whether or not the patient has diabetes, then following the arrows, determine what type of diabetes, whether treatment is with insulin or oral medications, and whether the patient has any of their medications with them. The arrows eventually indicate the pages in the manual that show the relevant support procedures, and the reader can then refer to those pages to find out what steps to take.

S8

薄いオレンジ色の枠は判断ポイントを、濃いオレンジ色の枠は支援の方法を示します。

まず、糖尿病のあり・なしから選択し、糖尿病のタイプ、インスリン治療または内服治療などの状態や、手持ちの残薬の状態など矢印に沿って進むと、その先には支援の方法を示すマニュアルのページが記載されています。そのページから何をすべきか読み取っていけるようになっています。

<p>マニュアルの構成</p> <p>第2部 「災害看護体験から学ぶ」</p> <ol style="list-style-type: none"><li>1. 発災直後から約1か月後の、糖尿病をもつ人の被災地での環境や状況</li><li>2. 項目別・時期別の糖尿病看護災害現場に赴いた看護師が見た被災地の現実とその対処</li></ol> 	<p><b>Structure of the manual</b></p> <p><b>Part 2</b> <b>“Learning from disaster nursing experience”</b></p> <ol style="list-style-type: none"><li>1. Environment and situation of diabetic patients in affected areas from immediately after the disaster up to approximately 1 month later.</li><li>2. Actual circumstances in affected areas and their management from the perspective of nurses who went to diabetes nursing settings in affected areas according to each item and time period. ③</li></ol>
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S9

Part 2 is entitled “Learning from disaster nursing experience”. This section is based on valuable comments from nurses who experienced previous disasters such as the Great East Japan, Niigata Chuetsu, or the Great Hanshin earthquakes, and from nurses with disaster relief experience. The situation and environment of diabetic patients in affected areas from immediately after the disaster up to about 1 month after the disaster occurred, along with the actual management performed by nurses, is described for each item and time period.

S9

第2部は「災害看護体験から学ぶ」とし、過去の災害、東日本大震災や新潟中越地震、阪神淡路大震災など実際の災害を体験した看護師や災害支援経験を持つ看護師の貴重な意見をもとに、発災直後から約1か月後の、糖尿病をもつ人の被災地での環境や状況、その時に実際行われた看護の対処について項目別、時期別に記載されています。


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### マニュアルの構成

巻末の資料

看護上、問題になったことの解決のための例として(写真を掲載)

- 注射製剤一覧(インスリン・GLP-1製剤)
- 経口血糖降下薬一覧
- 簡易血糖測定器一覧
- 製薬・機器メーカー各社の問い合わせ先



### Structure of the manual

#### Information at end of the manual

Examples of solutions to nursing problems (insert photographs):

- List of injectable drugs (insulin, GLP-1 preparations)
- List of oral antidiabetic drugs
- List of portable glucose monitors
- Contact information for each pharmaceutical & instrument company

S10

To give examples of solutions to nursing-related problems, the end of the manual includes lists of injectable drugs (insulin, GLP-1 preparations), oral antidiabetic drugs, portable glucose monitors, and company contact information.

S10

巻末資料には看護上問題になったことの解決の一例として、注射製剤一覧(インスリン・GLP-1製剤)各社問い合わせ先、経口血糖降下薬一覧、簡易血糖測定器一覧を掲載しています。

2013年7月31日

災害は必ずやってくる!  
有事の備えは平時から!

様々な教材として活用を期待

- ・糖尿病患者・家族
- ・糖尿病に携わる看護師
- ・保健師
- ・薬剤師など関係職種

Another disaster will certainly occur at some point in the future!

Prepare for emergencies in advance!

We expect the wide usage of this manual by

- ・ Diabetic patients and families
- ・ Diabetes related nurses
- ・ Public health nurses
- ・ Pharmacists and other related professions

[http://jaden1996.com/documents/saigai\\_manual.pdf](http://jaden1996.com/documents/saigai_manual.pdf)

DL from Official home page of JADEN

11

S11

**Another disaster will eventually happen! It is important to make preparations during stable times.**

Although certainly unwanted, we must presume that disasters will continue to occur in various regions. Preparations during stable times are essential to ensure prompt and appropriate measures during an emergency. The “Manual for Diabetes Nursing in Times of Disaster” can be used as educational materials in diabetes nursing education and diabetes classes in order to prepare for future disasters. We also hope to disseminate this manual to nurses with limited experience in diabetes nursing, as well as public health nurses working for the government or municipalities, and pharmacists, to help them prepare for emergencies. In addition, we hope that this manual will also be useful for the public health nurses who have patiently provided support to persons forced to live in shelters since the Great East Japan Earthquake.

The “Manual for Diabetes Nursing in Times of Disaster” was distributed to JADEN members in 2013. This manual is also available to non-members as a download from the JADEN website.

We would like to conclude with our sincere hopes for a prompt and full recovery in the affected areas.

Thank you all for your kind attention.

S11

災害は必ずやってくる! 有事の備えは平時から

あつてほしくはありませんが、今後もさまざまな地域で災害が起こることが想定されています。有

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事に、素早く適切な対処をするためには、平時からの取り組みが大切だといわれます。「災害時の糖尿病看護マニュアル」を糖尿病看護教育や糖尿病教室の教材として活用し、有事に備えていただきたいと思います。また、糖尿病看護の経験が少ない看護職や行政、市町村に勤務する保健師や、薬剤師にも、このマニュアルの存在を伝え、有事に備えていただきたいと思います。更に、東日本大震災時に避難生活を余儀なくされている人々へ、根気よく支援してきた保健師のみなさまにも、今からでもこのマニュアルを役立てていただきたいと願っています。

この「災害時の糖尿病看護マニュアル」は2013年に本看護学会の会員に配布されています。会員以外の方も、私たちの学会ホームページからダウンロードして多くの方が入手できるようになっています。

被災地の一日も早い復興を祈念して発表とさせていただきます。

御清聴有難うございました。