

Pediatric Emergency Decision Support System (PEDSS) Web Tool User Manual



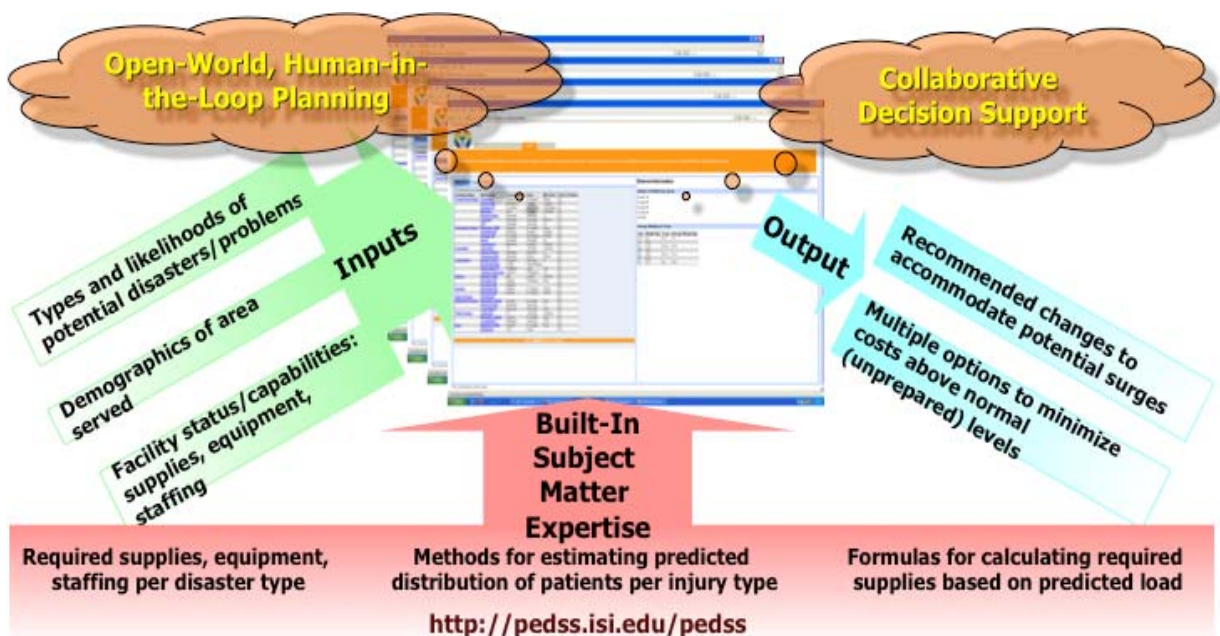
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PEDSS Overview

Pediatric Emergency Decision Support System (PEDSS) is a software tool that helps hospitals prepare and maintain disaster response plans. PEDSS guides users at a health facility through collecting and preparing critical information needed for preparing a plan, in the spirit of tax preparation software like TurboTax™. PEDSS asks only for relevant information, and only if it cannot access that information itself. TurboTax™ applies Federal/State laws to personal financial data. Its output is a low-cost, legal tax filing. PEDSS applies pediatric best practice rules to a facility's specific conditions/requirements. Its output is an effective, affordable, customized disaster plan, but instead of using it annually to deal with the past, you use PEDSS constantly to manage the future.



Like TurboTax, PEDSS guides users through a decision process by asking for information and helping determine what's called for based on the inputs. To do so, it presents a set of tabs which you look at using your favorite web browser. Users can either move sequentially through the steps by working through the tabs left to right, or can use navigation tabs accessible from a top-level menu.

PEDSS is designed as a growing set of modules addressing topic areas identified by the community as being of critical importance. Currently PEDSS supports two modules:

1. **Medical Supplies Module** – calculates types and amounts of required medical supplies during an earthquake pediatric disaster



Main information sources:

- Jones LM, Bernknopf R, Cox D, et al.: U.S. Geological Survey Open-File Report 2008-1150 and California Geological Survey Preliminary Report 25. vol 2008.
- “Hospital-Based Disaster Preparedness for Pediatric Patients: How to Design a Realistic Set of Moulage Patients”, American Journal of Disaster Medicine.

2. **Reunification Module** – addresses pediatric reunification issues

Main information sources:

- Los Angeles County, Emergency Medical Services Family Information Center Planning Guide (Draft, February 21, 2007).
- PEDIATRIC REUNIFICATION: National Consensus Conference Recommendations 2008.
- Mass Fatality Incidents and Family Assistance Center Planning Workshop, March 19, 2009.

PEDSS Privacy Note

This Policy describes how University of Southern California Information Sciences Institute treats personal and proprietary information received from our users.

Information Collection and Use:

We collect the following personally identifiable information about our on-line users: name and e-mail address when users register for online services. We also collect information that includes medical facility name, address, and other facility-specific information required for enabling some services. This information is considered confidential. We do not trade, sell, rent or otherwise share your personally identifiable information with third parties.

Registration:

Users may login anonymously using Guest account that provides only limited set of services and features. Only registered members (users with accounts) may access certain content, services, and features. Member registration requires you to provide certain personally identifiable information, such as your name, e-mail address, and facility specific information: medical facility street address and facility name. You will be asked to select an account name and password so that you have access to this information and can revise it in the future. To complete the registration process, we will send you a validation e-mail message.



Step One: Log into in the PEDSS Web Tool

In order to log into the PEDSS Web Tool, the user first must go to PEDSS homepage at www.pedss.isi.edu/pedss. PEDSS login page should appear that looks like this:



Pedss Tool - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://pedss.isi.edu/pedss/#PasswordRetrivalRequest

Most Visited Windows Marketplace http://maps.google.c...

Pedss Tool



PEDSS (Pediatric Emergency Decision Support System) is a web-based interactive software tool used for training or operational purposes to foster site-by-site compliance with best practice recommendations for required medical supplies during an earthquake pediatric disaster and family reunification.

Login to PEDSS.

Select PEDSS module to load:

☐ Medical Supplies Module

☒ Reunification Module

Login to PEDSS:

Login as Guest

- OR -

Login name:

Password:

Login

Request new account or retrieve information about existing account:

PEDSS Account

Privacy Note

First you need to select a module to be loaded.

- 1 Click on a button next to a module name to select one of the two modules to be loaded.



1 Select PEDSS module to load:

☐ Medical Supplies Module

☐ Reunification Module

2.a Login to PEDSS:

Login as Guest

— OR —

Login name:

2.b Password:

Login

Request new account or retrieve information about existing account:

3 PEDSS Account

4 Privacy Note

There are two PEDSS login options: Guest or Registered user.

2.a Click “Login as Guest” button to login as a guest, no prior registration is required.



Note No user input (except PEDSS evaluation) will be saved by PEDSS tool.

2.b Enter user name & password and click “Login” button to login as a registered user. Your inputs and data modifications will be saved, editing capabilities enabled.

3 If you need a username and password, click “PEDSS Account” button. New Account Request tab should appear that looks like this:

Pedss Tool - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://pedss.isi.edu/pedss/#Disaster Preparedness Plan

Most Visited Windows Marketplace http://maps.google.c...

Pedss Tool

Welcome, guest

Please logout before exiting PEDSS by clicking the button: Logout

New Account Request Password Retrieval Request

Please fill the requested information and click SUBMIT REQUEST button.

Provide the following information:

Your Name:

Email address:

Facility name:

Provide Facility Address

Street:

City:

State:

Zip Code:

Provide Account Information

Account name (at least 3 characters):

Password (at least 6 characters):

Submit Request

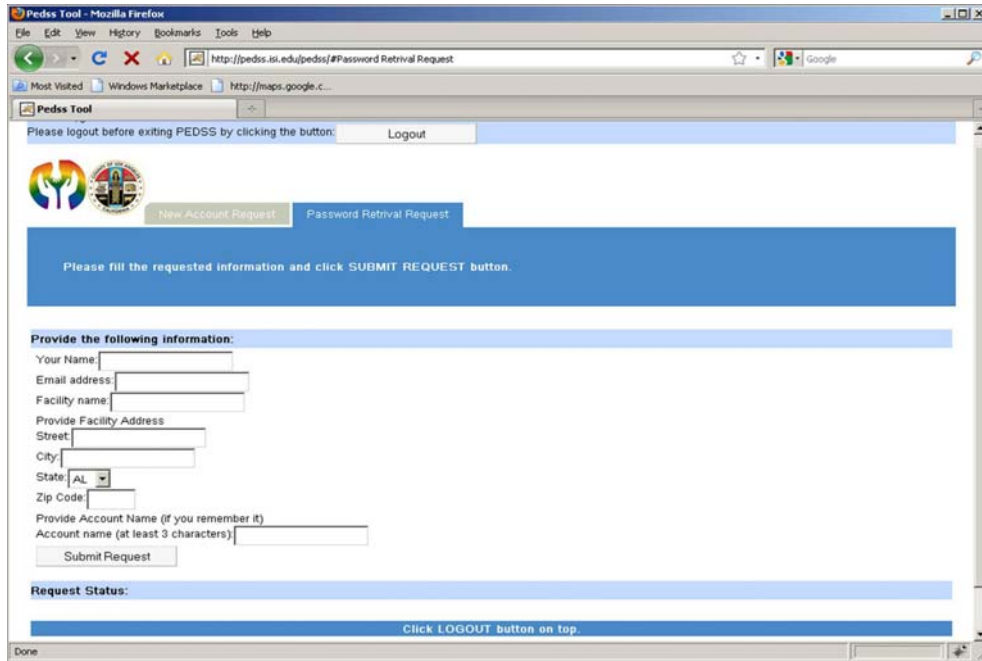
Request Status:

Click LOGOUT button on top



You need to enter requested information and click “Submit Request” button. A confirmation about creation of your new account will be sent to the provided email address.

If you have an account but do not remember either username or password or both, click “PEDSS Account” button and then select “Password Retrieval Request” tab. PEDSS Password Retrieval Request tab should appear that looks like this:



The screenshot shows a web browser window titled "Pedss Tool - Mozilla Firefox". The address bar displays "http://pedis.isi.edu/pedss/#PasswordRetrievalRequest". The page has a header with a "Logout" button and a navigation bar with "New Account Request" and "Password Retrieval Request" tabs. A blue banner instructs the user to "Please fill the requested information and click SUBMIT REQUEST button." Below this, a section titled "Provide the following information:" contains several input fields: "Your Name:", "Email address:", "Facility name:", "Provide Facility Address" (with sub-fields for "Street:", "City:", "State:" (a dropdown menu showing "AL"), and "Zip Code:"). There is also a field for "Provide Account Name (if you remember it)" with the label "Account name (at least 3 characters):". A "Submit Request" button is located below these fields. At the bottom, a "Request Status:" section contains a blue banner that says "Click LOGOUT button on top."

You need to enter requested information and click “Submit Request” button. Information about your existing account will be sent to the provided email address.

4 To view our Privacy note click “Privacy Note” button.



Step Two: Working with PEDSS Web Tool

PEDSS presents a user with a set of tabs thus enabling the user to switch between different components, one at a time. Each tab encompasses a specific topic.

Medical Supplies Module

Medical Supplies Module consists of five tabs (Context, Capabilities, Load, Supplies, and Medical Supplies Summary) and additional PEDSS Evaluation tab. The tabs should be navigated sequentially starting with the Context tab that is displayed when you login to PEDSS.

Context Tab

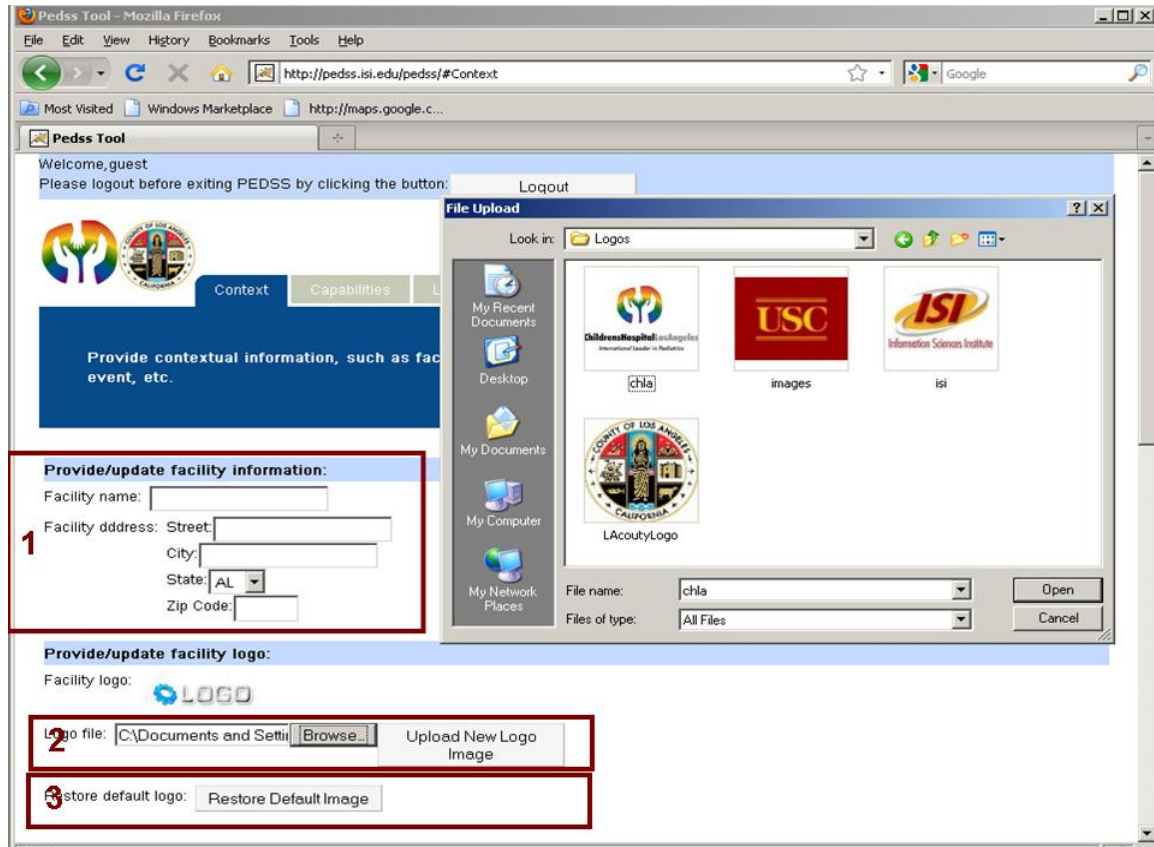
This tab is the first tab in the list and is used to collect contextual information, such as facility information, demographics, environmental context, type of event, etc. The tab looks like this:



1 To customize (or correct) PEDSS output, you need to provide (or update) facility information by filling the “Facility name” and “Facility address” fields.

2 You may also provide (or update) facility logo image by browsing local file system, selecting image file (accepted formats include jpg and gif), and clicking “Upload New Logo Image” button.

3 To restore default logo image, click “Restore Default Logo Image” button.



In its calculations PEDSS uses demographic information based on the ZIP code (s) covered by the facility as described in the Appendix.

Pedss Tool - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://pedss.isi.edu/pedss/#Context

Most Visited Windows Marketplace http://maps.google.c...

Pedss Tool

Enter 5 digit Area Code (ZIP Code) covered by the facility. You may enter several zipcodes (each on a separate line) by pressing the ENTER key after each one.

Zipcode: 90001 Get Demographic Data Click to get explanation

Status: Got Demographics for ZIP Code: 90001

Number of children in the specified area per age group:

under 1 month: 99 Override Click to get explanation

New value: 100 Reason:

1-12 months: 1096 Override Click to get explanation

1-3 years: 3588 Override Click to get explanation

4-5 years: 2392 Override Click to get explanation

6-8 years: 3588 Override Click to get explanation

9-11 years: 3588 Override Click to get explanation

12-17 years: 7176 Override Click to get explanation

Total for all groups: 21628

Select box for additional demographic information: ☒

Additional Demographic information

Percentage of Hispanic Nonwhite Population by Census Tract in Los Angeles Country

Done

4 To obtain this information, enter 5 digit Area Code (ZIP Code) covered by the facility. You may enter several ZIP codes (each on a separate line) by pressing the ENTER key after each one. Once all ZIP codes are listed, click “Get Demographic Data” button.



Note PEDSS calls demographic server to obtain the number of children in the specified area per age group. If the server is down, or server is busy, or provided ZIP code is invalid, PEDSS will not be able to get demographic data. In this case, follow step 5.

5 PEDSS allows users to override certain information. If you think the retrieved demographic data (number of children in the specified area per age group) is incorrect, or if PEDSS was not able to obtain the data, you can correct this information by selecting “Override” option. Two new fields should appear. You need to enter correct value in the “New value” field and provide a rationale for the change in the “Reason” field.

6 To view additional demographic information which may help you correct demographic data, select box for additional demographic information.



7 The next step is to select potential disasters events in the area (Earthquake, Fire, and Flood).



Note Currently, PEDSS only supports “Earthquake” option.

8 Next select special environmental conditions (School and Air pollution) that influence required supplies.



Note Currently, PEDSS does not support this option.

The screenshot shows a web interface with two main sections. The first section, titled "Select events", has a blue header. It contains three options: "Earthquake" (checked), "Fire", and "Flood". Each option has a "Click to get explanation" link. A red box highlights the "Earthquake" option, and a tooltip below it says "Currently we only support earthquake event". The second section, titled "Special context, environmental conditions", also has a blue header. It contains two options: "School" and "Air pollution", each with a "Click to get explanation" link. A red box highlights the "School" option, and a tooltip below it says "Currently not supported". At the bottom of the interface is a blue button that says "Click CAPABILITIES tab to continue".

Click Capabilities tab to continue.

Capabilities Tab

This tab prompts a user to enter emergency department capabilities: facilities, personnel, and surge capacity per injury type. This information is necessary to ensure that the preparedness plan accurately reflects the number of personnel available to administer the supplies and pharmaceuticals.



Note Currently, PEDSS does not fully support this option.



Pedss Tool - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://pedss.isi.edu/pedss/#Capabilities

Most Visited Windows Marketplace http://maps.google.c...

Pedss Tool

Context Capabilities Load Supplies Medical Supplies Summary PEDSS Evaluation

Determine maximum number of children that your facility can accommodate based on the Emergency Department Capabilities (facilities, personnel, surge capacity per age and injury type, etc.).

Enter ED Facilities

Number of beds: Click to get explanation

Enter ED Day time Personnel

Doctors: Click to get explanation

Nurses: Click to get explanation

Enter ED Night time Personnel

Doctors: Click to get explanation

Nurses: Click to get explanation

Maximum number of patients that the facility can accommodate

| Age group | Number of children | Number of children facility can accommodate |
|-----------|--------------------|---|
| 0-1mo | 0.0 | <u>0.0</u> |
| 1-12mo | 2.0 | <u>2.0</u> |
| 1-3y | 5.0 | <u>5.0</u> |
| 3-5y | 4.0 | <u>4.0</u> |
| 6-8y | 5.0 | <u>5.0</u> |
| 9-11y | 5.0 | <u>5.0</u> |
| 12-18y | 11.0 | <u>11.0</u> |

Comments for row 7 column 3

Default value: 0.0

Add new comment and/or override value

New value: Submit

Click LOAD tab to continue

You can manually correct the number of children for each of the 7 age groups setting the maximum number of children in each group that your facility can accommodate.

1 To do so click on a blue underlined number in the column titled “Number of children facility can accommodate”. Two new fields should appear.

2 You need to enter correct number in the “New value” field and provide a rationale for the change in the “Add new comment and/or override value” field.

Click “Load” tab to continue.

Load Tab

This tab determines the expected health facility load by number of children per group per injury type. The right part of the tab provides summary of entered and calculated information.

PEDSS employs formulas developed by subject matter experts including physicians, nurses and epidemiologists to calculate the load. The calculation methods are described in Appendix.



PEDSS calculates and displays:

1. The predicted number of injured children per age group in the area;
2. Predicted number of injured children who require intubation per age group in the area;
3. Expected number of injured children per age group per injury type including intubation

Numbers are rounded up to the nearest integer.

1 PEDSS suggests different replenishment options to optimize hospital plans with respect to cost or to expiration time. Select optimization option by clicking either “Cost” or “Shelf life” button.

2 To correct PEDSS calculations you may edit numbers in any of the two tables:

1. Percentage of injured children per age group
2. Distribution of injury types out of the total number of injured children

To do so, click on a blue underlined number that you want to correct. Two new fields should appear. You need to enter correct number in the “New value” field and provide a rationale for the change in the “Add new comment and/or override value” field.

Click Supplies Tab to continue.



Supplies Tab

This tab determines the required pharmaceuticals and medical supplies per injury type with options. The right part of the tab provides summary of entered and calculated information.

Medications sub-tab lists for each injury type required medication, concentration, dose, maximum dose, cost per unit, and expiration time. Supplies sub-tab lists supply type, cost per unit, and expiration time.

The screenshot shows the PEDSS web application interface. The 'Supplies' tab is selected, displaying a table of medical supplies. A red box highlights a row for 'Rapid infuser' under 'Abdominal trauma', with a blue underlined '12.0' in the 'Expires in # months' column. To the right of the table, there are summary statistics, a 'Selected coverage' section, and a 'Predicted number of injured children per age group in the area' table. The interface includes a navigation bar at the top with tabs for 'Medications' and 'Supplies'.

| Potential Injury | Supply: Option 1 | Cost per unit | Expires in # months | Supply: Option 2 | Cost per Unit | Expires in # months | Comments for row 2 column 7 |
|------------------|-------------------------|---------------|---------------------|-------------------|---------------|---------------------|-----------------------------|
| Abdominal trauma | DPL tray | 1.0 | 12.0 | | | | |
| | Rapid infuser | 1.0 | 12.0 | Pressure bag | 2.0 | 12.0 | 12.0 |
| | Fluid warmer | 1.0 | 12.0 | | | | |
| Anxiety | Self restraints | 1.0 | 12.0 | | | | |
| | Leather restraints | 1.0 | 12.0 | | | | |
| | | | | | | | |
| Asthma | Aerochamber mask infant | 1.0 | 12.0 | Paper cup | 2.0 | 12.0 | |
| | Aerochamber child | 1.0 | 12.0 | Paper cup (small) | 2.0 | 12.0 | |
| | Spacer | 1.0 | 12.0 | Paper cup | 2.0 | 12.0 | |
| | Nasal Cannula | 1.0 | 12.0 | | | | |
| | Oxygen mask-ped | 1.0 | 12.0 | | | | |
| Burn | Oxygen mask-ad | 1.0 | 12.0 | | | | |
| | Non-rebreather | 1.0 | 12.0 | | | | |
| | Dry sheet | 1.0 | 12.0 | Vigilon | 2.0 | 12.0 | |
| Chest Trauma | Non-adhesive gauze | 1.0 | 12.0 | | | | |
| | NS | 1.0 | 12.0 | | | | |
| | Suture Removal | 1.0 | 12.0 | | | | |
| | Pressure bag | 1.0 | 12.0 | | | | |
| | 3.5 inch spinal needle | 1.0 | 12.0 | | | | |
| | 30mL syringe | 1.0 | 12.0 | | | | |
| | Betadine | 1.0 | 12.0 | | | | |
| | 10mL syringe | 1.0 | 12.0 | | | | |
| | 25g needle | 1.0 | 12.0 | | | | |
| | 11 blade scalpal | 1.0 | 12.0 | | | | |
| | hemostat | 1.0 | 12.0 | | | | |
| | Clamp (2) | 1.0 | 12.0 | | | | |
| | Chest tube 12F | 1.0 | 12.0 | | | | |
| | Chest Tube 14F | 1.0 | 12.0 | | | | |
| | Chest tube 18F | 1.0 | 12.0 | | | | |
| Chest Tube 20F | 1.0 | 12.0 | | | | | |
| Chest Tube 24F | 1.0 | 12.0 | | | | | |
| 1.8 silk suture | 1.0 | 12.0 | | | | | |
| Tape | 1.0 | 12.0 | | | | | |
| Connector | 1.0 | 12.0 | | | | | |
| Pleurovac | 1.0 | 12.0 | | | | | |

1 You can correct cost per unit and expiration time for medications and supplies by clicking on a blue underlined number that you want to correct. Two new fields should appear. You need to enter correct number in the "New value" field and provide a rationale for the change in the "Add new comment and/or override value" field.

Click Medical Supplies Summary tab to continue.



Medical Supplies Summary Tab

This tab summarizes required medical supplies based on estimated number of children per group per injury type. It suggests the best replenishment plan based on the optimization option (cost or shelf life).

Replenishment plan for medications Replenishment plan for supplies

1 To print the list of needed medication, click PRINT button below:

PRINT

Facility Information:

Facility name:

Facility address:

Facility logo:

Best Medications option:

Cost of needed medications\$ 3967.49

| Potential Injury | Medication | Concentration | Number of Units Needed | Cost per Unit | Total Cost for Units Needed |
|--------------------|---------------------------------|----------------|------------------------|---------------|-----------------------------|
| Abdominal Trauma | Morphine Sulfate | 2 mg/mL | 134.6 | 1.74 | 234.2 |
| | Normal Saline | Standard | 134.6 | 1.0 | 134.6 |
| | O neg Blood | Standard | 134.6 | 1.0 | 134.6 |
| Anxiety | Diazepam IM | | 51.3 | 2.35 | 120.55 |
| | Lorazepam (Ativan) | 0.5 mg tablets | 51.3 | 0.31 | 15.9 |
| Asthma | Decadron IM | | 51.3 | 0.85 | 43.61 |
| | Prednisone (Prednisolone) | 15 mg/5mL | 51.3 | 0.13 | 6.67 |
| | Xopenex (Levalbuterol) | single unit | 1.0 | 2.61 | 2.61 |
| Burn | Morphine IV/IM | | 51.3 | 1.74 | 89.26 |
| | Silvadine (Silver sulfadiazine) | 1% | 1.0 | 2.07 | 2.07 |
| Chest Trauma | Lidocaine | 1% | 51.3 | 0.52 | 26.68 |
| | Morphine Sulfate | 2 mg/mL | 51.3 | 1.74 | 89.26 |
| | O neg Blood | Standard | 51.3 | 1.0 | 51.3 |
| Closed Head Injury | Atropine IV | | 51.3 | 0.26 | 13.34 |
| | Normal Saline | | 51.3 | 1.0 | 51.3 |
| | Fentanyl | | 51.3 | 0.28 | 14.36 |
| | Fentanyl | 10 mcg/mL | 51.3 | 0.28 | 14.36 |
| | FFP | | 51.3 | 1.0 | 51.3 |
| | Mannitol | | 51.3 | 0.86 | 44.12 |

Selected coverage

Coverage % 100

Total Cost of Medications\$ 3967.49

Total Cost of Supplies\$ 39.0

Total Cost\$ 4006.49

Zipcode(s)

90001

Predicted number of children per age group

| Age group | Number of children | Number of ch accommodate |
|-----------|--------------------|--------------------------|
| 0-1mo | 100 | 0.0 |
| 1-12mo | 1096 | 2.0 |
| 1-3y | 3588 | 5.0 |
| 3-6y | 2392 | 4.0 |
| 6-8y | 3588 | 5.0 |
| 9-11y | 3588 | 5.0 |
| 12-18y | 7176 | 11.0 |
| Total | 21528 | |

Predicted number of injured children per age group in the area

| Age group | Number of children | Number of ch accommodate |
|-----------|--------------------|--------------------------|
| 0-1mo | 0.0 | 0.0 |
| 1-12mo | 2.0 | 2.0 |
| 1-3y | 5.0 | 5.0 |
| 3-6y | 4.0 | 4.0 |
| 6-8y | 5.0 | 5.0 |
| 9-11y | 5.0 | 5.0 |
| 12-18y | 11.0 | 11.0 |

Predicted number of injured children who are age groups in the area

1 You can print the list of needed medications or supplies by selecting "Replenishment plan for medications" sub-tab or "Replenishment plan for supplies" sub-tab and clicking PRINT button.



Reunification Module

In contrast to the Medical Supplies Module that calculates required medications and supplies, the set of issues addressed by the Reunification Module is wider and often no exact formulas exist. Therefore, three main Reunification Module output categories include:

1. INFORMATION – general (not detailed) information on a particular health issue
2. GUIDANCE – a checklist of issues, detailed information, and required actions related to a particular preparedness/mitigation task
3. CALCULATIONS – recommendations (e.g., amounts and types of supplies) based on developed and endorsed data and formulas

Viewing Additional Information

Some tabs provide brief information about various topics. To obtain additional information, select box that looks like this:

☒ Select box for additional rational information

To hide displayed information, deselect the box:

☐ Select box for additional rational information

To view full documents, click on the blue underlined text that looks like the following:

Tool: Readiness for Events with Psychological Emergencies Assessment

[PDF \(600 KB\)](#)

1. [Los Angeles County Department of Health: Preparing Hospitals and Clinics for the Psychological Consequences of a Terrorist Incident or Other Public Health Emergency.](#)



[Child Identification Survey Form.](#)



Editing Information

If you logged in as a registered user, some tabs will display “Edit Information” button in various places. You can modify these parts by clicking the button. The modifiable text should appear in a window. You can edit the text directly. Once you are done, click “Save Edits” button. You can restore the default text by clicking “Restore Defaults” button. Both buttons will appear once you click “Edit Information” button.



Note To format your edits use HTML tags.

Medical Supplies Module consists of six tabs (Context, Mental Health and Family Support, Transportation and Transfer, Tracking Patients, Reunification Task Progress Summary, and Disaster Preparedness Plan) and additional PEDSS Evaluation tab. The tabs can be navigated in any order starting with the Context tab that is displayed when you login to PEDSS and finishing with the Disaster Preparedness Plan tab.

The context tab is similar to the context tab of the Medical Supplies Module. See page 5.

Mental Health and Family Support Tab

This tab provides brief information about various topics related to mental health and family support. This tab covers five tasks: Planning Mental Health Response, Psychological Triage, FIC support, Pediatric dietary needs, and Coroner services. The tasks can be navigated and completed in any order.



Family Information Center (FIC) main objectives and functions:

1. Provide the necessary reliable information via systematic organizational framework and assistance in the identification process;
2. Assist relatives coping with uncertainty, stress and stages of adaptation; and
3. Enable the medical staff to concentrate freely on their treatment of the casualties, especially in the acute stage of the proceedings, while providing a formal support system for bewildered and anxious relatives and friends.

☐ Select box for additional rational information

Select FIC services:

- ☒ Full FIC support
- ☐ Pediatric dietary needs
- ☐ Coroner services

Task Progress:

Task Priority Covered? Comments

| Task | Priority | Covered? | Comments |
|----------------------------------|----------|----------|----------|
| Planning mental health response | 1 | No | |
| Psychological triage | 2 | No | |
| FIC Location | 3 | No | |
| FIC Layout | 4 | No | |
| FIC Staffing | 5 | No | |
| FIC Equipment | 6 | No | |
| FIC Activation | 7 | No | |
| Pediatric dietary needs | 8 | No | |
| Adult nutrition interventions | 9 | No | |
| Storage of deceased | 10 | No | |
| Processing of death certificates | 11 | No | |

Comments for row 1 column 2

Default value: 1.0

Add new comment and/or override value

New value: Submit

Task completion score

Perfect Score 11

Planning a hospital disaster mental health response

☒ Select box if the Planning a hospital disaster mental health response task is completed

Provide task progress comments (optional):

Planning a hospital disaster mental health response

Children's responses to disaster and hospitalization may share some aspects of adult responses, but are distinguished by the developmental contexts in which children of varying ages experience the impact of associated events and procedures. An unfamiliar environment such as a medical setting can be made to feel safer for pediatric visitors and patients by including familiar people, familiar things and routines. Hospital staff need to consider the cultural differences that may cause a group of children exposed to the same trauma to react differently. Lastly, there are legal concerns regarding the treatment and release of children, which each hospital should consider when creating the pediatric response portion of its disaster plan.

To view more information, select boxes below

- ☐ General Guidelines
- ☐ How Children Can React to a Disaster
- ☐ Development-Specific Guidelines for Treating Children in the Hospital
- ☐ Understanding Death - Developmental and Cultural Considerations

1 Select FIC services that your facility wants to support by selecting the corresponding box:

- ☒ Full FIC support
- ☐ Pediatric dietary needs
- ☒ Coroner services

Each of the five task starts with a green area that looks like this:

☒ Select box if the Planning a hospital disaster mental health response task is completed

Provide task progress comments (optional):

Select the box once the task is completed and/or provide a comment that describes task completion progress and outstanding issues.

“FIC support” and “Coroner services” tasks have sub-tasks that can be completed in any order and are organized similarly to the five main tasks of the tab.





Note If some of the three FIC services are not selected, related sub-tasks will not be shown. Instead you will see a message that looks like this:

Pediatric dietary needs service is not selected. Please select *Pediatric dietary needs* box above to activate the service.


The right part of the tab displays task progress. For each of the tasks covered by this tab, it displays task priority, status (covered/not covered) and comment (if it was provided). Additionally, it displays task completion score and perfect score (if all tasks were addressed). Task Priority denotes importance of a task: 1-lowest, 5-highest priority.

2 To change task priority value, click on the priority value outlined in blue color. Two new fields should appear. You need to enter correct value in the “New value” field, provide a rationale for the change in the “Add new comment and/or override value” field, and click “Submit” button.


Transportation and Transfer Tab

This tab covers four tasks: Transportation Guidelines, Patient Triage, Assessment of regional transportation resources, and Transfer to other facilities. The tasks should be navigated and completed sequentially. Each task starts with a green area that was described earlier. This tab provides brief information about various topics related to transportation and transfer. To obtain additional information, select box as described earlier. The right part of the tab displays task progress.




 http://localhost:8080/index.html#Transportation and Transfer

Welcome, guest
 Please logout before exiting PEDSS by clicking the button: [Logout](#)


 Context [Mental Health and Family Support](#) **Transportation and Transfer** [Tracking Patients](#) [Reunification Task Progress Summary](#) [Disaster Preparedness Plan](#) [PEDSS Evaluation](#)

The number of pediatric patients requiring admission might exceed the normal patient capacity or expertise of hospital staff. All hospitals must consider the need for evacuation of pediatric patients during a disaster that renders the hospital unsafe or inoperable.

Transportation Guidelines [Patient Triage](#) [Assessment of regional transportation resources](#) [Transfer to other facilities](#)

☐ Select box if the Transportation Guidelines assessment task is completed
 Provide task progress comments (optional):

General guideline for transporting pediatric patients between hospitals units or diagnostic testing areas:

I. Transport personnel:

- Personnel to transport stable patients
 - All transport personnel should be oriented to the special needs of a pediatric transport.
 - Pediatric patients may not be left alone at any time.
- Personnel to transport unstable patients
 - Use usual transport personnel.
 - Additional staff skilled in pediatric airway management and familiar with pediatric resuscitation will be necessary.
 - Pediatric patients may not be left alone at any time.

II. Transport equipment:

- Have airway management and resuscitation supplies available which are appropriate for all age groups. (See **Section 11. Pediatric Equipment Recommendations.**)
- Identify appropriate transport vehicle(s)
 - Adult stretchers may be appropriate for children >8-10 years old.
 - Smaller children may require crib, additional transport personnel, and/or converting an adult stretcher by adding padding to inside rails assure safety during transport.

III. Chaperone and safety personnel

- Parents or adult care givers should be encouraged to stay with children.
- If no adult care giver is available, appropriate personnel must accompany and supervise pediatric patients to assure their safety at all times.
- Patients on stretchers
 - Patients less than 6 years old and not in an appropriate crib require continuous 1:1 observation.
 - Patients 6 years and older should be evaluated for ability to follow safety rules while on stretcher.
 - Individual patients separated from other pediatric patients require constant 1:1 observation by staff.
- Stable ambulatory patients may be cohorted in a Pediatric Safe Area with staff experienced or trained in observation of groups of children, such as school teachers, social workers, or day care workers. (See **Section 5. Security**)
 - All ambulatory patients transported individually out of the Emergency Department require 1:1 adult supervision.

Transport of Pediatric Patients from The Hospital to Other Facilities:

Task Progress:
 Task Priority denotes importance of a task: 1-lowest, 5-highest priority. To change priority value click on the priority value outlined in blue color enter new value and provide a reason for the update.

| Task | Task Priority | Covered? | Comments |
|---|---------------|----------|----------|
| Transportation Guidelines | 1.0 | No | |
| Patient Triage | 1.0 | No | |
| Assessment of regional transportation resources | 3.0 | No | |
| Transfer to other facilities | 2.0 | No | |

Task completion score 0
 Perfect Score 7

Tracking Patients Tab

This tab covers three tasks: Tracking Patients, Victim and family member identification, and Search and release of patient information. The tasks can be navigated and completed in any order. Each task starts with a green area that was described earlier. This tab provides high-level information.



Pedss Tool - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://pedss.isi.edu/pedss/#TrackingPatients

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Context Mental Health and Family Support Transportation and Transfer **Tracking Patients** Reunification Task Progress Summary Disaster Preparedness Plan PEDSS Evaluation

Rapid identification and tracking of displaced children is imperative in order to reduce the potential for maltreatment, neglect, exploitation and emotional injury.

Tracking Patients Victim and family member identification Search and release of patient information

☐ Select box if the Planning a hospital disaster mental health response task is completed
Provide task progress comments (optional):

Tracking Patients
Rational:
LA County hospitals use the Rapid Emergency Digital Data Information Network (ReddiNet). ReddiNet is the operative technology used to collect and distribute information for hospitals and some clinics in LA County. ReddiNet is a digital emergency medical communication system that is private and secure. The system can also be accessed through a secure website. ReddiNet tracks patients who were transported to the hospital through the EMS system. Patients who arrive at the hospitals and clinics on their own or who are transported by a relative or friend are not typically reported on ReddiNet. Therefore, a complete list of ALL of the people who sought hospital treatment following a disaster is NOT currently available through ReddiNet. ReddiNet has been reviewed by County Counsel and is HIPAA compliant.

Select SUMMARY tab to continue

Task Progress:
Task Priority denotes importance of a task: 1-lowest, 5-highest priority. To change priority value click on the priority value outlined in blue color enter new value and provide a reason for the update.

| Task | Task Priority | Covered? | Comments |
|---|---------------|----------|----------|
| Tracking patients | 1.0 | No | |
| Victim and family member identification | 1.0 | No | |
| Tracking patients during transfer | 1.0 | No | |
| Search and release of patient information | 1.0 | No | |

Task completion score 0

Reunification Task Progress Summary Tab

This tab provides a summary of coverage of all reunification issues. For each of the following high-level tasks Mental Health and Family Support, Transportation and Transfer, Tracking Patients, it displays a summary table.

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File Edit View History Bookmarks Tools Help

http://pedss.isi.edu/pedss/#ReunificationTaskProgressSummary

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Context Mental Health and Family Support Transportation and Transfer Tracking Patients **Reunification Task Progress Summary** Disaster Preparedness Plan PEDSS Evaluation

Summary of coverage of the reunification issues.

Task Priority denotes importance of a task: 1-lowest, 5-highest priority.

Mental Health and Family Support task progress status

| Task | Task Priority | Covered? | Comments | Actions to complete task |
|---------------------------------|---------------|----------|----------|---|
| Planning mental health response | 1.0 | No | | 1) select Tab: "Mental Health and Family Support" 2) select Subtab: "Planning mental health response" |
| Psychological triage | 1.0 | No | | 1) select Tab: "Mental Health and Family Support" 2) select Subtab: "Psychological triage" |
| FIC Location | 1.0 | No | | 1) select Tab: "Mental Health and Family Support" 2) select "Full FIC support" box 3) select Subtab: "FIC Support" 4) select SubTab: "FIC Location" |
| FIC Layout | 1.0 | No | | 1) select Tab: "Mental Health and Family Support" 2) select "Full FIC support" box 3) select Subtab: "FIC Support" 4) select SubTab: "FIC Layout" |
| FIC Staffing | 1.0 | No | | 1) select Tab: "Mental Health and Family Support" 2) select "Full FIC support" box 3) select Subtab: "FIC Support" 4) select SubTab: "FIC Staffing" |
| FIC Equipment | 1.0 | No | | 1) select Tab: "Mental Health and Family Support" 2) select "Full FIC support" box 3) select Subtab: "FIC Support" 4) select SubTab: "FIC Equipment" |
| FIC Activation | 1.0 | No | | 1) select Tab: "Mental Health and Family Support" 2) select "Full FIC support" box 3) select Subtab: "FIC Support" 4) select SubTab: "FIC Activation" |



In these tables, for each of the tasks covered by particular tab, it displays task priority, status (covered/not covered) and comment (if it was provided), and guidelines for navigating to the uncompleted tasks

Additionally, it displays task completion score for all tasks and perfect score (if all tasks were addressed).

Disaster Preparedness Plan Tab

This tab displays complete disaster preparedness plan.

The screenshot shows a web browser window titled "Pedss Tool - Mozilla Firefox" with the URL "http://pedss.isi.edu/pedss/#Disaster Preparedness Plan". The browser's address bar and tabs are visible. The Pedss Tool interface has a header with a "Welcome, guest" message and a "Logout" button. Below the header is a navigation bar with several tabs: "Context", "Mental Health and Family Support", "Transportation and Transfer", "Tracking Patients", "Reunification Task Progress Summary", "Disaster Preparedness Plan" (which is highlighted), and "PEDSS Evaluation". The main content area is titled "Disaster Preparedness Plan." and contains a green box with the text "To print the disaster preparedness plan, click PRINT button below:" and a "PRINT" button. Below this, the form is divided into sections: "1. Context (Facility and demographic information)", "Facility information:" (with fields for Facility name, Facility address, and Facility logo), "Zipcode(s) covered by the facility", and "Predicted number of children per age group in the area" (with fields for 0-1mo and 1-12mo).

1 To print the plan, click "Print" button.



Note Produced plan will contain all user inputs and will omit any tasks that were not selected by the user. For example, if FIC option was not selected, the plan will not display any related sub-tasks. Instead "FIC support service was not selected" message will be displayed.



Step Three: Evaluating PEDSS Web Tool

The last tab of both modules is PEDSS Evaluation Tab that is used to evaluate perceived usefulness and ease of use of the tool.

1 Rate the system by selecting the appropriate answer from the following set:

| | | | | | | | | | |
|-----------------------|----------------|-----------------------|----------------|-----------------------|---------|-----------------------|-------------------|-----------------------|-------------------|
| <input type="radio"/> | Strongly Agree | <input type="radio"/> | Somewhat Agree | <input type="radio"/> | Neutral | <input type="radio"/> | Somewhat Disagree | <input type="radio"/> | Strongly Disagree |
|-----------------------|----------------|-----------------------|----------------|-----------------------|---------|-----------------------|-------------------|-----------------------|-------------------|

Welcome, guest
Please logout before exiting PEDSS by clicking the button: [Logout](#)

PEDSS Tool

Context Mental Health and Family Support Transportation and Transfer Tracking Patients Reunification Task Progress Summary Disaster Preparedness Plan **PEDSS Evaluation**

Evaluate perceived usefulness and ease of use of the system.

Please rate the usefulness and ease of use of the system:

- Respond to all the items below
- Make sure all of the score fields are filled in
- Add a comment about an item by filling in the comment field
- For each item, once you finish, click SUBMIT RESPONSE button

PERCEIVED USEFULNESS

Using the system in my job will enable me to accomplish disaster preparedness tasks more quickly

☐ Strongly Agree ☐ Somewhat Agree ☐ Neutral ☐ Somewhat Disagree ☐ Strongly Disagree

Provide additional comments:

1

[Submit Response](#)

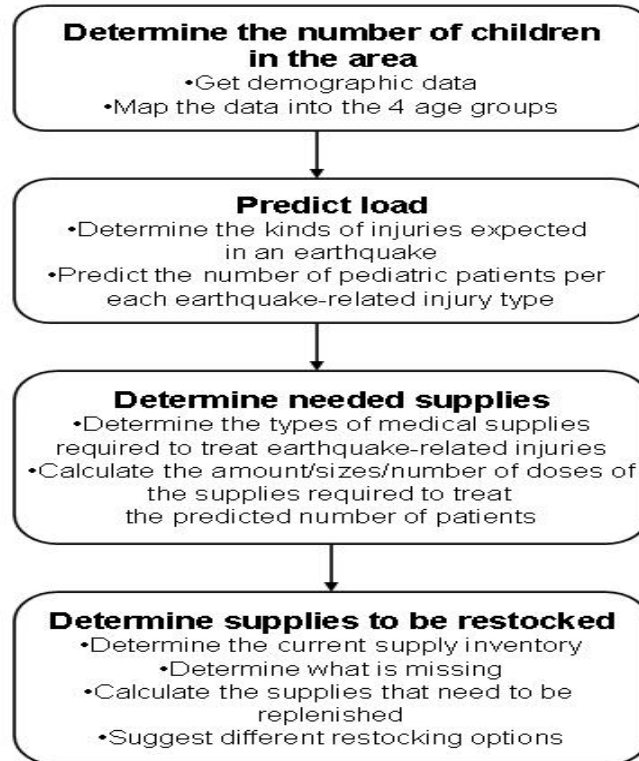
Optionally provide additional comments and click “Submit Response” button.

2 When you finish the evaluation, logout by clicking “Logout” button.



Appendix: PEDSS Methods

This section describes the methods used by PEDSS to forecast the influx of patients and required medical supplies needed during a large-scale earthquake event. This flowchart illustrates the basic steps taken by PEDSS:



The amounts and types of required supplies depend on the age, size, and weight of patients, as well as the types of sustained injuries. PEDSS defines seven age groups to aggregate children with similar requirements, weight and size characteristics.

- Group 1 – 0 to 28 days, average weight (a.w.) 3.9 kilograms (kg);
- Group 2 – 1 to 12 months (a.w. 7.1 kg);
- Group 3 – 1-3 years old (y.o.) (a.w. 12 kg);
- Group 4– 3 to 5 y.o. (a.w. 15.8 kg);
- Group 5 – 6 to 8 y.o. (a.w. 23.5 kg);
- Group 6 – 9-11 y.o. (a.w. 32 k);
- Group 7 – 12-18 y.o. (a.w. 51.3 kg).



PEDSS uses this information to calculate predicted load and to determine needed medications and supplies.

First, PEDSS determines the number of children for each of the seven age groups in the geographic area of concern. PEDSS has been integrated with a U.S. Census 2000 data server. We will switch to U.S. Census 2010 data, once it becomes available.

Once a user identifies the geographic location covered by the health care facility, PEDSS sends a request to the server to collect the demographic data: the number of children of different ages living in the area and translates the results into the numbers for the seven age groups supported by PEDSS.

The next step is to determine the percentage of children that will be injured in an earthquake. In the current version of the PEDSS earthquake module, the percentage is based on the report produced by the Great Southern California ShakeOut earthquake scenario. The scientists at the U.S. Geological Survey, with more than 300 partners and contributors including the California Geological Survey and the Southern California Earthquake Center, predict consequences of an earthquake of the magnitude 7.8 rupture along the southern San Andreas Fault. Based on this scenario, we expect 0.15% of children in each of the seven age groups to have various injuries during the earthquake. This is clearly a worst-case scenario, but in the example-driven spirit in which the system works, it is offered as a default rather than an obligatory set of factors. Users may, if they wish, adjust those factors to reflect more optimistic assumptions.

The next task is to determine the kinds of earthquake-related injuries and the number of children suffering from each injury type. The injury distribution builds on previous research by our group, which reviewed the epidemiological literature to develop representative patient profiles for exercises. The work provides an analysis of percentages of patients likely to have various types of medical problems, derived from data on prior earthquakes. Table shows the percentage of children (out of the total number of injured children) sustaining different types of injuries¹. The total does not add up to 100% as some patients sustain multiple injuries.

Table 1. The distribution of injury types for children, with all age categories combined*.

| Injury Type | All Four Age Groups (%) |
|--------------------|-------------------------|
| Extremity Fracture | 45.0 |

¹ Due to the lack of epidemiological data related to the age of patients sustaining the listed types of injuries, we use the same percentage for each age group.



| | |
|--------------------|------|
| Abdominal Trauma | 12.5 |
| Laceration | 10.0 |
| Closed Head Injury | 8.0 |
| Crush Injury | 8.0 |
| Anxiety | 5.0 |
| Asthma | 5.0 |
| Burn | 5.0 |
| Chest Trauma | 5.0 |
| Spine Injury | 3.0 |

*Percentages do not sum to 100% as some patients sustained multiple injuries

Based on the data collected from the CHLA trauma division, intubation is required for 12% of all injured children.

Once the total number of predicted injured children is established, PEDSS calculates the number of children with specific injuries based on the percentages outlined in the Table. CHLA experts determined the types of pharmaceuticals and supplies needed to treat the types of injuries outlined in the first column of the Table.

The next step is for PEDSS to combine the local demographic information, predicted patient age and weight distribution, and predicted injury distribution in order to calculate the required amounts, dosages and sizes of the medical supplies needed to sustain the facility for 96 hours, as recommended by the Joint Commission of Hospitals. PEDSS compares the current inventory with the required supplies and determines what needs to be additionally stocked. Finally, PEDSS can suggest different restocking options based on the cost of needed items. To do that, for each pharmaceutical or supply, PEDSS finds specified alternatives (e.g., gentamycin can be substituted for amikacin) and builds a tree of restocking options. For each option, PEDSS calculates the total cost of items comprising the option. A user can then choose the least expensive option. Additional considerations can include expiration dates (e.g., it may be more desirable to choose a more expensive option which includes supplies with a longer shelf life).

