Minnesota Pediatric Surge Plan

MAY 2019

DEPARTMENT OF HEALTH

Minnesota Pediatric Surge Plan

Minnesota Department of Health
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Contents

Letter from Minnesota Department of Health Commissioner

To Whom It May Concern:

Medical Surge planning is a priority for health care coalitions and the health care system in Minnesota. This requires building both capacity—the ability to manage a sudden influx of patients—and capability—the ability to manage patients requiring very specialized medical care.

Medical treatment for pediatric patients is specialized due to the specialized equipment and resources needed: pediatric experts, mechanical and alternative modes of ventilation, medication and pediatric beds. Minnesota has six American College of Surgeons (ACS) designated Pediatric Trauma Centers and two Minnesota Department of Health (MDH) designated Pediatric Trauma Centers serving as experts in the pediatric field. Over half of these centers are within the Twin Cities metropolitan statistical area and combined, the eight hospitals are licensed for a total of 812 pediatric beds of various acuity. An event resulting in a large number of pediatric casualties could quickly overwhelm the pediatric resources within our state.

All hospitals should be prepared to receive, stabilize, and manage pediatric patients. In line with this, Minnesota created the Pediatric Surge Toolkit available on the MDH website at: https://www.health.state.mn.us/communities/ep/surge/pediatric/index.html. Additionally, the Minnesota Pediatric Surge Plan provides a structure for how the Pediatric Trauma Centers will coordinate with each other and work with partners including local hospitals, EMS, health care coalitions, and the Minnesota Department of Health to respond to such an event. This plan is the culmination of collaboration with all aforementioned partners and will be exercised and updated as needed.

If you have any questions or concerns regarding the Framework, please contact Cheryl Petersen-Kroeber, the Director for the Center of Emergency Preparedness and Response, at (651) 201-5700 or Cheryl.Petersen-Kroeber@state.mn.us.

Sincerely,

Jan Malcolm (signature kept on file)
Commissioner of Health
P.O. Box 64975
St. Paul, MN 55164-0975

Purpose

Minnesota has six American College of Surgeons (ACS) designated Pediatric Trauma Centers serving as expert leaders when working with pediatric victims and patients. Over half reside in the Minneapolis-St. Paul Metropolitan area and all operate under independent coordination processes. The Minnesota Pediatric Surge Plan has been developed to ensure the state's pediatric trauma centers are coordinated, have a common operating picture, and align with the ACS designated pediatric trauma centers located along the western border in North and South Dakota during potential statewide pediatric surge disasters.

Scope

The Minnesota Pediatric Surge Plan provides guidance to Minnesota Health Care Coalitions (HCCs), Minnesota Hospitals, and Emergency Medical Services (EMS) in relation to pediatric surge trauma needs. Infectious disease-related pediatric surge planning will be addressed in another plan. This Plan also takes into consideration national best practices and lessons learned while leveraging Minnesota specific strengths and weaknesses when faced with a pediatric surge disaster.

Background

According to the American Academy of Pediatrics, the pediatric age range spans from birth young adulthood.[1] Children, ages 0-18 years, make-up 23% of the Minnesota population. Additionally, 11.3% of the Minnesota population over the age of 5 speak a language other than English at home.[2]

Over the past century, these 74 million infants, toddlers, adolescents and teenagers have been greatly impacted through man-made and natural disasters, infectious disease outbreaks and other catastrophic incidents leading them to be one of the most vulnerable populations during times of disaster.[3,4] Pediatric surge is unique due to the specialized equipment and resources needed: pediatric experts, mechanical and alternative modes of ventilation, medication and pediatric beds.[5] Therefore, emergency preparedness responders are working towards

[1] Committee of Pediatric Workforce. (2015). Definition of a Pediatrician. *American Academy of Pediatrics, 135*(4), 1. Retrieved from http://pediatrics.aappublications.org/content/135/4/780

[2] United States Census. *QuickFacts: Minnesota,* Accessed June 4, 2019 at https://www.census.gov/quickfacts/fact/table/MN/PST045218

[3] Bullock, J. A., Haddow, G. D., & Coppola, D. P. (2011). *Managing Children In Disasters: Planning for their unique needs.* Boca Raton, FL: Taylor and Francis Group, LLC.

[4] Kim, M. D., Mosher, M. B., MOrrison, M. C., Parker-Lee, M. C., Opreanu, M. R., Stevens, M. P., . . . Kepros MD, J. P. (2010, October). A Modern Analysis of a Historical Pediatric Disaster: The 1927 Bath School Bombing. *Association for Academic Surgery, 163*(2), 309-316.

[5] Bohn, D., Kanter, R., Burns, J., Bargield, W., & Kissoon, N. (2011, November). Supplies and equipment for pediatric emergency mass critical care. *Pediatric Critical Care Medicine, 12*(60), S120-S127.

developing pediatric surge plans (locally and statewide) to address these limitations, while leveraging existing resources and creating a redundant framework.

As directed by the Office of the Assistant Secretary of Preparedness and Response (ASPR), states nationwide are to work with health care systems in establishing pediatric surge preparedness and response plans to address pediatric surge. "All hospitals should be prepared to receive, stabilize, and manage pediatric patients. Additionally, pediatric practitioners may be able to help identify patients who are appropriate for transfer to non-pediatric facilities. EMS resources, including providers with appropriate training and equipment, should be prepared to transport pediatric patients".[6]

The Minnesota Pediatric Surge Toolkit contains multiple resources including a Pediatric Surge Primer for planning, education and just-in-time training tools, exercise tools, and response tools—including behavioral health—online at: https://www.health.state.mn.us/communities/ep/surge/pediatric/index.html.

Planning Assumptions

Planning assumptions include, but are not limited to the following:

1. All hospitals providing emergency services are equipped to initially treat and stabilize pediatric patients in accordance with their available resources. All hospitals have differing capacities and capabilities of treating and stabilizing pediatric victims; however, all hospitals should at minimum provide initial triage and resuscitation for pediatric patients.[7]
2. Each pediatric trauma center has an updated surge plan to fully maximize and leverage their organizational resources prior to activating the Minnesota Pediatric Surge Plan.
3. The pediatric surge response will use existing NIMS/HICS response frameworks.
4. Most critical access hospitals will not be able to treat critically injured pediatric patients long term and will need to transport them to a higher trauma level hospital.
5. Providers specializing in pediatrics are able to provide definitive care for pediatric patients.
6. Planning and response under the Pediatric Surge Plan will be coordinated with other response plans because most disasters involving pediatric patients also include other victims.
7. Determination of whether a child meets pediatric age should follow both organizational definitions and assessment of physical maturity and anatomical characteristics of victim.

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[6] Response, O. o. (2016, November). *Hospital Preparedness Program (HPP).* Retrieved from US Department of Health and Human Services - Office of Assistant Secretary for Preparedness and Response: https://www.phe.gov/Preparedness/planning/hpp/reports/Documents/2017-2022-healthcare-pr-capablities.pdf

[7] Trauma level I and II pediatric trauma hospitals are required to maintain the American College of Surgeons' (ACS) presence of resources and equipment listed in the *Resources for Optimal Care of the Injured Patient.* MDH requires trauma level III and IV pediatric trauma hospitals maintain certain equipment capabilities for all ages. See Level 3 Equipment Checklist (PDF) and Level 4 Equipment Checklist (PDF) for more detail.

8. Metro, Northeast, and Southeast[8] will follow established regional activation and notification process to implement this Pediatric Surge Plan.
9. The Minnesota system for Tracking Resources, Alerts, and Communications (MNTrac) will be used to send alerts and notifications and will have a Command Center open to partners and should be monitored during an incident.
10. Each pediatric trauma hospital, health care coalition, regional EMS program, and the Minnesota Department of Health-Center for Emergency Preparedness and Response (MDH-CEPR) will have personnel select the MNTrac "Pediatric Surge" role three deep at minimum.

Designated Pediatric Trauma Centers

All Level I and Level II American College of Surgeons (ACS) designated Pediatric Trauma Centers play a role in this Pediatric Surge Plan. Minnesota currently has six Level I to Level II designated Pediatric Trauma Centers (Table 1). Table 2 lists additional MDH designated Pediatric Trauma Centers.

Table 1: ACS Designated Pediatric Trauma Centers

Trauma Designation	Hospital Name	HCC Contact
Level I	Children's of Minnesota, Minneapolis	Metro Health & Medical Preparedness Coalition 612-873-9911
Level I	Hennepin County Medical Children's Hospital	
Level I	Regions Hospital/Gillette Children's Specialty Healthcare	
Level I	Mayo Clinic Hospital Eugenio Litta Children's Hospital	Southeast Minnesota Disaster Health Coalition 855-606-5458 507-255-2808
Level II	North Memorial Health Hospital	Metro Health & Medical Preparedness Coalition 612-873-9911
Level II	Essentia Health St. Mary's Medical Center	Northeast Healthcare Preparedness Coalition Jo Thompson: 218-269-7781 Adam Shadiow: 218-428-3610

[8] Designated pediatric trauma centers are located in these health care coalitions' geographic borders.

Table 2: MDH Designated Pediatric Trauma Centers

Trauma Designation	Hospital Name	HCC Contact
Level III	University of Minnesota Masonic Children's Hospital	Metro Health & Medical Preparedness Coalition 612-873-9911
Level IV	Children's of Minnesota, St. Paul	

Concept of Operations

Indication/Triggers

When an incident occurs resulting in pediatric victims, the initial response should follow local surge plans. Local hospitals and EMS agencies should assess:

- Scope and magnitude of the incident,
- Estimate the influx of patients and the real or potential impact on the local health care system,
- Any special response needs (e.g., infectious disease, hazardous materials, etc.), and
- Internal response plan activation(s).

When the first ACS designated pediatric trauma center to respond activates their internal surge plan, they are responsible to request activation of the Minnesota Pediatric Surge Plan by contacting their HCC as delineated in their regional activation and notification plan(s). The hospital will assume the role of the State Coordinating Pediatric Trauma Center (SCPC).

Communications

Activation

The activation of this Plan includes information sharing and coordination across the six ACS designated pediatric trauma centers, eight HCC regions and MDH-CEPR Health Care Preparedness Program partners.

If a border state notifies a Minnesota HCC or Pediatric Trauma Center requesting assistance, the Minnesota Pediatric Surge Plan can be activated to organize the response that occurs within Minnesota.

Alert and Notification

The SCPC will request their HCC to send a Regional Alert via MNTrac Alert to all users in the **"Pediatric Surge"** role providing:

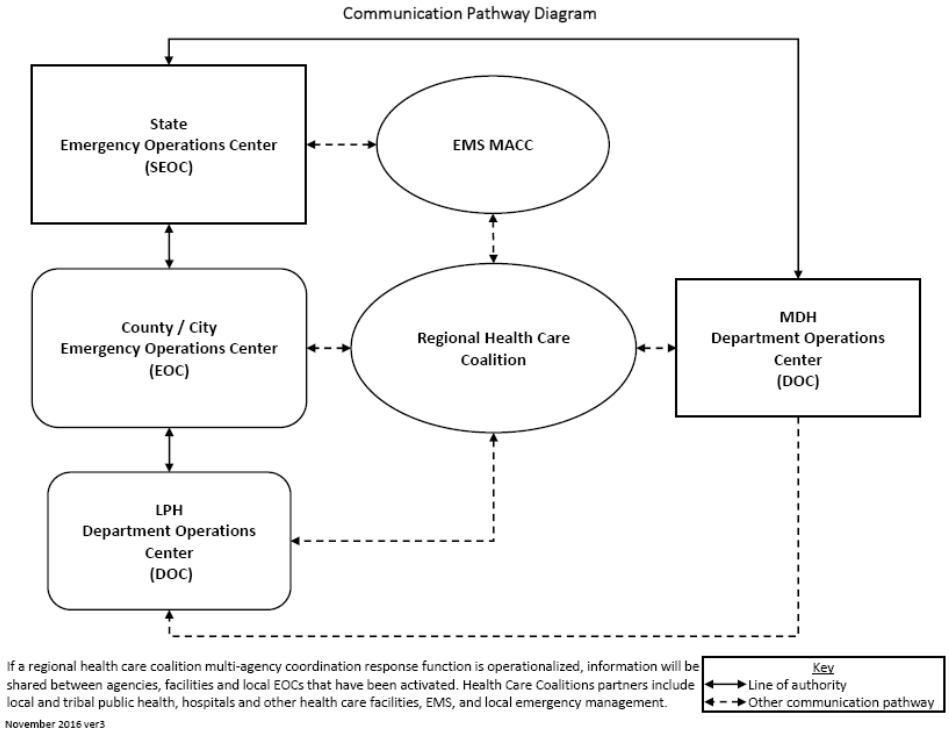
- Situational awareness information (e.g. incident details, estimation on number of victims, number of transported and/or admitted victims, number of possible victims at the scene, etc.),
- Bed availability request to be completed in 30 minutes, and
- Action items (e.g. conference call, frequent bed availability updates, etc.)

Please note, some HCC response personnel may send a separate MNTrac bed availability alert in addition to an initial alert.

MDH-CEPR and HCCs

For ongoing communications and communications during a disaster situation, MDH-CEPR connects with health care partners through regional Health Care Coalitions (HCC). Minnesota has eight regional health care coalitions: Northwest Health Services Coalition, Northeast Healthcare Preparedness Coalition, West Central Minnesota Healthcare Preparedness Coalition, Central Minnesota Healthcare Preparedness Coalition, Metro Health & Medical Preparedness Coalition, Southwest Healthcare Preparedness Coalition, South Central Healthcare Coalition, and Southeast Minnesota Disaster Health Coalition.

Figure 1: Communication Pathways Between MDH and Health Care Coalitions



If the incident is catastrophic and the SCPC or affected regional HCC coordinating entity forecasts state resources will be depleted and/or surge capacity is exceeded, a request can be made to MDH-CEPR to escalate the plan beyond state borders to inter-state partners through the Great Lakes Healthcare Partnership (GLHP) existing plans and procedures. The GLHP operates with federal partners including the U.S. Department of Health and Human Services (HHS) Field Project Officers and the Federal Emergency Management Agency (FEMA) Regional Emergency Coordinators (RECs).

Public Messaging

Public information and messaging should be coordinated among all partners (SCPC, supporting pediatric trauma centers, MDH, HCCs). Designated MDH Public Information Officers (PIOs) can work with MDH-CEPR and hospital communications staff to draft and coordinate public messaging and information as needed to inform and educate the public about the incident and response efforts. Public information materials may include but are not limited to news releases, talking points, public website updates, and social media posts. Information can be shared with response partners in a variety of methods, including a virtual Joint Information Center (JIC) hosted on SharePoint.

Roles and Responsibilities

Roles and responsibilities are outlined in the following tables for the state and partners during a pediatric surge incident.

Table 3: Partner Roles and Responsibilities

Partner	Role	Responsibilities
State Coordinating Pediatric Trauma Center[9]	Lead Coordinating Entity and Treatment	▪ Provide treatment and care per trauma level designation for victims ▪ Admit patients per normal operating protocols until surge capacity is met ▪ When internal surge plan is activated, request HCC to activate the Minnesota Pediatric Surge Plan ▪ Maintain frequent communications with HCC, other pediatric trauma centers, EMS, and others as deemed appropriate ▪ Monitor for and acknowledge all alerts, notifications, and communications during an incident and provide information as

[9] The State Coordinating Pediatric Trauma Center (SCBC) is the Level I or Level II trauma center that is the first to receive patients/respond to the incident and therefore most likely closest in proximity to the incident.

Partner	Role	Responsibilities
		requested to local, regional, and state partners ▪ Maintain appropriate users in MNTrac to receive and monitor notifications[10] ▪ Provide telephone/telemedicine expertise to assist stabilizing hospitals caring for victims ▪ Specialty care personnel from other pediatric trauma centers may be engaged to provide advice and support to the Level III and IV trauma centers or others caring for specialty care patients for a prolonged period ▪ SCPC will maintain lead on definitive care guidance for patient placement
Designated Pediatric Trauma Centers	Treatment	▪ Provide treatment and care per trauma level designation for victims and utilize telephone/telemedicine if needed ▪ Admit patients per normal operating protocols until surge capacity is met ▪ Maintain frequent communications with HCC, other pediatric trauma centers, EMS, and others as deemed appropriate ▪ Monitor for and acknowledge all alerts, notifications, and communications during an incident and provide information as requested to local, regional, and state partners ▪ Maintain appropriate users in MNTrac to receive and monitor notifications[11]
Local Hospital(s)	Support and Stabilization	▪ Provide initial treatment and stabilization of any victim transferred to their facility ▪ Follow normal organizational referral protocols and transport criteria with respect to pediatric victims ▪ Monitor for and acknowledge all alerts, notifications, and communications during

[10] See Appendix C for detail.
[11] See Appendix C for detail.

Partner	Role	Responsibilities
		an incident and provide information as requested to local, regional, and state partners ▪ Maintain appropriate users in MNTrac to receive and monitor notifications[12]
Regional Health Care Coalitions	Regional coordination of health response	▪ Activate the Minnesota Pediatric Surge Plan when requested ▪ Support information sharing and coordination of activities between coalition members and MDH-CEPR ▪ Help manage resources between hospitals in the area ▪ May provide single point of contact for patient transfer coordination
Regional EMS Programs	Regional coordination of EMS	▪ Support information sharing of activities between EMS, hospital, emergency management and local, regional and state emergency operations centers ▪ Assist in coordination of EMS resources and emergency management in collaboration with the State, Regional or Local Emergency Operations Centers ▪ If needed, activate a EMS Multi-Agency Command Center (MACC) to assist with influx of victims ▪ May provide or develop regional procedures for EMS disaster response ▪ Maintain appropriate users in MNTrac to receive and monitor notifications[13]
Local EMS Agency	Emergency response and patient transport	▪ Following normal surge protocols, coordinate patient destination hospitals to the degree possible to avoid overloading a single facility ▪ Interface with local hospitals and regional health care coalition to share information/status

[12] See Appendix C for detail.
[13] See Appendix C for detail.

Partner	Role	Responsibilities
		▪ Maintain appropriate users in MNTrac to receive and monitor notifications[14]
First Responders	First response	▪ Frequently the first personnel on scene to assess and report on the situation, provide initial triage and care and help determine what additional resources may be needed ▪ Support and assist arriving ambulance personnel on scene

Table 4: State Roles and Responsibilities

State Agency	Role	Responsibilities
Minnesota Department of Health (MDH)	Lead State agency for health-related issues	▪ Maintain this Plan ▪ Support HCC information exchange and situational awareness needs ▪ Facilitate health care resource requests to state/inter-state/federal partners ▪ Request State Disaster or Public Health Emergency Declarations and governor's emergency orders as required to support response ▪ Request CMS 1135 waivers as required during response to allow patient billing when usual conditions cannot be met ▪ Request specific emergency orders/actions by the governor's office if needed ▪ Provide health related guidance and recommendations for clinicians, local and tribal public health and community members
Minnesota Division of Homeland Security and Emergency Management (HSEM)	Lead for incident coordination	▪ Serve as point of contact for resource requests ▪ Request State declaration of emergency if needed

[14] See Appendix C for detail.

State Agency	Role	Responsibilities
EMS Regulatory Board (EMSRB)	Lead agency for EMS disaster issues	▪ Support hospitals by regional and state-level coordination of EMS surge capacity implementation ▪ Provide support to regional health care coalition/response through regional EMS system program personnel ▪ Work with Multi-Agency Coordination Centers (MACC) at the local, regional, and state level to deploy Ambulance Strike Teams (AST), MCI buses, additional ground or air ambulances from regions as requested by local EMS agencies through the State Duty Officer ▪ Communicate suspension of selected regulatory statutes/rules to facilitate crisis care activities during declared disaster ▪ Support local EMS medical directors by providing guidance on patient care, if needed

Triage

In the event of a pediatric surge incident, EMS will triage patients in the field according to their standard of care. It is the responsibility of all hospitals to perform secondary triage to determine the best setting for a patient to receive definitive care. MDH-CEPR provides a Quick Reference for Assessment, Stabilization and Transfer of Pediatric Patients online. Additionally, Patient Care Strategies for Scarce Resource Situations is another resource for providers that can be found online and includes a Pediatrics Resource card and a Pediatrics Triage Card. The State Coordinating Pediatric Trauma Center will maintain lead on definitive care guidance for patient placement.

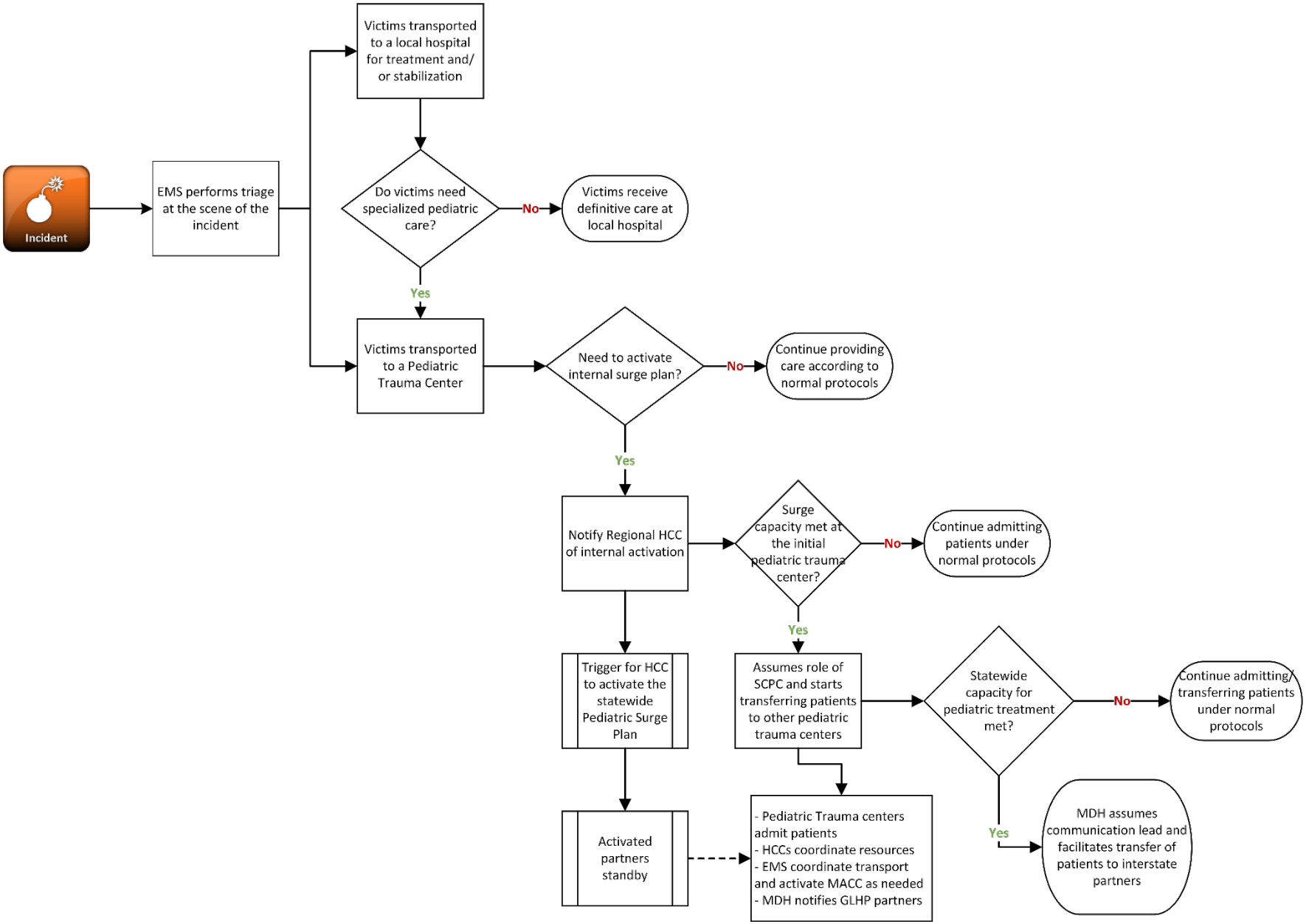
Plan Maintenance and Review

This plan was developed through a collaborative effort of Minnesota's six pediatric trauma centers, regional health care coalitions, and cross border hospital partners in North and South Dakota.

This Plan will be maintained and distributed by MDH-CEPR and posted on the MDH website. Review of the Plan will be, at minimum, annually; or after an exercise or activation as warranted. The review process will incorporate lessons learned from an activation and any new planning developments. Necessary subject matter experts will be consulted if needed.

Supporting partners are responsible for maintaining and reviewing their own internal plans. Additionally, each partner is responsible for having appropriate staff select the Pediatric Surge role in MNTrac and opt into the appropriate alert level (See Appendix B for more information).

Appendix A: Pediatric Surge Response Overview



Appendix B: Pediatric and Neonatal Licensed Beds in Minnesota

Trauma Designation	Hospital Name	Bed Type				
		General Pediatrics	PICU	NICU[15]		
				Level II	Level III	Level IV
Level I	Children's Minnesota, Minneapolis	102	23	-	-	44
	Hennepin County Medical Children's Hospital	18	9	-	21	-
	Regions Hospital/Gillette Children's Specialty Healthcare	68[16]	10	10	-	-
	Mayo Clinic Hospital Eugenio Litta Children's Hospital	44	16	-	24[17]	34
Level II	North Memorial Health Hospital[18]	8[19]	-	-	26	-
	Essentia Health St. Mary's Medical Center	19	7	-	18	-
Level III	University of Minnesota Masonic Children's Hospital	72	24	-	-	62
Level IV	Children's Minnesota, St. Paul	83	8	-	62	-
	Bed Totals	**414**	**97**	**10**	**151**	**140**

[15] American Academy of Pediatrics. *Pediatrics*. 2012; 130: 587-597. *Policy Statement: Levels of Neonatal Care.* Accessed April 8, 2019 at https://pediatrics.aappublications.org/content/pediatrics/130/3/587.full.pdf

[16] 18 of these beds are considered swing beds and can be used as either general pediatric or PICU beds.

[17] Located at the Rochester Methodist Campus.

[18] North Memorial Health Hospital has pediatric intensivists and trained nursing staff to care for critically injured pediatric patients located in the Trauma ICU.

[19] Can be increased if needed.

Appendix C: MNTrac for Pediatric Surge Guide

MNTrac is a database-driven web application intended as a statewide solution. This system has been designed specifically to track bed, pharmaceutical and resource availability from all designated facilities within the state as well as providing for allocation of these resources to support surge capacity needs. Hospital bed diversion status, emergency event planning, emergency chat, and alert notifications are supported in real time. Information is aggregated from all facilities and can be transported to other systems and agencies to improve communications and share pertinent information.

If you do not have a MNTrac account, please contact your Regional Health Care Preparedness Coordinator (RHPC). After having an account, you must select appropriate roles and opt in to receive alerts. Please have appropriate staff do this and ensure staff members update their profiles at least annually.

How to Select a Role

1. Log into MNTrac using your username and password.
2. In the top right hand corner select your Name. This will open your user profile.
3. There are five sections of your user profile: Demographics, Permissions, Options/Notifications, Trainings, and History.
4. Select Permissions and then Edit Permissions.
5. Under Selected Roles choose **"Pediatric Surge."** You can select more than one role by holding down the Control key on your computer.
6. Hit Save.

How to Opt-In to Receive Alerts

1. Log into MNTrac using your username and password.
2. In the top right hand corner select your Name. This will open your user profile.
3. There are five sections of your user profile: Demographics, Permissions, Options/Notifications, Trainings, and History.
4. Select Demographics.
5. Enter/Update email, phone and/or pager. Hit Save.
6. Select Options/Notifications.
7. Select Alert Settings.
8. Opt in to select **"Regional Alert"** by any or all methods (email, text, pager). Hit Save.

Appendix D: Abbreviations and Acronyms

Abbreviation/Acronym	Definition
ASPR	Office of the Assistant Secretary of Preparedness and Response
CEPR	Center for Emergency Preparedness and Response
EMS	Emergency Medical Services
FEMA	Federal Emergency Management Agency
HCC	Health Care Coalition
HHS	U.S. Department of Health and Human Services
HICS	Hospital Incident Command System
ICS	Incident Command System
MACC	Multi-agency coordination center
MDH	Minnesota Department of Health
MNTrac	Minnesota system for Tracking Resources, Alerts, and Communications
REC	Regional Emergency Coordinator
RHPC	Regional Health Care Preparedness Coordinator
SCPC	State Coordinating Pediatric Center