



Vattikuti Innovators Challenge

Global Medical Student Disaster Leadership Challenge

Round 1: Written Submission

72-Hour Response: Catastrophic Floods in Rasuwa, Nepal

One team. One crisis. 72 hours to lead.

Think globally. Act locally.

Apply problem-solving, leadership, medical knowledge, and global perspective to a real-world medical and public health crisis.

Submissions due 30 November 2026

1. The Challenge

On 26 August 2026, severe flash floods affected central Nepal, including communities along the Bhote Koshi and Trishuli river corridors. Roads, bridges, water systems and health services were disrupted, leaving families displaced and isolated communities with urgent and continuing healthcare needs.

For this competition, a team of two are assigned to a simulated response zone based on the real geography and documented conditions of Rasuwa District. Some population figures, resource inventories, patient cases and operational details are fictionalized for educational purposes.

The Mission

In the first 72 hours after catastrophic flooding in Rasuwa, Nepal, how would a team organize people, information, medical resources, and technology to respond to the most urgent health needs of isolated communities?

What this competition is testing

- Leadership without relying on a rigid top-down hierarchy
- Organizational skills and shared decision-making
- Problem identification, prioritization and triage
- Supply-chain and resource management
- Appropriate application of technology
- The human side of medicine: empathy, uncertainty, communication and dignity
- The ability to think globally and act locally
- Pragmatism: making defensible decisions when resources and information are incomplete
- Ownership: creating a clear vision and acting rather than waiting for ideal conditions

2. The Response Area

Upper Rasuwa: Syabrubesi-Timure response corridor

The command and coordination point is based in the Syabrubesi area of Gosainkunda Rural Municipality, Rasuwa District. The response zone includes four communities modeled on Syabrubesi, Thulo Syabru, Timure and Briddim.

- 4 communities requiring assistance
- 3 temporary displacement/holding centers
- 1 damaged local health facility
- 1 temporary field medical center
- 1 partially functioning road connection out of the response area
- 2 major bridge crossings unavailable
- Bhote Koshi river system affecting access between communities
- Steep mountainous terrain
- Several areas reachable only on foot
- Limited and uncertain helicopter access

The team should study the terrain, determine where people and resources are located, identify access constraints, and decide how information, supplies and care should move through the response zone.

3. Operating Assumptions

- Outside help may arrive, but the plan cannot be built around it.
- Internet, cellular service and electricity may fail without warning.
- Not all information reaching the command center will be complete or accurate.
- Not every patient who needs care will reach the command center.
- There are not enough people, supplies or transportation to do everything at once.
- Local knowledge is a critical resource and must be incorporated into decision-making.
- Technology should solve a defined problem; it is not automatically the solution.
- There is no single correct response plan. Explain the reasoning behind the decisions that are made.

4. The Human Resources

There is a small multidisciplinary group of responders. The listed roles describe available capabilities, not a required hierarchy. Responsibilities can be reorganized, if it will improve the outcome. The medical student team has these 21 people to deploy.

Capability	#	Status
Medical response lead / senior clinician	1	Local/regional professional
Physicians	2	Deployed to the area before the students' arrival
Nurses	2	Local/regional
Community health workers	2	Local
Logistics & supply coordinator	1	Response organization
Information & communications coordinator	1	Response organization
Mental health / psychosocial professional	1	Response organization
Local community volunteers	10	Local
Field support / driver	1	Local
Total	21	

Leadership prompt: Who leads what? How are decisions made? How does information move? Who can act when the nominal leader is unavailable? How will local expertise influence decisions?

5. Resources and Constraints

Resources are intentionally limited. The task is to allocate, move, preserve and replenish them - not simply list what would be nice to have.

Resource	Starting availability
Trauma / wound-care kits	50
IV fluid bags / sets	60
Oral rehydration packets	300
Antibiotic courses	40
Analgesic / fever-treatment courses	100
Diabetes / insulin supplies	10 patients for 3 days
Essential chronic-disease medicines	30 patients for 3 days
Maternal / newborn kits	5
Pediatric kits	10
Emergency medication kits	5
Splints / immobilization supplies	10
Basic diagnostic field sets	2
Household water-treatment supplies	100 households
PPE / gloves / masks / sanitizer	Limited

Mobility

- 1 four-wheel-drive vehicle
- 2 motorcycles
- Foot transport and local carriers
- Limited river-crossing capability where conditions permit
- One helicopter request may be approved during the 72-hour period; approval, timing and payload are not guaranteed

Information and communications

- 2 satellite phones
- 1 radio
- 6 basic mobile phones
- 1 laptop or tablet
- GPS capability and paper maps
- Paper patient and inventory forms
- Solar charging equipment
- Intermittent cellular service and internet

Dhunche regional resource hub

Additional relief resources may exist at the regional hub in Dhunche. Access is constrained. If supplies are requested, the plan must explain what is requested, why it is prioritized, how it will be transported, and how it will be distributed.

6. The Patient Flow

Forty patients will reach the command center over the 72-hour period. For every patient, age, situation and presenting symptoms/injury are known on arrival. Other information - medical history, medications, family circumstances, exact origin, access barriers and resource needs - may be incomplete or unknown.

Important: Do not invent missing facts. Identify what needs to be known, how to obtain that information, and whether the missing information changes priorities or actions.

The complete patient roster is supplied as a separate competition appendix. The written submission must demonstrate how to triage the full group, while recognizing that some individual patients may signal a larger community-level problem.

7. Think Globally. Act Locally.

The two-person team brings perspectives shaped by different training environments, institutions and potentially different countries. Use that diversity.

Think globally

- Study lessons from disaster responses in other countries and settings.
- Consider international approaches to triage, logistics, public health, communication and team organization.
- Explore technologies and operating models that could be adapted.
- Use credible evidence and expert input rather than assuming a familiar system is universal.

Act locally

- Design for Rasuwa's terrain, infrastructure, language, culture and available resources.
- Use local health workers and community knowledge as part of the operating system.
- Adapt rather than import.
- Reject technologies or processes that are impressive but impractical under local conditions.

8. Round 1 - Written Submission

Round 1 is designed to show the judges how the team thinks. The strongest submissions will demonstrate disciplined prioritization, collaborative leadership, evidence gathering, human-centered decision-making and practical use of scarce resources.

Submission format

- PDF submission
- Maximum 3,250 words, excluding title page, table of contents, abstract, 72-hr action plan required tables/graphics and references
- Single spacing; 12-point readable font
- Graphics, maps, diagrams and illustrations are encouraged where they clarify decisions
- Data and analytics should be used where relevant
- All external factual claims and borrowed ideas must be referenced
- Do not include patient-identifiable real-world information

Required Structure

- A. Title Page** - Challenge title; team name; both team member names; year in medical school; medical school(s); country/countries.
- B. Abstract – 400-500 words** - Briefly state the understanding of the problem, approach, major priorities, and intended 72-hour outcome.
- C. Situation Analysis – 200-300 words** - Identify the three most important problems, the populations most at risk, critical geographic/system constraints, key missing information, and what must happen first.
- D. Leadership & Organization – 300-400 words + visual** - Provide one organizational visual. Explain how responsibilities are distributed, how decisions are made, how local expertise is incorporated, and how the structure avoids unnecessary top-down bottlenecks.
- E. Patient Prioritization & Triage – 400-500 words + table** - Triage all 40 patients using an action framework that can be explained. Identify five requiring the most immediate attention, three who may indicate a larger community problem, and three for whom missing information is especially important.
- F. Resource & Supply-Chain Plan 300-400 words + visual** - Show how personnel, medicines, transportation and information will move. Include a resource-flow visual and explain how to manage scarcity, inventory, resupply and isolated communities.
- G. Technology: Use It - or Don't – 200-300 words** - Select no more than three technologies. For each, state the problem solved, operational requirements, failure mode and backup. Identify one plausible technology that would deliberately not be used and explain why.
- H. Think Globally, Act Locally – 200-300 words** - Identify one external lesson/model that exists and how it was adapted for Rasuwa, and one assumption that changed because of the team's different perspectives or research.
- I. Human Side of Medicine – 200-300 words** - Choose one patient/family situation. Explain what the team still needs to learn, how the team would communicate, and how emotional, cultural or family needs influence the response. Do not invent unknown facts.
- J. 72-Hour Action Plan** - Provide a one-page timeline for Hours 0-6, 6-12, 12-24, 24-48 and 48-72. End with five measurable indicators that exhibit whether the response is working.
- K. Conclusion – 250 words** - In a concise personal synthesis, state the single most important leadership choice the team made and what was learned from working across perspectives.
- L. References** - List credible sources used for disaster context, methods, technology, logistics, public health or other evidence.

Required triage table

Patient	Priority / action category	Immediate action	Disposition / location	Key missing information
Example entry	Example entry	Example entry	Example entry	Example entry
Example entry	Example entry	Example entry	Example entry	Example entry
Example entry	Example entry	Example entry	Example entry	Example entry

Required 72-hour timeline

Period	Priorities	People	Resources	Intended outcome
0-6 h				
6-12 h				
12-24 h				
24-48 h				
48-72 h				

9. Round 1 Evaluation Criteria

Criterion	Weight	What judges are looking for
Problem identification & prioritization	20%	Identifies what matters most, distinguishes urgent from merely visible problems, recognizes uncertainty and sets defensible priorities.
Leadership & organizational design	20%	Creates a clear, collaborative operating structure; distributes responsibility; uses local expertise; enables decisions without unnecessary hierarchy.
Patient triage & human-centered decision-making	20%	Prioritizes patients coherently while accounting for dignity, family context, communication, vulnerable groups and broader community signals.
Resource & supply-chain management	15%	Uses scarce people, medicines, transport and information realistically; anticipates bottlenecks and resupply constraints.
Pragmatism & feasibility	10%	Works within stated constraints, makes trade-offs explicit, and avoids plans dependent on resources that may not arrive.
Technology application	5%	Uses technology selectively to solve defined problems and includes workable failure-mode backups.
Think globally, act locally	5%	Uses external learning while adapting it thoughtfully to Rasuwa's local reality.
Clarity, evidence & written communication	5%	Communicates decisions clearly, uses credible evidence, and presents visuals/data that improve understanding.

Judging principle

There is no perfect response plan and no single correct answer. Judges are looking for thought processes: what is prioritized, what is recognized that is not known, how to organize people, how to make trade-offs, and how well patients and communities are kept at the center of the response.

10. Research, Advisors and Responsible Use of Technology

- Teams are encouraged to seek external advice, data and input from faculty and experts.
- Faculty and experts may advise, question and challenge; the students must own the analysis and final submission.
- Teams should verify factual claims and cite credible sources.
- Generative AI and other digital tools may be used as research or drafting aids, but teams remain responsible for accuracy, originality, citations and final decisions.
- Do not fabricate interviews, patient facts, data or sources.
- Do not contact disaster survivors in ways that could burden, exploit or compromise their privacy.

11. Semifinals

The five highest-scoring teams from Round 1 will advance to an in-person final. Round 2 is not simply a repeat of the written submission. The semi-finalists will be invited to attend the Vattikuti Innovation in Medicine Summit, to be held in Vizag, India on 20-21 February 2027 to present their findings. They will be participating in the multi-specialty global conference featuring robotic surgeons and specialists in neurology.

What should the semi-finalists expect:

- 10-minute team presentation
- Visual command-center / operating-picture component
- Questions from judges
- Assessment of adaptability, teamwork, communication and leadership under pressure
- Vattikuti Foundation will assign a mentor to each team
- Travel and lodging will be provided
- Details will be provided directly to teams upon notification of Round 2 advancement

12. Background Sources

Entrants may begin with the following official sources and should expand their research as needed:

Vattikuti Innovators Challenge: <https://vattikutifoundation.com/vattikuti-innovators-challenge/>

WHO Nepal - 2026 Rasuwa flash floods: <https://www.who.int/nepal/emergencies/2026-rasuwa-flash-floods>

WHO Nepal statement on the Rasuwa floods, 26 August 2026: <https://www.who.int/nepal/news/detail/26-08-2026-who-nepal-statement-on-rasuwa-floods>

WHO - Strengthening post-disaster surveillance after Nepal's flash floods, 9 September 2026:
<https://www.who.int/nepal/news/detail/09-09-2026-strengthening-post-disaster-surveillance-after-nepal-s-flash-floods>

WHO - Flood survivors face new health struggles far from home, 14 September 2026:
<https://www.who.int/nepal/news/detail/14-09-2026-flood-survivors-face-new-health-struggles-far-from-home>