

Empowering the Public in the Next Pandemic

Kaley Skapinsky and Kevin Webb

August 30, 2007

SIE: Social Innovation and Entrepreneurship

- Look for opportunities for innovation
- Bring worlds together
- Seek inspiration from the public and guidance from the experts

Saving Lives in the Next Pandemic

- Expert Partners



Public Health Department
Santa Clara Valley Health & Hospital System



- Passionate Students
- Public

Empowering the Public in the Next Pandemic: Summer 2007 Projects

- Innovative method to get people **prepared**
- Centralized source for official **local** information
- Understanding how people view their **“community”**
- Understanding the **technology** requirements for moving the pandemic hotline forward

Why is it so critical for people to be empowered throughout a pandemic?

- Unlike other disasters, a pandemic will be **widespread**.
- There may be **no outside aid**.
- Empowered people create **resilient** communities.

Resilient communities fight back.

How do you empower people during a time of emergency?

Give them the best information for protecting themselves and their families, and coping with changes in daily life.

What types of information do people need throughout a pandemic?

We let *people tell us*:

“What do I need to be stocking up on for the pandemic?”

“What can we do to prevent the spread of it?”

“What makes this flu different from the regular flu?”

“Where will there be food? Water?”

“Will there be electricity?”

“If you’re taking care of someone at home, what do you do?”

“Should I go to work? If so, what precautions should I take?”

“What area has it hit?”

Two of the types of information that emerged clearly:

- Information on **how to get prepared** for a pandemic
- **Local** Information
 - Official
 - Grassroots

The Challenge: To Get People
Prepared for the Next Pandemic

So, people want information about how to
get prepared...

...yet most people are not prepared for
emergency situations.

Where are we losing them?

Barriers to Getting Prepared

- **Same lecture, different topic**



Y2K

**HOMELAND SECURITY
ADVISORY SYSTEM**

SEVERE
SEVERE RISK OF
TERRORIST ATTACKS

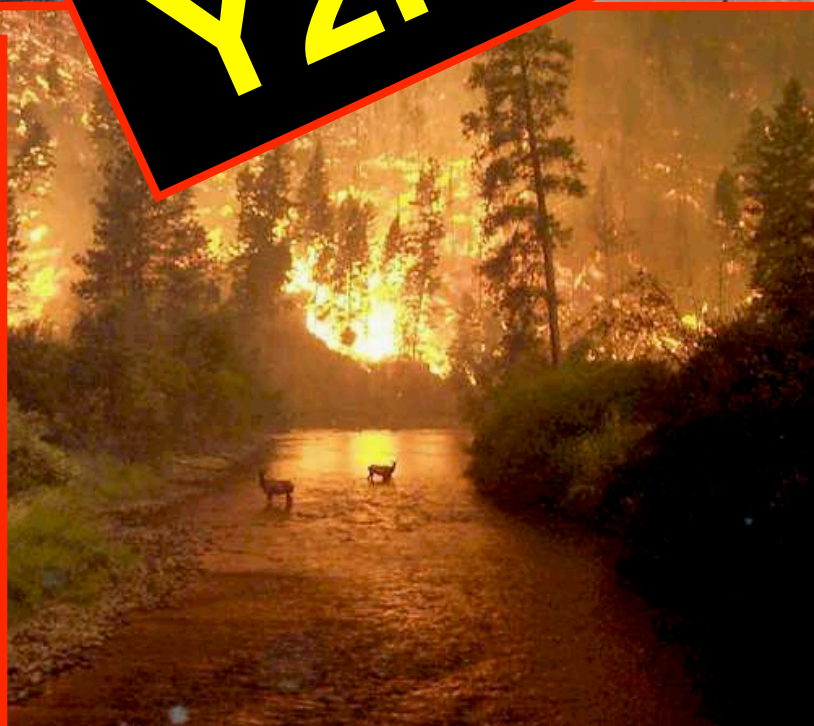
HIGH
HIGH RISK OF
TERRORIST ATTACKS

**CURRENT
THREAT
LEVEL**

ELEVATED
SIGNIFICANT RISK OF
TERRORIST ATTACKS

GUARDED
GENERAL RISK OF
TERRORIST ATTACKS

LOW
LOW RISK OF
TERRORIST ATTACKS



Barriers to Getting Prepared

- Same lecture, different topic
- **Overwhelming, ambiguous tasks**
- **Information is not pre-digested or prioritized**

- **Social Disruption May Be Widespread**

- Plan for the possibility that usual services may be disrupted. These could include services provided by hospitals and other health care facilities, banks, stores, restaurants, government offices, and post offices.
- Prepare backup plans in case public gatherings, such as volunteer meetings and worship services, are canceled.
- Consider how to care for people with special needs in case the services they rely on are not available.
- [top of page](#)

- **Being Able to Work May Be Difficult or Impossible**

- Find out if you can work from home.
- Ask your employer about how business will continue during a pandemic. (A Business Pandemic Influenza Planning Checklist is available at www.pandemicflu.gov/plan/business/businesschecklist.html.)
- Plan for the possible reduction or loss of income if you are unable to work or your place of employment is closed.
- Check with your employer or union about leave policies.
- [top of page](#)

- **Schools May Be Closed for an Extended Period of Time**

- Help schools plan for pandemic influenza. Talk to the school nurse or the health center. Talk to your teachers, administrators, and parent-teacher organizations.
- Plan home learning activities and exercises. Have materials, such as books, on hand. Also plan recreational activities that your children can do at home.
- Consider childcare needs.
- [top of page](#)

- **Transportation Services May Be Disrupted**

- Think about how you can rely less on public transportation during a pandemic. For example, store food and other essential supplies so you can make fewer trips to the store.
- Prepare backup plans for taking care of loved ones who are far away.
- Consider other ways to get to work, or, if you can, work at home.
- [top of page](#)

It gets worse.

Where do I start? What should I be doing now?

How long will this take?

- **Social Disruption May Be Widespread**
- Plan for the possibility that usual services may be disrupted. These could include services provided by hospitals and other health care facilities, banks, stores, restaurants, government offices, and post offices.
- Prepare backup plans in case public gatherings, such as volunteer meetings and worship services, are canceled.
- Consider how to care for people with special needs in case the services they rely on are not available.
- [top of page](#)

But I can still go to hospital if I'm sick, right?

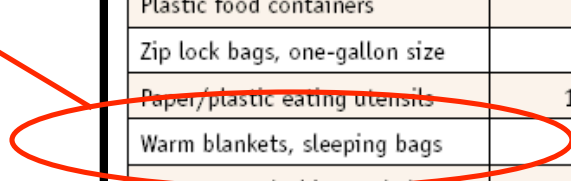
Who has the authority to cancel them?

Who is at the most risk during a pandemic?

Barriers to Getting Prepared

- Same lecture, different topic
- Overwhelming, ambiguous tasks
- Information is not pre-digested or prioritized
- **People need to know “why”**

Why would I need a blanket to protect myself against a virus?



Two-Week Emergency Supply Checklist

Items	2 people	4 people	Your quantity	Check off
First aid kit and instructions	1 medium kit	1 large kit		
Emergency radio with batteries	1	1		
Lanterns, flashlights, candles	2 flashlights	4 flashlights		
Batteries	2 (12-packs)	4 (12-packs)		
Trash bags	20 bags	40 bags		
Barbeque pits, camping stove	as needed	as needed		
Lighter fluid and matches	2 containers/boxes	4 containers/boxes		
Fire extinguisher (A-B-C type)	2	2		
Manual can opener and knife	1	1		
Plastic food containers	10	20		
Zip lock bags, one-gallon size	100	200		
Paper/plastic eating utensils	100 sets	200 sets		
Warm blankets, sleeping bags	2 sets	4 sets		
Extra warm clothing and shoes	4 full sets	8 full sets		
Personal hygiene products	as needed	as needed		
Baby and/or pet supplies	as needed	as needed		
Toolkit with wrench, pliers, etc.	1	1		
Utility instructions, maps, etc.	2 copies	4 copies		
Copies of important documents	as needed	as needed		
If possible:	2 people	4 people	Your quantity	Check off
Cell phone with battery	1	1		
Emergency cash	\$200	\$400		

Two-Week Supply of Drinking Water

Number in family/group	Allow 14 gallons per person	Total water required
	x 14 gallons	= total gallons

Barriers to Getting Prepared

- Same lecture, different topic
- Overwhelming, ambiguous tasks
- Information is not pre-digested or prioritized
- People need to know “why”
- **Tolerance for information increases with risk perception**

So, now that we know what doesn't work,
how do we create something that does?

The Innovation:

An Internet viral epidemic to
fight a real viral epidemic

The Story of Moveon.org



- Began with a one-line email with a very powerful message
- Sent out to less than 100 people
- Spread to half a million people in just a few weeks
- Now there are over 3 million members

Method Innovations

- Two levels of Preparation: Essential and Complete
- Preparation is organized by “mental models”
 - Transmission
 - Social Distancing
 - Home Care
 - Changes in Daily Life
- Actions to take and items to have
- Prioritization

Essential Preparation

You receive an email from your friend:

Hi _____,

I just spent about 15 minutes at the **Pandemic Homepage** and learned about a deadly new virus that could break out at any time and spread quickly around the world. They've got some really easy steps to take now to help protect yourself and your family. I've just taken them, and now I want to help you do the same.

Just click the link below to get started. The website is really helpful and easy to navigate, but if you need any help, feel free to email me back and I can help you figure out how to get prepared.

[Take me to the Pandemic Homepage](#)



The Pandemic Homepage

Welcome to Essential Preparation.

About three times every century, a deadly new flu virus breaks out, spreads quickly around the world, and causes a flu pandemic.

There is current concern about a virus circulating in Europe and Asia. The next pandemic may be closer to breaking out than you think.

How can you fight a deadly virus?

This section of the Pandemic Homepage, **Essential Preparation**, will show you. In about 15 minutes, you can take **5 simple steps that are critical to take now** and may save your life.

In **Essential Preparation** you:

1. **Learn** what a pandemic is and how it will affect your life.
2. Take the **single-most important step** that may save your life.
3. Sign up to **know when a pandemic is coming**.
4. **Spread the Pandemic Homepage** to your friends, so they can start protecting themselves and their families.
5. Download simple checklists to **see how ready you are now**.

Begin Essential Preparation!

Welcome to Essential Preparation

Learn what a pandemic is and how it will affect your life.

Essential Preparation

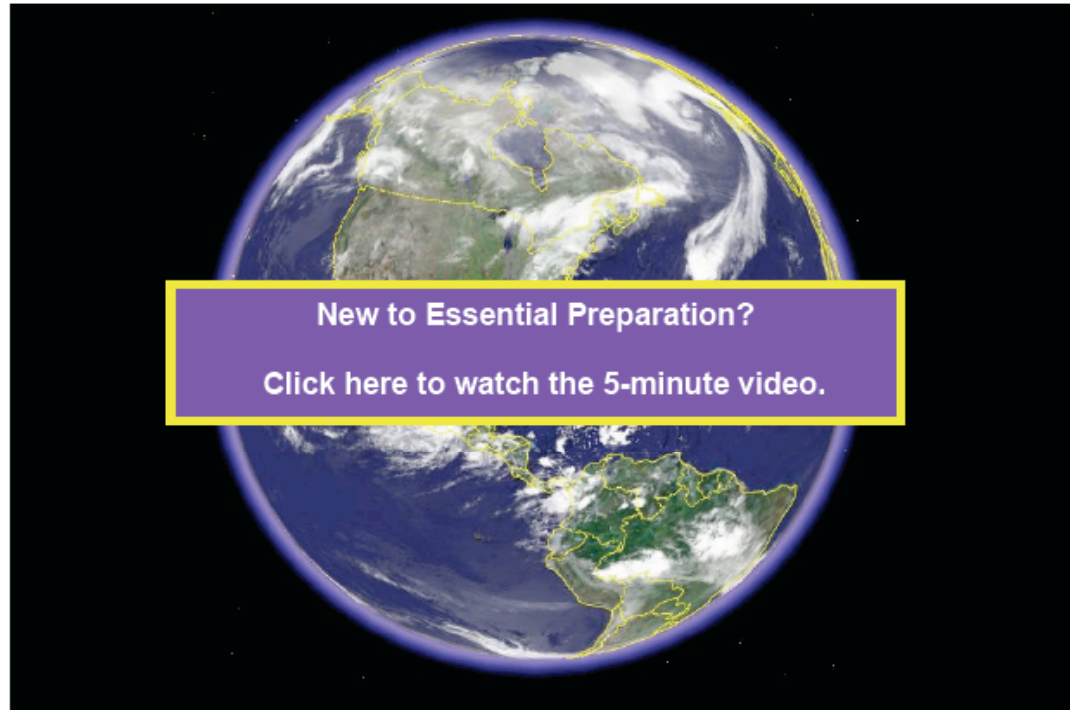
1. Learn what a pandemic is

2. Take the most important step

3. Know when a pandemic is coming

4. Spread the Pandemic Homepage to friends

5. See how ready you are now.



OR

[Read the Text Version of Video](#)



[I'm ready to go to Step 2!](#)

2. Buying Masks: the single-most important step that may save your life.

A special mask can trap the virus before it has a chance to get into your body, or to infect people around you.

Essential Preparation

1. Learn what a pandemic is

2. Take the most important step

3. Know when a pandemic is coming

4. Spread the Pandemic Homepage to friends

5. See how ready you are now.

- Buying masks may be the **most important step** you can take to get prepared for a pandemic.
- Masks are **not very expensive**, and will be **scarce** during a pandemic. It is critical to get them **ahead of time**. They can be your **insurance** that you **keep on a shelf** until you need them during a pandemic.
- You will need **special masks for different situations**. Not just any type of mask will work.
- You need your masks to **fit perfectly**. One gap could be deadly.
- Download the **2-page Mask Guide**, which will walk you through the special types of masks that will offer you the best protection in each situation, and where to **find them**. It will also walk you through the **simple steps for how to store your masks** until you need them.

[Download the Mask Guide Here.](#)





[I'm ready to go to Step 3!](#)

The Pandemic Homepage Mask Guide

Special masks that go over your nose and mouth can **trap the virus** before it has the chance to enter your body or infect others.

It is critical to buy these masks now, because they will be **very scarce** during a pandemic.

Some special masks are for you to wear to help you from catching virus, and other special masks are for others to wear when they are sick, so you can care for them more safely. The guide below shows you which mask is recommended for each situation.

Purpose	Recommended Mask
<p>To keep from catching the virus when you are out in public or taking care of someone who is sick at home.</p>	 <p>An elastomeric mask may be your best option. You can wear it comfortably for extended periods of time, and it is reusable. This silicone mask costs \$30, but it may be the inexpensive insurance that helps protect you from the virus.</p>
<p>For someone who is sick to wear, so you can care for them more safely.</p>	 <p>A simple surgical mask will help to trap the virus when you cough, sneeze, or breathe out. They are inexpensive, disposable, and you can breathe comfortably while wearing one.</p>

Where to Get Them:

You can generally find surgical masks at pharmacies, and elastomeric masks are available at many hardware stores.

You can also visit the Pandemic Homepage, where there are links to places where you can buy these masks online.

<http://xxx.xxx>

How to Store Your Mask:

Once you get your masks, you can store them for when you need them. It is very important to keep them in a **hard container** so that they are not damaged while in storage.

Fitting Your Mask Perfectly is Critical.

It is very important to store your masks properly, because when you need to wear them during a pandemic, it is **critical that they fit over your nose and mouth perfectly**. One gap could be deadly. When you need to wear your mask, you can visit the Pandemic Homepage for detailed information on how to fit your mask just right.

Essential Preparation

1. Learn what a pandemic is
2. Take the most important step
- [3. Know when a pandemic is coming](#)
4. Spread the Pandemic Homepage to friends
5. See how ready you are now.

3. Sign up to know when a pandemic is coming.

- Enter your **name and email address** below, and we will try our best to send you an email when the pandemic is much closer to breaking out. It is also important to **pay attention to news updates**.
- It will then be urgent to return to the **Pandemic Homepage** for the most **up-to-date** information, and to follow the Pandemic Flu Preparation Guide for **Complete Preparation**.
- **Enter a password** so you can keep track of where you are at in the preparation process, and how many people are getting prepared because of you.

Name (First, Last)	<input type="text"/>
Email Address	<input type="text"/>
Password	<input type="password"/>
Confirm Password	<input type="password"/>
<input type="submit" value="Submit!"/>	



[I'm ready to go to step 4!](#)

4. Spread the Pandemic Homepage to Your Friends

The better prepared everyone is, the less severe the pandemic will be.

Essential Preparation

1. **Learn** what a pandemic is
2. **Take** the most important step
3. **Know** when a pandemic is coming
4. **Spread the Pandemic Homepage to friends**
5. **See** how ready you are now.

To tell your friends:

- Click on the link below to be taken to **your own email account**.
- You will then see a **short email** that you can edit as you like and **send to your friends**, urging them to visit the Pandemic Homepage.
- They can then start taking steps to protect themselves and their families during the next pandemic.

[I want to tell my friends!](#)



[I'm ready to go to Step 5!](#)

5. Download simple checklists to see how ready you are now.

Essential Preparation

1. Learn what a pandemic is
2. Take the most important step
3. Know when a pandemic is coming
4. Spread the Pandemic Homepage to friends
5. See how ready you are now.

- You have almost finished going through **Essential Preparation**, which has guided you through the steps that are very simple and urgent to do **ahead of time** to protect yourself and others during a pandemic.
- There are other steps that are also important to take **before the pandemic breaks out** that will help you to get **more fully prepared**. Many of these steps are **very simple** and may **save your life** during a pandemic.
- The **Complete Preparation Checklists** will guide you through these important steps to take to get more fully prepared. Download them now and either **put them on a shelf for later or start looking at them now**. You may find that you are already partly prepared, and can check off some of the steps.
[Download the Complete Preparation Checklists Here.](#)
- The **Pandemic Homepage** has the most accurate, up-to-date information that will be a good resource to go with the checklists. Visit the **Complete Preparation section** when you are ready to get more fully prepared.



[I'm ready to find out where to go from here!](#)

Protecting Yourself and Others From the Virus: Checklist

To Know:

Young, old, and even healthy-looking people can spread the pandemic flu virus.

You can catch the virus by:

- Breathing it in when someone exhales, coughs, or sneezes droplets containing the virus
- Getting the virus on your hands and touching your eyes, nose, mouth, or food

You can avoid from getting the virus by:

- Wearing a special kind of mask when in public or caring for those sick with the flu
- Washing your hands
- Not touching your eyes, nose, mouth, or food with unwashed hands

And you can keep from spreading it by keeping yourself healthy and learning to cough properly.

To Do:

- Adopt proper cough etiquette
 - Cough or sneeze into your elbow or sleeve
- Adopt proper handwashing technique
 - Wash for at least 20 seconds
- Avoid touching your eyes, nose, mouth, or food without washing your hands

To Have:

Item (higher in list = higher priority)	Quantity/Person	Cost	Scarcity in Pandemic
<input type="checkbox"/> Elastomeric mask	1 mask	\$30	Very scare
<input type="checkbox"/> Soap	6 dispensers	\$7	
<input type="checkbox"/> Hand sanitizer	32 fl. oz.	\$5	Scarce
<input type="checkbox"/> Paper towels	8 rolls	\$5	
<input type="checkbox"/> Tissues	6 boxes	\$5	Scarce

More information about the items above can be found at the Pandemic Homepage (<http://xxx.xxx>).

Close (X)

Welcome Back, John Smith!

Because of you, **118** people have started getting ready for the next flu pandemic!

Keep Track of How Prepared You Are

Essential Preparation

- 1. Learn what a pandemic is
- 2. Take the most important step
- 3. Know when a pandemic is coming
- 4. Spread the Pandemic Homepage to friends
- 5. See how ready you are now.

Complete Preparation

- 1. Protect yourself and others from the virus
- 2. Avoid large gatherings of people
- 3. Learn how to care for someone sick at home
- 4. Cope with the changes in daily life

Complete Preparation

- People who are motivated can start now
- More urgent to do when the pandemic is closer to breaking out
- Helps you get more fully prepared
- Explains mental models in more detail

But this still leaves many of the people's questions unanswered.

How do we bring people the **local** information they need to feel empowered?

The Need for **Local Information** During a Pandemic

Official Local Information

- Officials will need to get out timely, local information to the public
- The public will need this information to feel empowered



San Carlos

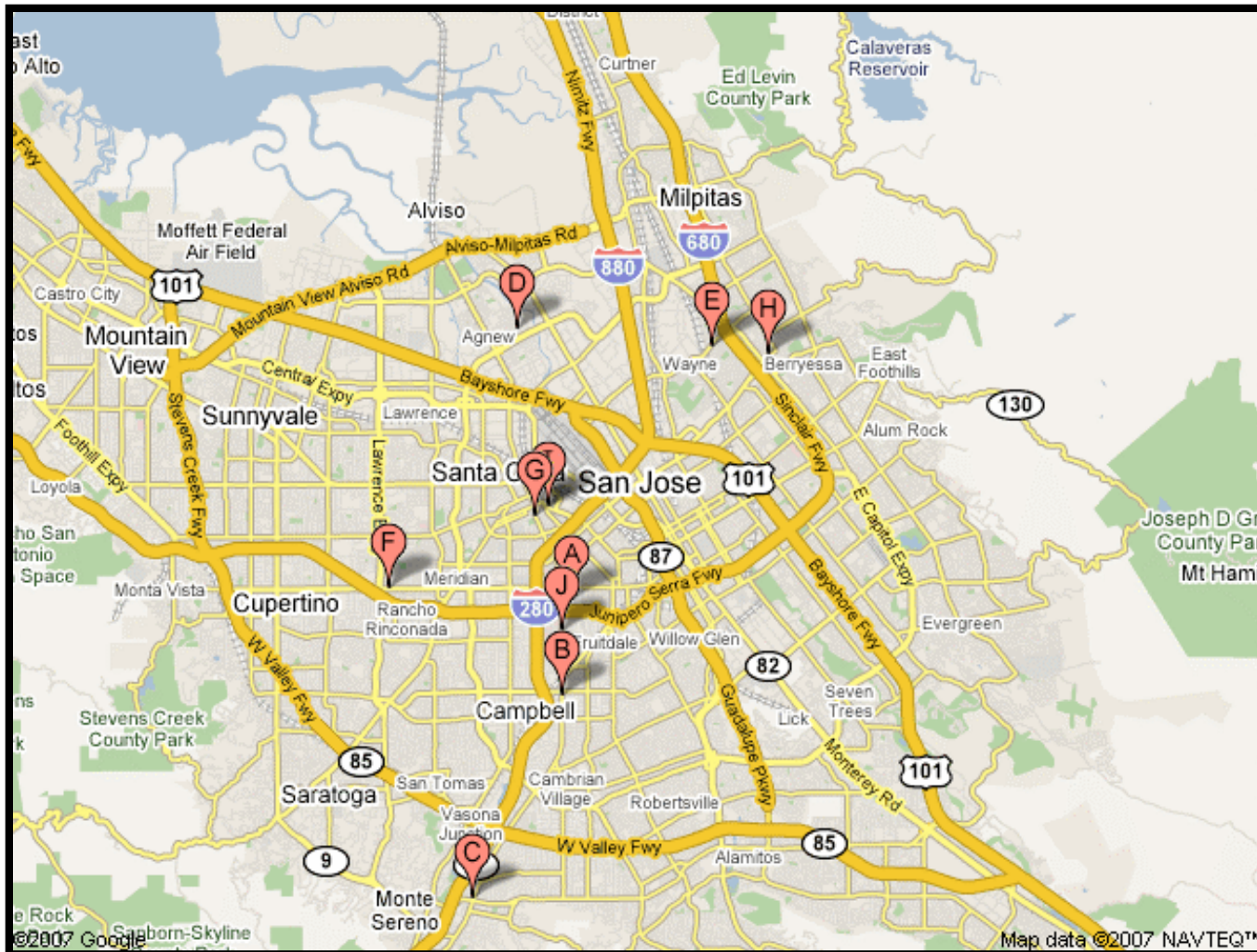


San Francisco



San Jose

Results 1-10 of about **20,745** for grocery store and near **San Jose, CA**



There must be an easier way.

Our goal: To directly connect the people with answers with the people who need them.

Information Providers

- Local Officials
 - Public Information Officers (PIOs)
- Essential Services
 - Food
 - Water
 - Power
 - Transportation
 - Law Enforcement

Insights from Talking with Information Providers

- Official local information will vary by:
 - How often it needs to be updated
 - Geographical level that it impacts
 - Importance
- The main connection between information providers and the public is the **media**
- A centralized source of local information would be convenient for information providers and the media

Your Local Pandemic Alerts

[Get updates by email!](#)

9:15 PM, September 27, 2009

Showing information for:

94305

Most Critical Pandemic Announcements

Government Health Local Services See all



All CA public schools closed as of September 28.

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Posted 4 hours ago by [CAGovernor](#)



27 confirmed cases of bird flu in SCC.

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Posted 9/24 by [SCCPHD](#)

Government Announcements

USA California Santa Clara County Palo Alto See all

- [All CA public schools closed as of September 28](#). -[CAGovernor](#), 4 hours ago
- [Firefighter shortage declared](#). -[CAFirefightersUnion](#), 11 hours ago
- [California Congress to take early recess](#). -[CACongress](#), 9/26
- [Trials delayed for immediate future across CA](#). -[CALegalAssn](#), 9/24

Health Announcements

Hospitals Red Cross Public Health See all

- [SCCPHD cancels SJ Oktoberfest](#). -[SCCPHD](#), 12 minutes ago
- [Bay Area public health departments launch hotline](#). -[BAPHDs](#), 7 hours ago
- [Santa Clara County converts 6 hotels into Influenza Care Center](#). -[SCCPHD](#), 9/27
- [27 confirmed cases of pandemic flu in SCC](#). -[SCCPHD](#), 9/25

Local Services Announcements

Water Food Power Transport Police See all

- [Water main out on El Camino and University](#). -[PAWaterCo](#), 2 hours ago
- [S.J police ask for pandemic volunteers](#). -[SJPD](#), 9 hours ago
- [Rolling blackouts to start in SCC](#). -[SCCPGandE](#), 9/26
- [CA Safeways offer online ordering system](#). -[CASafewayInc.](#), 9/26
- [SFO, SJC quarantine international passengers](#). -[FAA](#), 9/25

Can't find what you're looking for? [Check out your community updates!](#)

Your Local Pandemic Alerts

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[-27 confirmed cases of pandemic flu in SCC.](#) -[SCCPHD](#), 9/25

Local Services Announcements

[Water](#) [Food](#)



Santa Clara County converts 6 hotels into Influenza Care Centers
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Can't find what you're looking for? [Check out your community updates!](#)

Hello [CAGovernor](#)
Settings:
Jurisdiction: [California](#)
Importance: Medium to High

[See My Postings](#)

Online Announcement Form

5:02 PM, September 27, 2009

Title This is how your announcement will be listed.

Jurisdiction What region does this announcement apply to? (Default is your max jurisdiction)

Select Importance The more important announcements will be displayed more prominently.

Full Article Write your full announcement here.

Edit Automatic Summary This summary will appear when people mouse over the headline. Enter a new summary, or let one be generated from the first two sentences of your article.

Upload photo Optional: upload a photo to accompany your announcement.

Hello [CAGovernor](#)
Settings:
Jurisdiction: [California](#)
Importance: Medium to High

[See My Postings](#)

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Moving Forward

- Schools and faith-based organizations
- Technology is not complicated
- Need a major Internet company to host it
 - Capacity
 - Reliability

Grassroots Information

People need to stay connected to their communities throughout a pandemic

But what does the idea of a “community” even mean to people?

Concept of a Community

- Most think locally, but not necessarily their neighbors
- Many turn to local organizations
- Younger people are connected to their schools
- Most would want to connect using Internet or phone

We've looked at some ways of using the Internet to keep people empowered during a pandemic. How do we design a **pandemic hotline** that will empower people as well?

The Pandemic Hotline: **Technology**
Required for Moving Forward

- A pandemic hotline will be a critical source of information during a pandemic.
 - Vulnerable populations
 - People who want to talk to another person
 - Problems with Internet
- A pandemic hotline could be set up on a **county, regional, or national** level.
- Current **homesourcing** technology allows calls to be routed to **volunteers working safely from home.**

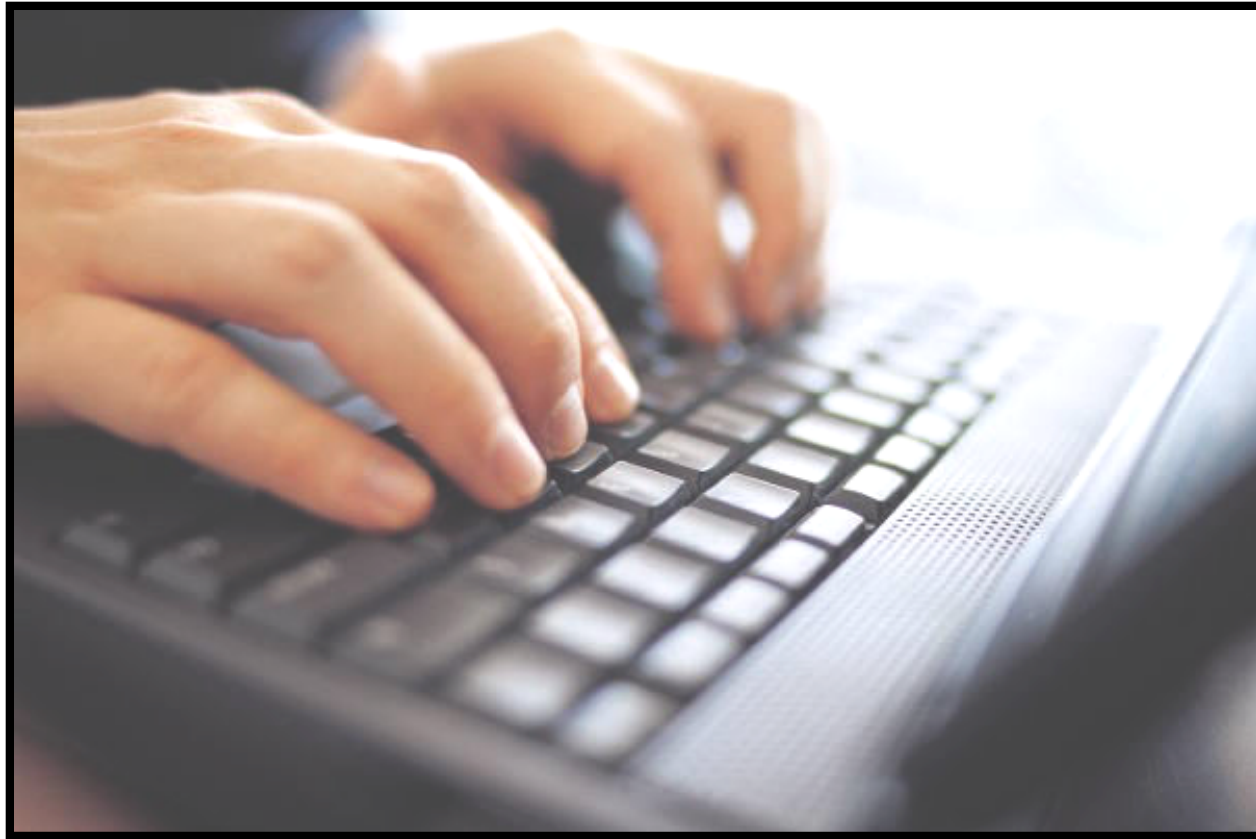


Philip goes through **e-training**.



Elena calls the **pandemic hotline**.

- Self-service
 - Pre-recorded local information
- Routed to volunteer working from home



Philip uses the **Pandemic Homepage** or **Volunteer Handbook**.

- Chatrooms and online messaging
- Data collection

How do we make this happen? How much will it cost?

- Critical to get design ahead of time
- It is not necessary to buy equipment ahead of time
- Pandemic hotline report outlines:
 - The companies that can do this
 - Advantages and disadvantages of companies
 - Cost estimates

Where do we go from here?

- Goal: Launch Pandemic Homepage by end of spring
- Build a team of students and advisors for the upcoming year

Special Thanks to:

**Joy Alexiou
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Lisa Koonin
Meredith Li-Vollmer
Marta Lugo
Gwendolyn Mitchell
Rose Njiraini
Jim Rooney
Dorothy Teeter
Darlene Washington
Jim Wollbrinck
Diane Young**

Final reports are available at:

<http://sie-panflu.stanford.edu>