

## Saving strangers

How much radiation dose would you be willing to receive to save a stranger's life? What about multiple strangers? Or a class of schoolkids on a field trip? Our guidance in the US varies from 500 to 1,000 mSv to save a life. Does that seem reasonable to you? Hopefully you've already thought about this sort of thing – especially if your work has anything to do with radiological and/or nuclear emergency response. And hopefully, whatever your number is, you arrived at it for a solid reason that you can articulate and defend to anyone who's curious.

### Here's my thinking on the matter.

My number for saving lives is somewhere between 1 and 2 sieverts. And, yes – I know that's a lot of dose. But it's less than the lowest dose that can be fatal and, over the decades to come, it'll increase my risk of de-

veloping a fatal cancer by 5 to 10 %. That's not a trivial risk – but if the person(s) I'm contemplating saving is certain to die unless I save them then I'm balancing my 5 to 10 % risk of death in the next few to several decades against the 100 % chance of death to the person(s) at risk. Or, stated in terms of ALARA, "Is it reasonable to let 1 or more people die today in order to avoid a 5 % or 10 % chance of death at an indeterminate time in the future?"

To me, that's a no-brainer – but bear in mind that my Navy training emphasized that sort of thinking, up to and including locking a compartment that was flooding, even a compartment that had not been fully evacuated, in order to save the ship. Better to lose part of the crew than to lose the whole submarine and the entire crew.

### Before equipment arrives

So ... let's take it a little further. What if you're at the scene of what's most likely a "dirty bomb" (more formally, a radiological dispersal device or RDD)

attack, there are people for whom every minute matters if their lives are to be saved, but the emergency responders don't have any way to know the dose rate or to measure their accumulated dose. Would you advise them to enter the area to save lives or to wait until instruments and do-

simeters begin to arrive?

As a radiation protection professional, sending anyone into a potentially very high radiation area with neither instrumentation or dosimetry is anathema. When the people who will be making the entries aren't even radiation workers I grow even more reluctant. But there are 2 recent guidance documents, one from the "Department of Homeland Security" and the other by ASTM International that both recommend exactly that for anything other than a nuclear detonation.

The thinking is that only a nuclear surface burst is likely to deposit enough contamination to be quickly lethal. That, while radiation dose rates from other events might be very high (up to a few Sv/hr), entering for a limited time and only for the purpose of saving lives, does not pose enough risk to let people die while waiting for instruments or dosimeters to arrive at the scene. The thinking here is similar to the thinking described earlier. The ALARA phrasing comes out to "Is it

**Enter the area  
to save lives!**



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reasonable to let people die while we wait for the proper monitoring equipment to make its way to the scene?" I should add, too, that after emerging from such an entry the responders would not be permitted to go back into the radiation area until their dose has been evaluated, which likely

## People die while waiting for instruments.

would require several hours.

I've got to admit that thinking about this makes me a bit queasy, even though I understand the calculations and agree with their conclusions – it's just that the thought of doing this runs counter to everything I've been taught and everything I've done in over 40 years in radiation safety. Would I be able to give this advice in a real incident? I think so ... but I'm not sure, and I hope I never have to find out.

### At the hospital

What about when these people begin arriving at the hospital?

Now put yourself in the position of the hospital RPO getting calls from the physicians staffing your Emergency Department. They've got patients who need assistance, but who are potentially heavily contaminated – the medical staff are worried that caring for these

patients might result in dangerous exposure to radiation, not to mention contaminating the Emergency Department and taking it out of service for days or weeks after this emergency is over. You can run over to provide radiological support, as can some

of your staff – but how many of the patients might suffer or die needlessly while waiting for your arrival? And even when the patients do start being treated, does your staff know enough about the health effects of radiation to

know how to prioritize their care? In many exercises held in the US over the last decade or so there have been far too many instances in which simulated patients have simulated dying while waiting to be decontaminated.

NCRP has weighed in on this matter in Report 161 (Management of Persons Contaminated with Radionuclides), recommending what, hopefully, you've already

concluded – that saving lives is paramount. Or, as I teach it to my students, "We can always decontaminate a person, a trauma bay, or an emergency room – but if a person loses a leg or their life because we delayed treatment, we can't do anything. So let's save lives and worry about cleanup later." Or, in the language of ALARA, "Is it reasonable to let people suffer and die because we'd need to decontaminate our facility after we're done saving their lives?"

### Are you ready to help?

And I have one final question for you – if a rad/nuke incident happened near you today or tomorrow, what do you envision your role to be? Would you be prepared to leap into that role on a moment's notice? Is that compatible with what your employer would expect and support? And, most importantly for those of you who do not work for government or medical employers, do you know what you need to do in advance in order to be permitted to assist?

In the US, for example, I can't just show up at the scene, instruments in hand, offering to help out – they don't know me, don't know if I'm qualified to do **anything** other than get in the way, don't know if I know enough to be useful. Unless one has government credentials of some sort they're probably not going to be allowed near anyplace they can help out, and by just showing up, volunteers are also going

to be taking valuable person-hours away from the response.

That's why, several years ago when I worked with the Health Department in New York City, I helped start up our

Radiological Reserve Corps as a part of the city-wide Medical Reserve Corps. Volunteers were screened to determine their levels of experience and training, entered into a database, and then they

were given RRC-specific training, including hands-on experience, to get them to the point of being able to help, for example, staff our Community Reception Centers to help screen potentially contaminated people (among other roles). And – crucially – they were given credentials (an ID card and an RRC baseball hat), a reporting structure, and a procedure to follow if they heard of a radiological or nuclear event, so they could find out if, when, and where they should report to help out. Importantly, they were told they might not be put to work immediately – that

any large-scale response will be an around-the-clock effort likely to go on for weeks or longer – that it will be just as important to have staff for the second shift and the third as to have staff for the first. The moral of the story is that if you do not work in government or medicine (where they presumably already know your qualifications) and you'd like to help out, it's not a bad idea to find out how to volunteer properly.

### Summing up

I've had a few too many jobs in which I've done a lot of work that I hope is never needed, and spent a tremendous amount of time preparing for events that I hope never occur. This area is one, my time in the military is another. And I've got to say that, as I enter the last years of my career, I've

## How to prioritize their care?

## Find out how to volunteer properly

## Does the staff know enough about the health effects of radiation?

spent an awful lot of time on work that, frankly, is sort of depressing, however necessary and useful it might be.

The thing is – the work is necessary and it **is** useful and if the worst comes to pass, we are going to need to know that there's guidance out there, that it was painstakingly developed by talented people and reviewed by other talented people, and that it's the best we can do at the moment.

That's why, no matter where you work or what your exact job might be, it might behoove you to think about what you would do, what you would recommend, what you envision your role being if the worst comes to pass, and what you need to do to ready yourself. There's time for all of that now – there won't be if all of this is suddenly needed.

Andrew Karam 

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## Aktuelle Informationen zur radiologischen Lage im Iran

### Informationsstand vom 7. April 2026

Bei den Kampfhandlungen im Iran sind seit Beginn des Krieges am 28. Februar 2026 auch Nuklearanlagen in Mitleidenschaft gezogen worden. Das Radiologische Lagezentrum des Bundes (RLZ-Bund) beobachtet die Lage im Iran und in den umliegenden Staaten daher sehr aufmerksam. Es liegen keine Hinweise vor, dass Radioaktivität ausgetreten sein könnte, Messdaten aus der Region sind unauffällig.

Selbst wenn im Nahen oder Mittleren Osten eine erhebliche Menge radioaktiver Stoffe freigesetzt würde, wäre nach Einschätzung des Bundesamtes für Strahlenschutz (BfS) nicht davon auszugehen, dass in Deutschland radiologische Maßnahmen notwendig werden. Spuren in der Luft könnten in Deutschland durch hochempfindliche Messgeräte dennoch messbar sein.

Im RLZ-Bund wirken Expertinnen und Experten des Bundesumweltministeriums (BMUKN), des BfS und der Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) zusammen.

### Redaktioneller Hinweis

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[www.bfs.de/SharedDocs/Kurzmeldungen/BfS/DE/2026/0302-iran-aktuell.html](http://www.bfs.de/SharedDocs/Kurzmeldungen/BfS/DE/2026/0302-iran-aktuell.html)

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