

Vulnerability and resilience: determinants for support requirements during a prolonged power outage

AUTHORED BY: N. Carey, Clinical Nurse Consultant, N. Cicuto, Counter Disaster Coordinator, & L. Hampel, Clinical Nurse Consultant
Counter Disaster Unit, Northern Sydney Local Health District (nsldh-counterdisaster@health.nsw.gov.au)

Background

On 24th November 2019, a severe weather event caused significant damage to the power infrastructure in the northern suburbs of Sydney, New South Wales, with over 52,000 homes and businesses affected.

6,000 homes remained without power three days after the storm with outages to continue in the coming days. The Local Emergency Operations Centre (EOC) was re-commissioned 29th November 2019

Identification of vulnerable persons

The EOC's objective was to identify potentially vulnerable persons and implement strategies to support the affected community.

Various strategies were used by the EOC to identify vulnerable persons.

| Strategies used | Number identified |
|--|-------------------|
| Government Agencies | 2 |
| Energy Provider 'Life Support' Customer List | 110 |
| Local Council lists e.g. library, Meals on Wheels | 113 |
| Identified 'at risk' persons without power in adjacent LGA | 374 |

Data consolidation was required to remove duplicate referrals. In addition to a door knock of the community, a call centre was established to make contact with the identified people and to establish immediate needs and referral to the appropriate agency.

Interpretation of data

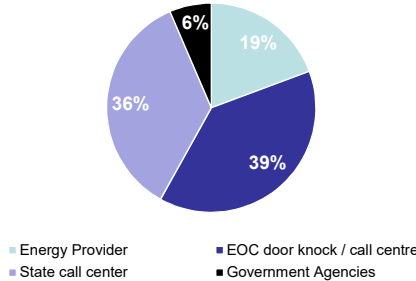
The establishment of the call centre proved to be the most effective strategy in identifying persons with health care requirements.

77% of the referrals to Health were not engaged with the public health system. There were also a number known to Health but not current care recipients.

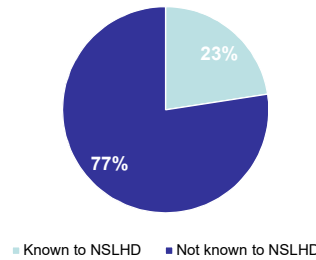
People access health services through multiple avenues including local general practitioners, private and/or public non government agency health care providers or may not consider themselves to be potentially vulnerable. Subsequently, there is limited visibility of potentially vulnerable persons in the affected community^{2,3}.

During evolving situations, this provides a challenge in identifying these individuals and addressing preparation activities to build resilience^{1,2}.

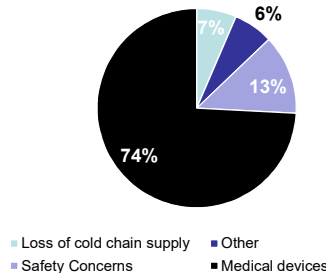
Source of referrals to Health



Referrals to Health



Primary health concern



EOC briefing 2019

Vulnerability vs Resilience

Defining vulnerability

When looking for potentially vulnerable persons, the EOC identified people who were linked to council services or their energy provider 'Life Support' customers list. These people already had established support networks and the majority were able to manage in the community during the power outage. Vulnerability is a susceptibility to disproportionately be affected by a hazard. Vulnerability is not just defined by factors such as chronic illness or dependence on power supply but also the degree to which support structures are in place^{1,2}.

Building resilience

Whilst being dependent on power increases the risk of becoming vulnerable during an outage, this can be mitigated through having established contingency plans in place. Plans can include registration with energy provider's 'Life Support' customers list, identification of alternate power supply, or establishment of support networks^{2,3}.

Impact of duration

Although some community members had contingency plans in place to manage their healthcare needs during the short term, these plans may not have been robust enough to support them through an extended outage. The risk of vulnerability for a person who is dependent on power will potentially increase with the duration of the outage^{1,3}.

What has been implemented?

- Established pathways into health services for people who are not known to Health
- Developed tools to assist responding agencies in identifying, supporting and referring the affected community members:
 - EOC call centre script
 - Health script
 - Prolonged power outage health factsheet

Future Direction

Meaningful community engagement is essential to effectively support disaster resilience.

Future activities could focus on:

- Community campaign to promote personal action plans and registering with energy provider's 'Life Support' customers list
- Messaging prior to a severe weather event on preparing for a power outage
- Explore potential IT interface to link with patient management systems for management of health referrals for patients not known to Health

References

- Buckle, P., G. Mars, and S. Smale, *New approaches to assessing vulnerability and resilience*. Australian Journal of Emergency Management, The, 2000. 15(2): p. 8.
- Domianni, C., et al., *Power outage preparedness and concern among vulnerable New York City residents*. Journal of urban health, 2018. 95(5): p. 716-726.
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