Questions and Answers from the UCL / GRID Council / UCL Global Engagement webinar

held on 22 May 2024 - Investigating risk of suicide in patients with cancer

Dr Alexandra Pitman, UCL Division of Psychiatry

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Project website: https://www.ucl.ac.uk/mental-health/research/special-interest-groups/self-harm-and-suicide/investigating-risk-suicide-patients-cancer

Questions about the SR & MA by Heinrich et al 2022

We had some questions about the systematic review presented in the webinar summarising studies that had investigated the risk of suicide in patients with cancer (Heinrich et al 2022 https://www.nature.com/articles/s41591-022-01745-y)

QUESTION: Did the systematic review include outcomes other than suicide among people with cancer?

Answer: The systematic review did not investigate any other mental health outcomes, but focussed solely on suicide as an outcome. Only one study eligible for the review included data on suicidal thoughts and attempts.

QUESTION: Did the systematic review include non-pharmacological interventions available for suicide prevention among people with cancer?

Answer: The systematic review did not take into account the influence of psychopharmacological interventions, psychotherapeutic interventions or any aspects of cancer treatment on suicide risk, and only one study in the review took into account the influence of prediagnosis psychiatric care on suicide mortality in patients with cancer.

QUESTION: Did the MA look at effect size by types of cancer? Thanks

Answer: They did look at specific types of cancer and grouped the cancer sites by good/intermediate/poor prognosis. There was no delineation of paediatric/teenage cancers versus adult cancers as they could not look at age, but 3 studies included investigated leukaemia.

QUESTION: What recommendations could be drawn from the systematic review to be applied in clinical settings?

Answer: The SR concluded that patients with cancer should be closely monitored for suicidality and that some may need specialised care to reduce short- and long-term risks of suicide. The patients of particular concern were those with late stage / advanced cancers, those with a poor prognosis cancer, and anyone in the first year of diagnosis. This last factor points to the importance of discussing mental health concerns with patients early on after diagnosis.

Questions about linkage of data

Question: How feasible is it to obtain personal identifiable data from Cancer Registries & Vital Registration systems. What are the ethical issues / institutional barriers?

Answer: In-house analysts (ie those working within cancer registries) have very few barriers (legal, institutional) and can get ethical approval and Information Governance approval more easily as long as they can justify the rationale for accessing data. It often helps to identify a collaborator working for the data custodian rather then trying to do the analysis as an independent researcher.

Generally, Cancer Registry teams mention that they are also the third party to obtain personal identifiable data for the purpose of cancer surveillance, whilst the data custodians are individual hospitals. Therefore cancer registries are unable to share personal identifiable data.

Maybe by collaborating with institutions you may get the data a bit easier compared to doing independent research. Usually multiple ethics approvals are advised across the institutions and then personal consents from the patient and family if required.

Different jurisdictions will have different prevailing laws and regulations about access to such data for research purpose. It may be easier, as indicated above, to collaborate with an analyst working for the data custodian.

For Sri Lanka, you can visit the National Cancer Control Programme website - www.nccp.health.gov.lk

It was suggested that people could consider datasets that are broader than cancer registry data, to work out what is available more generally. For example, for India this paper describes data sources:

Mishra A, Mokashi T, Nair A, Chokshi M. Mapping Healthcare Data Sources in India. *Journal of Health Management*. 2022;24(1):146-159. doi:[10.1177/09720634221077322](10.1177/09720634221077322)
https://journals.sagepub.com/doi/full/10.1177/09720634221077322

Naomi Launders mentioned that she has managed to conduct cancer studies using primary care data in the UK, but that would depend on what is recorded and available in other countries.

Joseph Lam suggested that in some countries we can also think about piggy-backing on larger cohorts/institutes that may have been linked with registries/health data - such as the UK LLC in the UK (https://ukllc.ac.uk/datasets).

Questions about statistical software packages

Question: Is SPSS software better than Stata or not?

Answer: The best software is always the one with which you are familiar with, and that can also cope with the analysis. There are advantages and disadvantages to SPSS, of course, but many sound analyses have been conducted using SPSS all the same.

Joseph Lam at UCL mentioned that he has created some simple tutorials and practicals for Stata that he has made publicly available, and might be helpful for some very simple data preparation tasks. (https://github.com/Jo-Lam/Stata-Notes).

Joseph Lam has been helping to teach the Introduction to Data Linkage Course (organised by the National Centre for Research Methods, led by Prof Katie Harron and James Doidge), and we sometimes they run the course virtually. The link to the course is here https://www.ncrm.ac.uk/training/show.php?article=12273 and the fee per teaching day is:

• £35 per day for students registered at University.

• £70 per day for staff at academic institutions, Research Councils researchers, public sector staff and staff at registered charity organisations and recognised research institutions.

• £250 per day for all other participants.

If there was sufficient interest in online training for a group of researchers from non-UK countries, they may be able to create a lower cost package.

Question: Which software package has the best (informal) advice available online for the analyst community?

Answer: R and Stata have the best online community with public questions and answers.

Questions about clinical context

Question: From the field, I have found that suicides among cancer patients are seen immediately after diagnosing. The recent one was a medical professional who knew the extent of the condition. Others may include high out of pocket expenditure or lack of support system. Do studies find similar patterns ?

Answer: This is what was found in the SR by Heinrich et al 2022 https://www.nature.com/articles/s41591-022-01745-y- and see the above Q&A.

Question: Do psychological reasons or physical factors increase the risk of suicide in cancer patients? For example whether they attempt suicide just after the diagnosis of cancer? What's the time gap?

Answer: We assume that some suicide risk factors are similar for people with cancer than those without (gender, age, economic deprivation, untreated mental illness, past history of self-harm) but some are likely to be particularly pronounced in a patient with cancer (pain, access to lethal medications) and it is possible that mental illness can go unrecognised in a cancer context (see this BMJ Clinical Update: *Depression and anxiety in patients with cancer* BMJ 361:k1415 doi: 10.1136/bmj.k1415 https://www.bmj.com/content/361/bmj.k1415). Different studies in the SR by Heinrich et al 2022 https://www.nature.com/articles/s41591-022-01745-y- investigated different time periods over the cancer journey, with differing degrees of granularity (how short the time periods were). One study not included in the Heinrich et al 2022 SR was an analysis of Swedish registry data by Fang et al 2012, which looked at fine-grained time periods and found that the relative risk of suicide in the first week after a cancer diagnosis, compared with cancer-free persons, was 12.6 (95% CI= 8.6 to 17.8) during the first week (29 patients; incidence rate, 2.50 per 1000 person-years) and 3.1 (95% CI, 2.7 to 3.5) during the first year (260 patients; incidence rate, 0.60 per 1000 person-years). The risk elevations decreased rapidly during the first year after diagnosis, and increased risk was particularly prominent for cancers with a poor prognosis. Note that the number of events in this study was quite low. We don't know what factors increase the risk of suicide early on in the cancer journey and this is an important research gap.

Fang F, Fall K, Mittleman MA, Sparén P, Ye W, Adami HO, Valdimarsdóttir U. Suicide and cardiovascular death after a cancer diagnosis. N Engl J Med. 2012 Apr 5;366(14):1310-8. doi: 10.1056/NEJMoa1110307. https://www.nejm.org/doi/full/10.1056/NEJMoa1110307

In the discussion it was mentioned that in India, getting insurance for cancer treatment is an added burden over the stress of being diagnosed with the condition, and these factors may contribute.

Question: What tools are available to measure wellbeing in patients with cancer?

Answer: Dr Alok Atreya, based in Nepal, shared that he has conducted a study on QoL in cancer patients using the EORTC-QLQC-30 questionnaires in Bangladesh. We have pasted below the reference and the data repository.

Islam N, Atreya A, Nepal S, Uddin KJ, Kaiser MR, Menezes RG, Lasrado S, Abdullah-Al-Noman M. Assessment of quality of life (QOL) in cancer patients attending oncology unit of a Teaching Hospital in Bangladesh. Cancer Rep (Hoboken). 2023 Aug;6(8):e1829. doi: 10.1002/cnr2.1829.

Data: https://data.niaid.nih.gov/resources?id=DRYAD_doi.org:10.5061:dryad.pnvx0k6s4

Question: Given that most kinds of Cancer have higher 5-year survival (in the UK than in countries without universal health coverage), it would be interesting to see an analysis comparing Years of Life Lost /Burden of Disease due to suicide *versus* cancer v both, and a relevant cost analysis to make an economic case for investment/intervention.

Answer: There is a relative lack of mental health studies incorporating economic analyses and this would be a really positive contribution to the literature, helping cancer services determine whether to invest more in the psychosocial care of patients with cancer.

Thank you for your interest in this webinar.

The project website is here: https://www.ucl.ac.uk/mental-health/research/special-interest-groups/self-harm-and-suicide/investigating-risk-suicide-patients-cancer

If you would like further information please contact: Dr Neethu Mohan, State Health Agency, Kerala, India: globalengagement2024@gmail.com

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We have created a channel to discuss cancer registry analyses in relation to mental health outcomes - Slack channel: https://join.slack.com/t/investigating-0j39451/shared_invite/zt-2jaurdlfl-52hF8jgvydtdTnRnZAEilg