

Impact of receiving Guideline Concordant Treatment on Quality of Life for people diagnosed with Lung Cancer: an Australian registry cohort study using patient-reported outcomes to drive value-based healthcare

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Background

This study investigated the feasibility of collecting patient-reported outcome and experience measures (PROMs and PREMs) via a lung cancer registry. We aimed to determine if preference-based health-related quality of life (HRQL, a PROM) and PREMs could be combined with routinely collected clinical outcome data in a dashboard to identify areas of care important to patients, to guide value-based, quality improvement initiatives.

Aim

The primary outcomes for the study were as follows: 1) feasibility of collection of registry-level PROMs and PREMs; 2) reporting of HRQL and experiences of diagnosis and care; 3) health service cost estimates for stage-specific optimal treatment; and 4) correlation of these outcomes with routinely collected registry clinical data. The ultimate goal was to develop a value-based dashboard as a reporting framework to assist health services in developing quality improvement initiatives that add value and drive patient-centred change in improving health outcomes.

Method

This was a prospective, proof-of-principle cohort study to incorporate the assessment of PROMs/PREMs to help inform VBHC in patients newly diagnosed with lung cancer. Data were collected across five health services within the VLCR, an established clinical quality lung cancer registry in Australia (24). The VLCR captures diagnostic, management and clinical outcomes data from patients diagnosed within 19 health care networks (50 hospitals) across the State of Victoria. Data are collected and collated through direct downloads from hospital information systems, supplemented by individual abstraction of clinical data records.

Between April 2021 to April 2022, people diagnosed with lung cancer at five metropolitan health services (four public, one private) were invited to participate in the VLCR. After 2 weeks, participants were invited to complete a series of PROMs/PREMs electronic surveys sent via SMS or email. Respondents to this survey invitation were defined as the VBHC study cohort.

Results

The overall response rate to baseline PROMs/PREMs surveys was 49% (241/490 invited). Regarding PREMs, 92% were either satisfied or very satisfied with the care they received at diagnosis but 39% reported that they were not involved as much as they would have wanted in decisions about their care and 41% did not have details for a lung cancer nurse specialist for support. On multivariate analysis we found that HRQL was significantly better for people with early-stage disease and those with better overall health. Importantly, HRQL was also significantly better for people who received guideline concordant treatment for all stages of disease. HRQL did not significantly change over serial time points.

Survey	Overall	Public Hospital		Private Hospital	
	Total surveys sent (completed)	Total surveys sent	Completed	Total surveys sent	Completed
Baseline PROMs	490 (241 49.1)	385	155 (40.0)	105	86 (77.5)
3-month PROMs		152	116 (76.3)	86	67 (77.9)
6-month PROMs		132	84 (63.6)	79	56 (70.9)
9-month PROMs*		119	46 (38.7)	67	32 (47.8)
Baseline PREMs	490 (238 48.6)	385	158 (41.0)	105	80 (76.2)
9-month PREMs*		151	85 (56.3)	82	48 (58.5)

Conclusion

Our study showed that the collection of PROMs/PREMs via a lung cancer registry is feasible. The positive association of HRQL assessment at a single timepoint in the first few months after a lung cancer diagnosis in patients receiving guideline concordant treatment, offers support to using HRQL as a measure for future quality improvement initiatives by the lung cancer registry. PREMs are clearly relevant as supplementary direct measures of patient-valued treatment quality, and should also be included in future quality improvement initiatives.

References

Smith S, Brand M, Harden S, Briggs L, Leigh L, Brims F, et al. Development of an Australia and New Zealand Lung Cancer Clinical Quality Registry: a protocol paper. *BMJ Open*. 2022;12(8):e060907.