Development of a Quality Measures Tool for the Utilization of Tyrosine Kinase Inhibitors in Non-small Cell Lung Cancer: An Integrated Specialty Pharmacy Initiative

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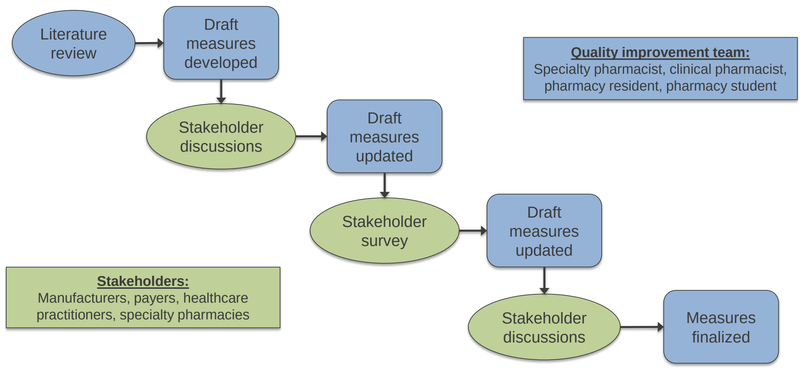
BACKGROUND

- Non-small cell lung cancer (NSCLC) is the most common type of lung cancer and possesses a 5-year survival rate of 23%.[1]
- Tyrosine kinase inhibitors (TKIs), indicated for NSCLC, improve outcomes compared to standard platinum chemotherapy.[2]
- Given TKI costs, potential adverse effects, and potential clinical benefit, ensuring appropriate utilization of these agents is necessary.
- The purpose of this initiative was to develop quality measures for the utilization of TKIs in NSCLC by identifying key components of quality care and understanding the perspectives of key stakeholders.

METHODS

- Single-center quality improvement project undertaken from August 2018 to March 2019 at Vanderbilt Specialty Pharmacy.
- Internal and external stakeholders were identified to assist in measure development and provide proposed measure feedback.
- A feedback survey was created in REDCap[3] and distributed to 43 stakeholders.

Figure 1: Measurement Development Process



RESULTS

Quality Measures

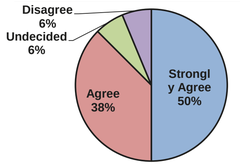
Pre-treatment assessment	***Clinical Documentation:***
	▪ Documentation of genetic mutation, disease staging and burden, previous therapies received, and baseline labs. ✓ Baseline labs should include complete blood count (CBC) and comprehensive metabolic panel (CMP). Other testing may include electrocardiogram (EKG), diagnostic testing, and labs as required per drug package insert.
	Pharmacist consultation prior to initial drug dispensing:
	▪ Provision of patient disease and drug education, including but not limited to: ✓ Review of medication dosing and administration. ✓ Review of all applicable drug-drug interactions. ✓ Review potential adverse drug reactions (ADRs) and proper management. ✓ Review pregnancy, lactation, and contraception status. ✓ Review handling and storage of hazardous medication. ▪ Documentation of patient understanding of drug and disease education provided. ▪ Navigation and resolution of medication access barriers.
On-treatment assessment	***Initial assessment within 30 days of treatment initiation followed by a second assessment between 30 and 60 days of initiation. Assessments should include:***
	▪ Pharmacist interactive consultation (phone call/clinic visit) to assess: ✓ Patient-reported medication adherence ✓ Patient-reported ADRs ✓ Patient-reported symptoms ▪ Documentation of repeat labs including CBC and CMP. ▪ Assessment of ADRs using Common Terminology Criteria for Adverse Events (CTCAE). ▪ Management of ADRs such as nausea, skin toxicity, and gastrointestinal toxicity. ▪ Evaluation for clinical factors warranting dose reduction. ▪ When applicable, coordination with healthcare team to manage ADRs with supportive therapy and discuss appropriate dose reduction or change in therapy. If applicable, reporting of ADRs to Food and Drug Administration and/or drug manufacturer.
	Subsequent assessment every 3 months thereafter while on-treatment:
	▪ Patient-reported medication adherence. ▪ Evaluation for disease progression. ▪ Assessment and management of potential ADRs. ▪ Evaluation for clinical factors (abnormal labs and ADRs) warranting dose reduction.
Longitudinal assessment	▪ Evaluation of appropriateness of continued therapy based on clinical factors. ▪ Review of overall healthcare resource utilization including: ✓ Hospitalizations, emergency department visits, urgent care visits, after-hour calls, and unscheduled clinic visits.
	▪ Medication persistence: ✓ Documentation of duration from treatment initiation to discontinuation. ✓ Documentation of a reason if patient has discontinued or suspended therapy.
	▪ Patient satisfaction: ✓ Review of patient satisfaction with specialty pharmacy (such as patient education, time to delivery, and responsiveness and accessibility of pharmacy team).

Survey Results

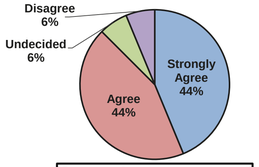
Survey Respondents	(n=16*)
Specialty Pharmacy	7
Pharmaceutical Industry	4
Prescriber/Healthcare Practitioner	4
Insurer/Pharmacy Benefits Manager	1

*Response rate - 35.5% (16/43)

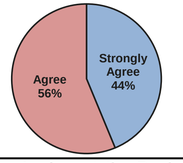
Developing Quality Measures for TKIs in NSCLC is Important



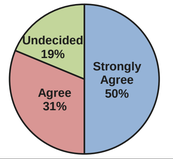
Proposed Measures Accurately Assess Quality



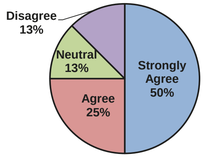
Proposed Measures are Relevant to TKIs in NSCLC



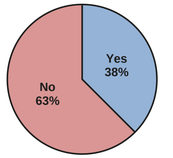
Proposed Measures are Feasible to Collect



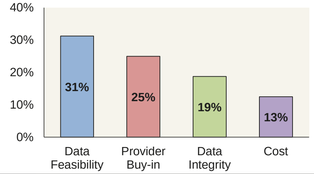
Support Implementation of these Quality Measures



Foresee Implementation Barriers of these Measures at your Institution



Anticipated Barriers to Implementation at your Institution



CONCLUSIONS

- This proposed set of quality provides a foundation for measuring quality of TKI therapy in NSCLC. Next steps involve implementing these measures to evaluate their impact on health outcomes.

REFERENCES

1. American Cancer Society. Cancer Facts & Figures 2019. Atlanta: American Cancer Society; 2019. https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2019/cancer-facts-and-figures-2019.pdf.
2. Rolfo C, Passiglia F, Ostrowski M, et al. Improvement in lung cancer outcomes with targeted therapies: an update for family physicians. J Am Board Fam Med. 2015;28(1):124-133.
3. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support, J Biomed Inform. 2009 Apr;42(2):377-81.

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