CONQUEST
Quality Improvement Initiative for Achieving Excellence in Standards for COPD Care

Global QI Operational Protocol for CONQUEST

QI: Quality Improvement

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CONQUEST: A Quality Improvement Program for Defining and Optimizing Standards of Care for Modifiable High-Risk COPD Patients

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Patient Related Outcome Measures 2022:13 Pages 53—68

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The CONQUEST Quality Improvement Programme

- Background & Key Features of the Programme

Introduction & Background: The CONQUEST Quality Improvement Programme (QIP)

Patient Related Outcome Measures

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REVIEW

CONQUEST: A Quality Improvement Program for Defining and Optimizing Standards of Care for Modifiable High-Risk COPD Patients

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Abstract: The COllaboration on QUality improvement initiative for achieving Excellence in STandards of COPD care (CONQUEST) aims to improve the quality of COPD care in primary care. The CONQUEST target population includes patients diagnosed with COPD, and those undiagnosed but with COPD-like exacerbations, who are at high but modifiable risk of COPD exacerbations, increased morbidity, and mortality. Timely diagnosis and optimized management to reduce these risks is vital. There is a need for a quality improvement program (QIP) that enables long-term improvement of patient clinical outcomes via integration of the program into routine clinical care. Core to the CONQUEST program is the adoption of four specifically designed, globally applicable, and expert-agreed quality standards (QS) for modifiable high-risk COPD patients. Translation of the QS into clinical practice, and implementation of the QIP, is guided by the CONQUEST global operational protocol provided to sites meeting the minimum healthcare system requirements. Initial analyses of current practices are conducted to generate baseline assessments of need within healthcare systems and sites looking to implement the QIP. Implementation is supported by the provision of CONQUEST resources and tools, such as clinical decision support, that promote prompt identification and treatment of patients. Utilization of electronic medical record (EMR) and patient-reported data are integral components of the QIP. Regular, automated collection and analysis of data, combined with a cyclical review of the implementation process, will be conducted for long-term, continuous improvement and health impact evaluation. The CONQUEST QIP will be an important resource in the identification and management of patients with modifiable high-risk COPD. Embedding the CONQUEST QS into routine clinical practice with regular evaluation and feedback will result in long-term quality of care improvement.

Keywords: patient-reported outcome, patient-reported information, clinical decision support, primary care, quality standards, integrated care

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- **Timely diagnosis and optimised COPD management** are key to **reducing exacerbation and cardiac risk**
- The CONQUEST QIP fulfills a **need** to **integrate management optimisation** for undiagnosed and diagnosed COPD patients **into routine clinical care**

- CONQUEST QIP **target populations** include patients diagnosed with COPD, and those undiagnosed but with COPD-like exacerbations, who are at a **higher but modifiable risk of COPD exacerbations, cardiac events and increased morbidity**
- This **article details key features of the programme** from development through to implementation and evaluation

The Need for the CONQUEST QI Programme and Key Programme Elements

Rationale

COPD: a leading cause of death worldwide

Consequences of delayed diagnosis or treatment

Impact of recurrent exacerbations

- lung function decline
- increased CV events
- steroid related adverse events

challenges of sustainable quality improvement (QI)

need for integrated program supported by patient-reported information

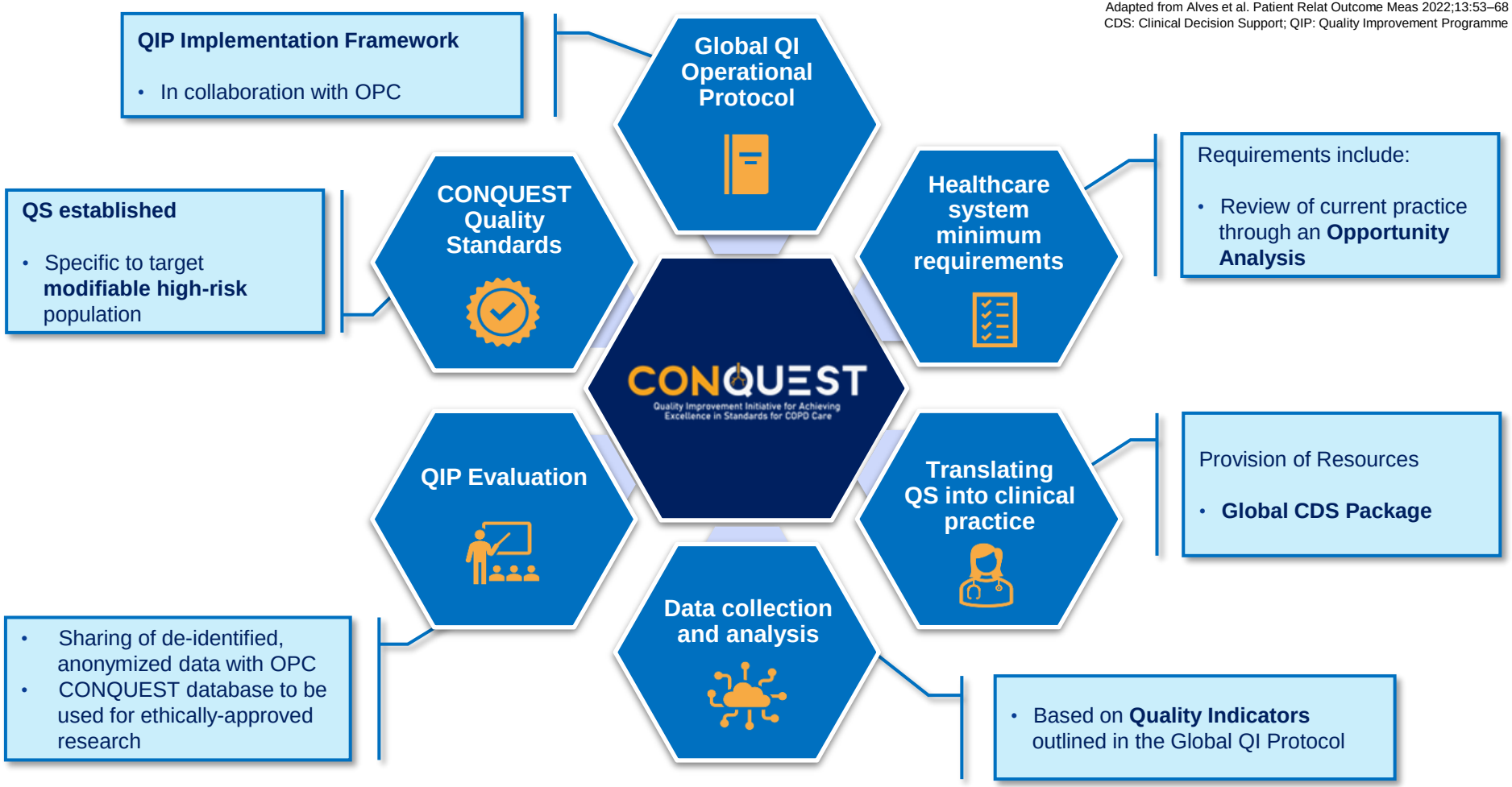
CONQUEST
Quality Improvement Initiative for Achieving Excellence in Standards for COPD Care

- Global Operational Protocol
- Healthcare system minimum requirements
- Translating QS into clinical practice
- Data collection and analysis
- Programme evaluation and monitoring
- CONQUEST Quality Standards (QS)

CV: Cardiovascular; QS: Quality Standards Adapted from Alves et al. Patient Relat Outcome Meas 2022;13:53–68

Key Features of the CONQUEST QI Programme

Adapted from Alves et al. Patient Relat Outcome Meas 2022;13:53–68
CDS: Clinical Decision Support; QIP: Quality Improvement Programme



The CONQUEST Quality Improvement Programme

- The CONQUEST patient population and associated Quality Standards

Target Populations : Modifiable High-risk (MHR) Patients

Aged ≥40 with ≥ 2 moderate or ≥ 1 severe exacerbations of COPD, or potential exacerbations of COPD, in the last 24 months (with at least one exacerbation occurring in the last 12 months)*

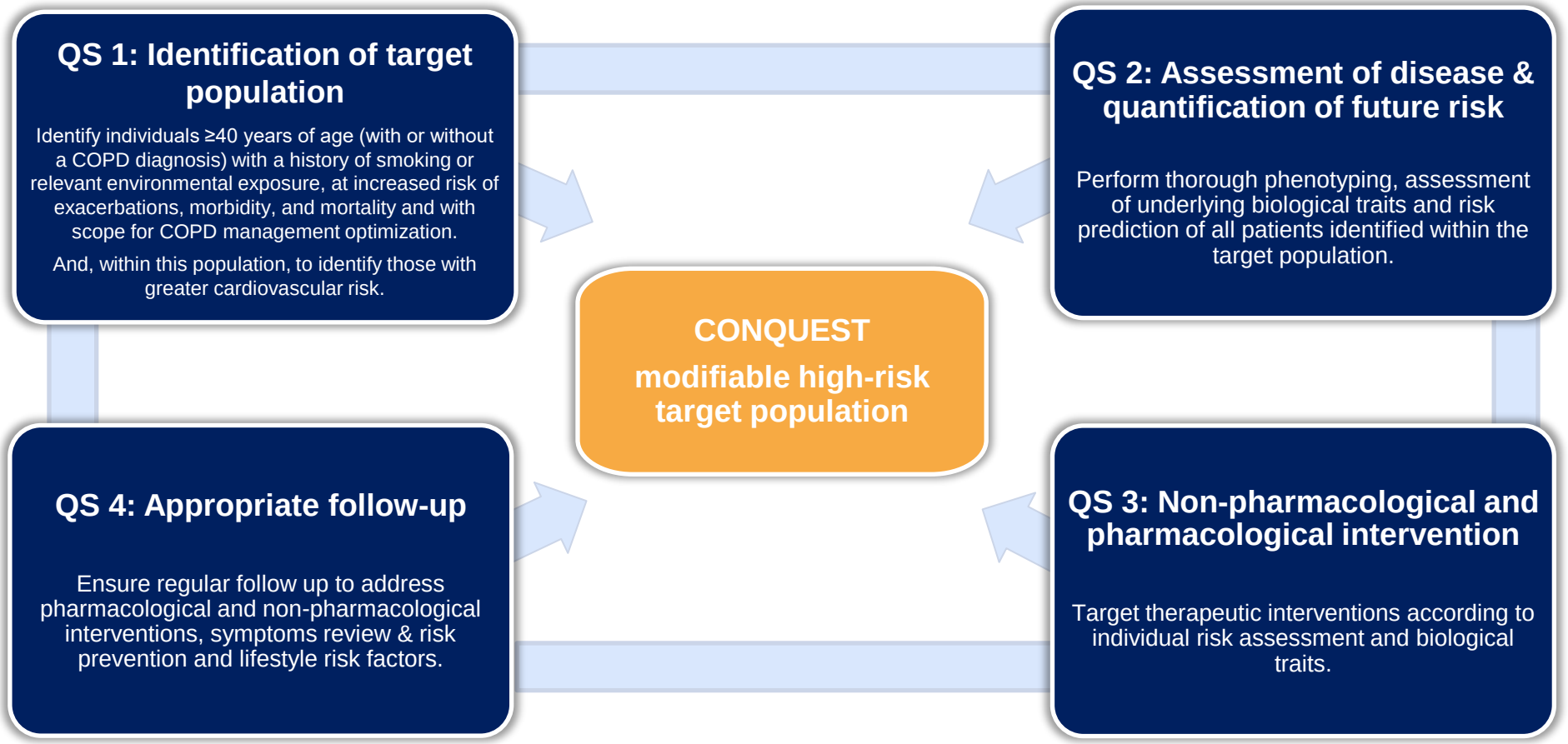
*AND whose medical record data indicates clearly that there is scope for management optimisation.

Undiagnosed patients with **potential** MHR COPD

Diagnosed MHR COPD patients

Adapted from Alves et al. Patient Related Outcome Measures 2022: 13 53-68.

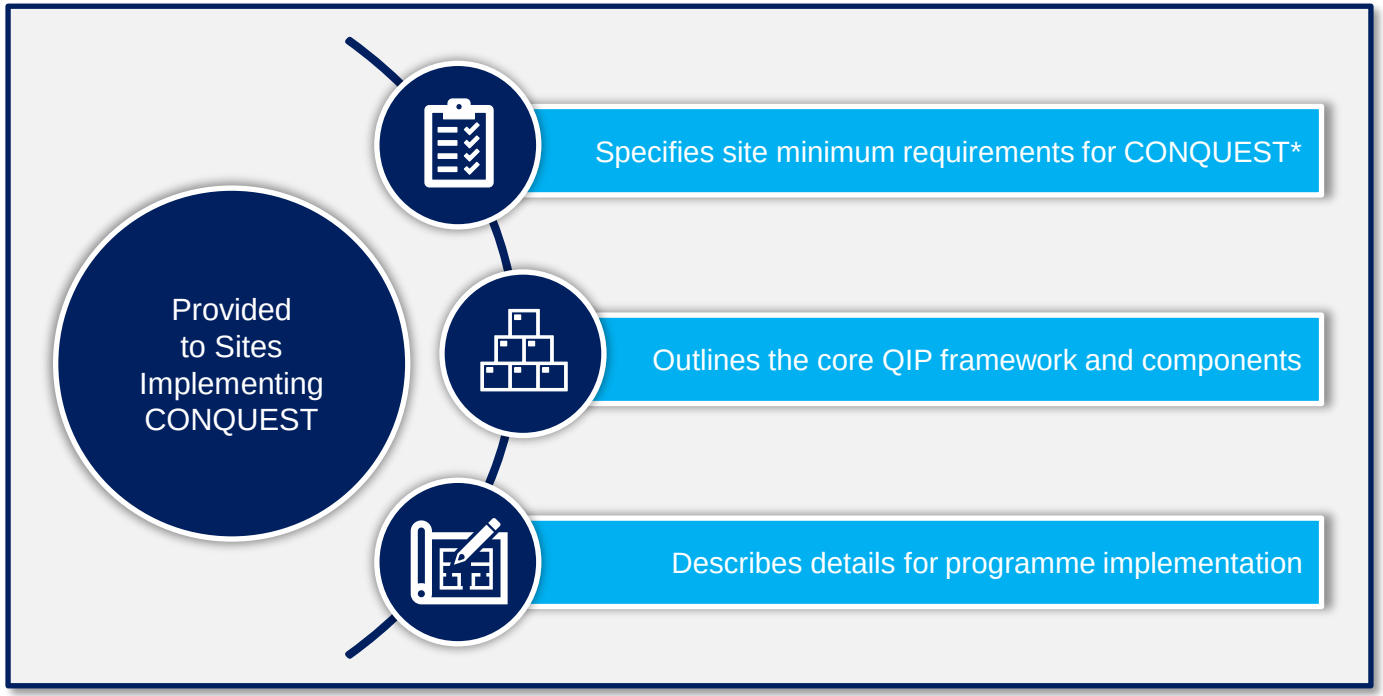
CONQUEST Quality Standards (QS)^: A framework for the CONQUEST Quality Improvement Programme



^specific to modifiable high-risk target population

Adapted from Alves et al. Patient Related Outcome Measures 2022: 13 53-68.

Creating a Global Operational Protocol for the CONQUEST Quality Improvement Programme



Protocol reviewed regularly to incorporate site feedback, and retain relevance in primary care as new COPD research emerges and guidelines evolve

*Applicable to sites implementing CONQUEST as part of the PREVAIL Cluster Randomised Trial. QIP, quality improvement program. Adapted from Alves et al. Patient Related Outcome Measures 2022: 13 53-68.

Summary of Minimum Requirements* for CONQUEST Programme Delivery

CONQUEST
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Infrastructure & Resources

- ✓ Implementation team
- ✓ EHR system to support automated processes
- ✓ Capacity for patient assessment

Clinical Activity

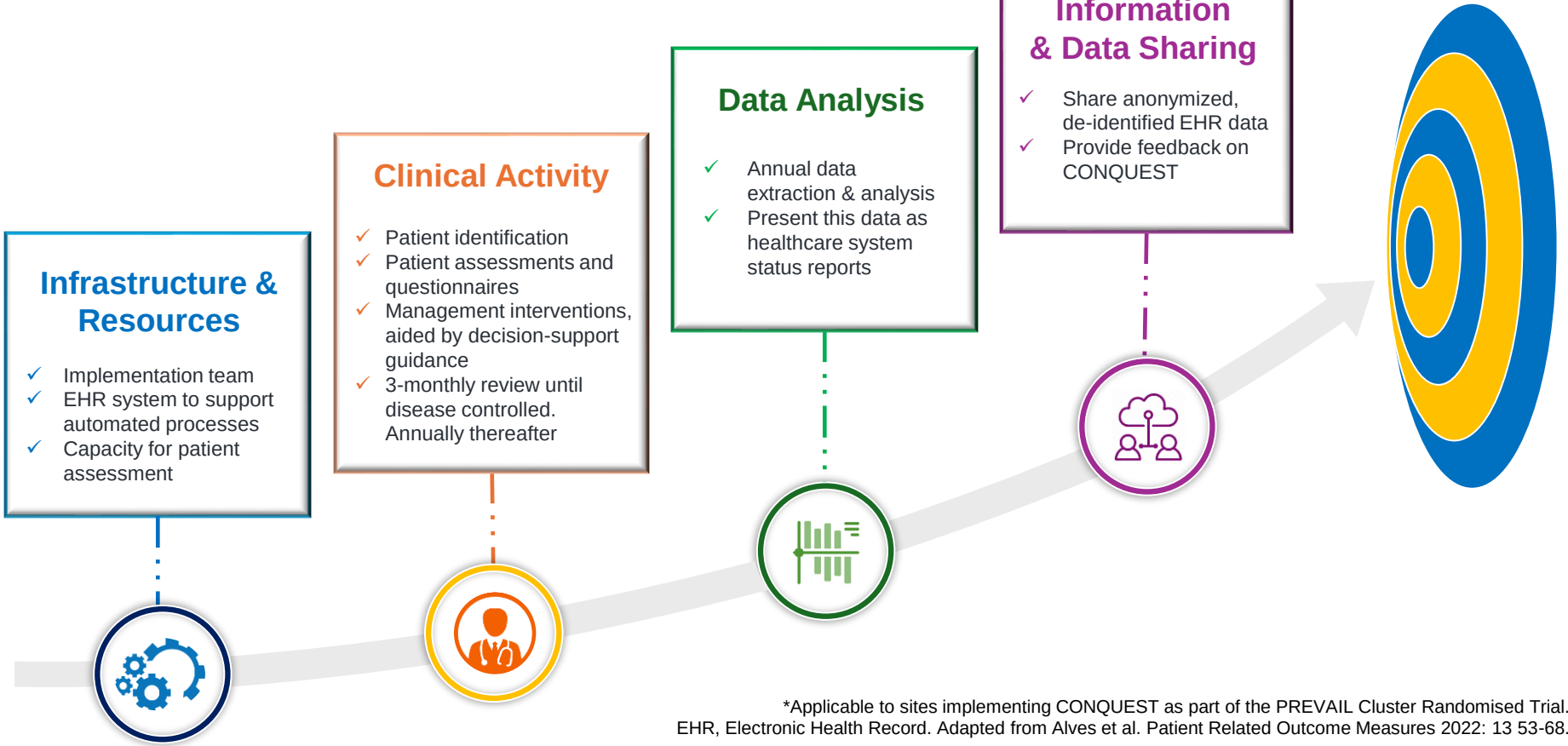
- ✓ Patient identification
- ✓ Patient assessments and questionnaires
- ✓ Management interventions, aided by decision-support guidance
- ✓ 3-monthly review until disease controlled. Annually thereafter

Data Analysis

- ✓ Annual data extraction & analysis
- ✓ Present this data as healthcare system status reports

Information & Data Sharing

- ✓ Share anonymized, de-identified EHR data
- ✓ Provide feedback on CONQUEST

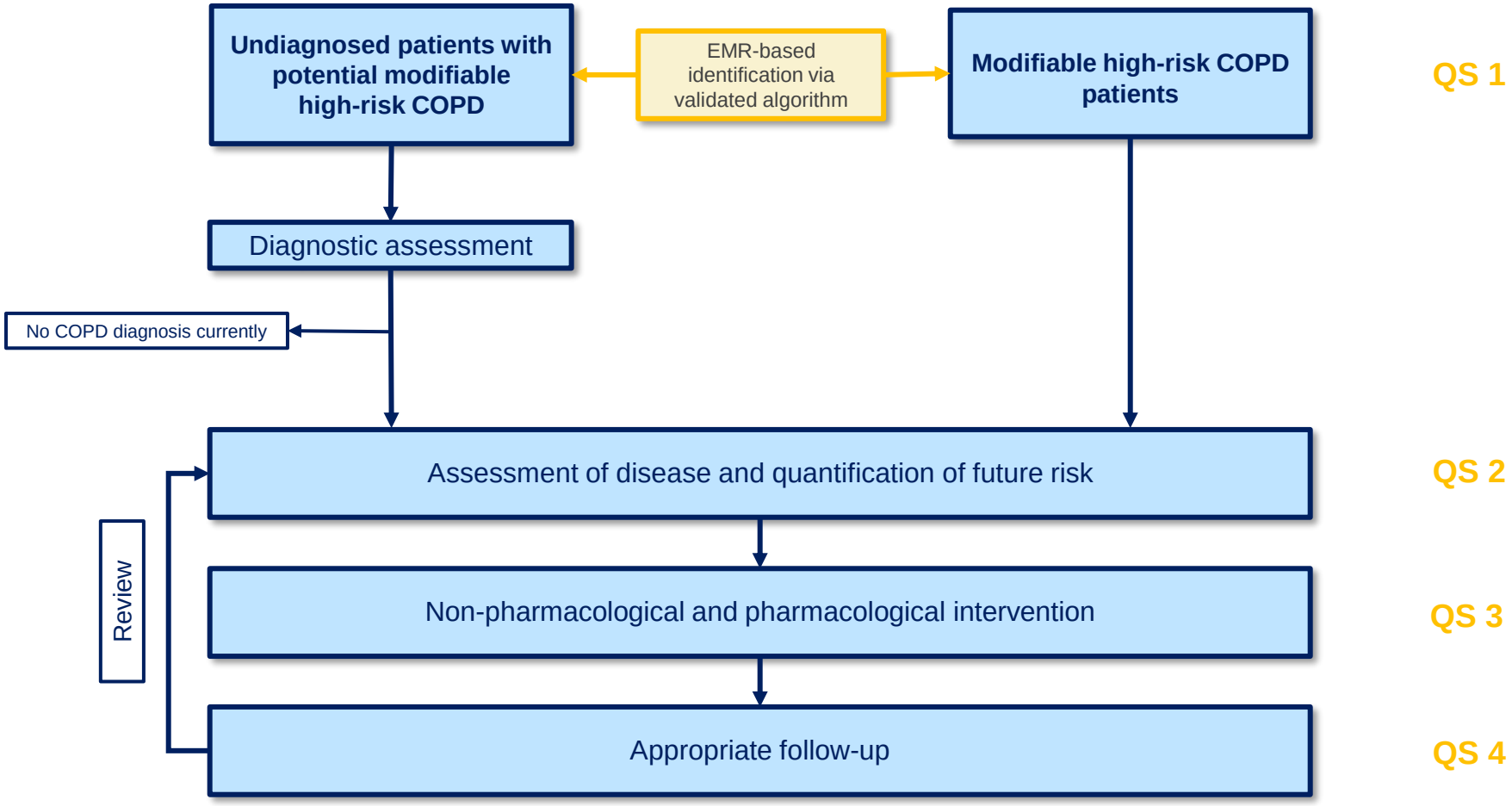


*Applicable to sites implementing CONQUEST as part of the PREVAIL Cluster Randomised Trial.
EHR, Electronic Health Record. Adapted from Alves et al. Patient Related Outcome Measures 2022: 13 53-68.

Implementing the CONQUEST QI Programme

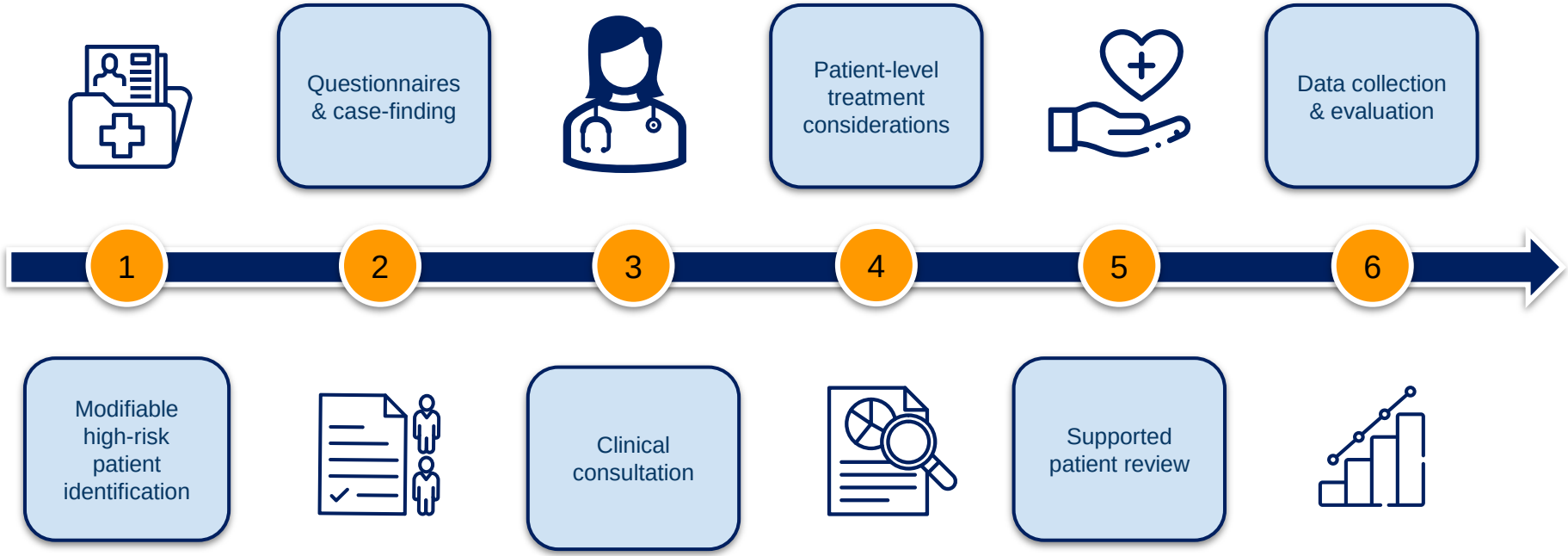
- Translating Quality Standards into Clinical Practice
- Patient Reported Outcomes and Information
- Data collection and analysis

CONQUEST Quality Standards (QS) and Their Role in Guiding QI Programme Activities



EMR: Electronic Medical Records; QS: Quality Standards; QIP: Quality Improvement Program. Adapted from Alves et al. Patient Related Outcome Measures 2022: 13 53-68.

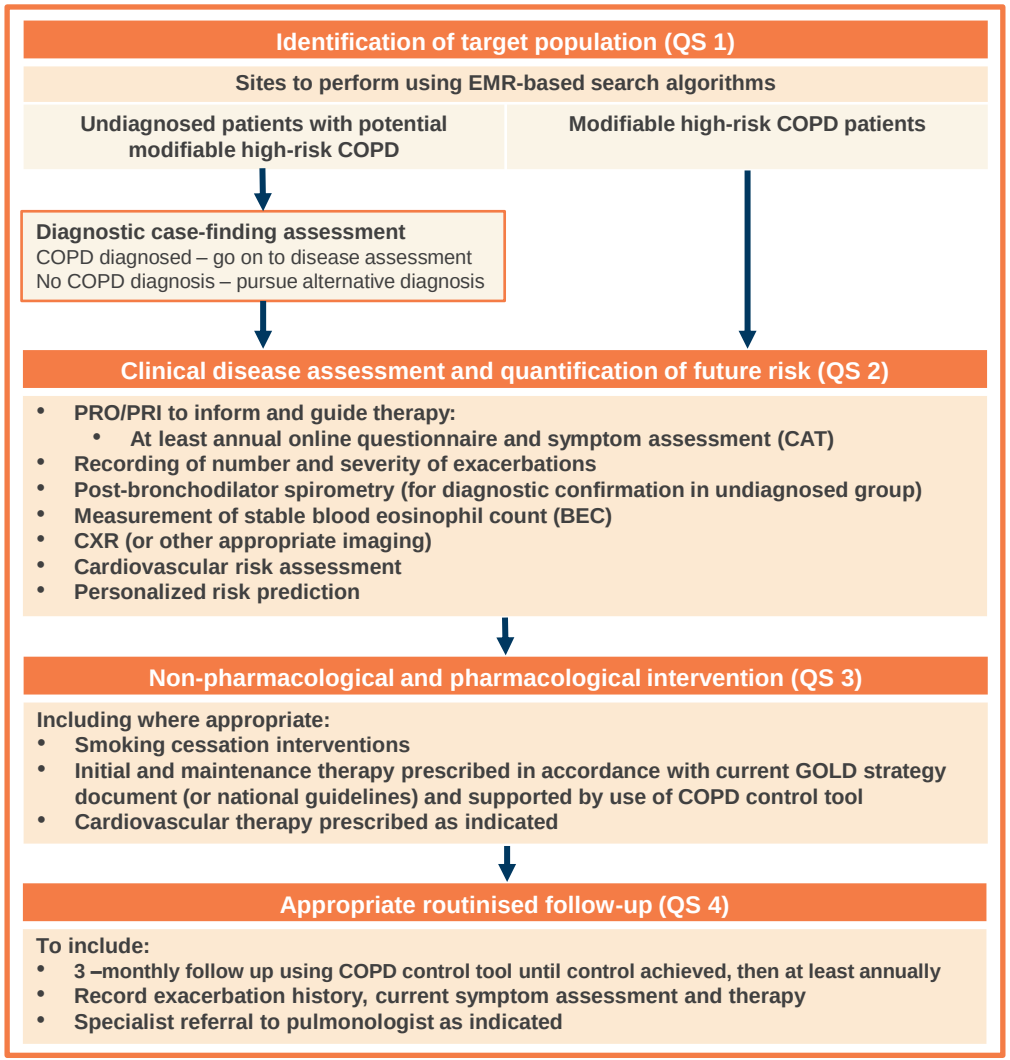
Embedding CONQUEST Quality Standards into Clinical Practice: Practical CONQUEST QIP Implementation steps*



* Supported by CONQUEST Global Operational Protocol and Clinical Decision Support. QIP: quality improvement program. Adapted from Alves et al. Patient Related Outcome Measures 2022: 13 53-68.

Translation of CONQUEST Quality Standards (QS) into Clinical Practice :

Core clinical activities



Adapted from Alves et al. Patient Related Outcome Measures 2022: 13 53-68. BEC, blood eosinophil count; CDS, Clinical Decision Support; CAT, COPD Assessment Test; CXR, Chest X-Ray; EMR, Electronic Medical Record; GOLD, Global Initiative for Chronic Obstructive Lung Disease; PRI, patient-reported information; PRO, patient-reported outcomes; QIP, quality improvement program; QS, quality standards.

Translation of CONQUEST Quality Standards (QS) into Clinical Practice :

Core clinical activities Aided by Clinical Decision Support

Clinical Decision Support (CDS)

Management considerations

- Based on COPD guidelines and expert knowledge
- Prompts to consider COPD diagnosis, further disease assessment, initial and maintenance medication, non-pharmacological interventions and review
- Based on input from EMR data, PRO/PRI, and information collected during consultations

Identification of target population (QS 1)

Sites to perform using EMR-based search algorithms

- Undiagnosed patients with potential modifiable high-risk COPD
- Modifiable high-risk COPD patients

Diagnostic case-finding assessment
COPD diagnosed – go on to disease assessment
No COPD diagnosis – pursue alternative diagnosis

Clinical disease assessment and quantification of future risk (QS 2)

- PRO/PRI to inform and guide therapy:
  - At least annual online questionnaire and symptom assessment (CAT)
- Recording of number and severity of exacerbations
- Post-bronchodilator spirometry (for diagnostic confirmation in undiagnosed group)
- Measurement of stable blood eosinophil count (BEC)
- CXR (or other appropriate imaging)
- Cardiovascular risk assessment
- Personalized risk prediction

Non-pharmacological and pharmacological intervention (QS 3)

Including where appropriate:

- Smoking cessation interventions
- Initial and maintenance therapy prescribed in accordance with current GOLD strategy document (or national guidelines) and supported by use of COPD control tool
- Cardiovascular therapy prescribed as indicated

Appropriate routinised follow-up (QS 4)

To include:

- 3 –monthly follow up using COPD control tool until control achieved, then at least annually
- Record exacerbation history, current symptom assessment and therapy
- Specialist referral to pulmonologist as indicated

Adapted from Alves et al. Patient Related Outcome Measures 2022: 13 53-68. BEC, blood eosinophil count; CDS, Clinical Decision Support; CAT, COPD Assessment Test; CXR, Chest X-Ray; EMR, Electronic Medical Record; GOLD, Global Initiative for Chronic Obstructive Lung Disease; PRI, patient-reported information; PRO, patient-reported outcomes; QIP, quality improvement program; QS, quality standards.

Translation of CONQUEST Quality Standards into Clinical Practice :

Core Clinical Activities + CDS + Data collection and analysis of quality indicators

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Data Collection and Analysis

Collection of key quality indicators

- Quality indicators reflecting quality of care for each group of modifiable high-risk patients
- At QIP implementation and at least annually thereafter

Annual status report

- Based on collected quality indicator data
- Summarize the impact of CONQUEST implementation on practices and patients.
- Evaluate change since past data collection and highlight areas for further improvement

Adapted from Alves et al. Patient Related Outcome Measures 2022: 13 53-68. BEC, blood eosinophil count; CDS, Clinical Decision Support; CAT, COPD Assessment Test; CXR, Chest X-Ray; EMR, Electronic Medical Record; GOLD, Global Initiative for Chronic Obstructive Lung Disease; PRI, patient-reported information; PRO, patient-reported outcomes; QIP, quality improvement program; QS, quality standards.

Patient-reported Outcomes and Patient Reported Information in CONQUEST QIP

- Patient-reported data provide valuable information utilised:
  - in assessment of symptoms and current disease status
  - to guide therapy choice
- Questionnaires are used throughout the CONQUEST programme:
  - for initial case-finding in undiagnosed patients
  - at or before initial clinical consultations
  - in follow up after clinical consultations

Alves et al. Patient Related Outcome Measures 2022: 13 53-68.
QIP: Quality Improvement Programme

Table 2 CONQUEST Patient Questionnaire Domains and Instruments Utilized in Collection of Patient-Reported Outcomes and Information

Questionnaire Domain	Instrument	Comments/Rationale for Inclusion
Case-finding questions	CAPTURE questionnaire[63] and COPD diagnostic Questionnaire[64]	Only visible to those who do not have a COPD diagnosis Aims to identify those with a greater likelihood of COPD
Health status: **a) Symptoms (eg, breathlessness, cough, sputum production and appearance)** **b) Physical/daily activities** **c) Subjective perception**	a) mMRC Dyspnea scale, CAT, cough visual analogue scale, COPD control tool b) CAT, mMRC Dyspnea scale, COPD control tool c) COPD control tool	Assessment of health status and disease burden Helps guide therapy and management, eg, information used in GOLD medication algorithms Part of determining clinical impact and stability in the COPD control tool
Exacerbations: **Frequency, severity, and treatment**	CONQUEST Questionnaire and COPD control tool	Triangulation with EMR data - patient reporting of exacerbation frequency may differ from EMR record. Helps guide therapy and management decisions Informs individual steroid burden. Part of determining clinical stability in COPD control tool and risk of future exacerbations
Inhaler use, technique and adherence	CONQUEST questionnaire and COPD Control tool	Essential to ensure correct use of therapy Guides further management decisions Part of determining clinical impact in COPD control tool
Smoking status	CONQUEST questionnaire	To prompt smoking cessation advice/intervention
Goal setting and self-management	CONQUEST questionnaire	Encourage patient engagement and self-empowerment Information to correlate with EMR records, further detail on steroid and antibiotic use. Prompt creation or update of individual action plans where appropriate

Abbreviations: CAPTURE, COPD Assessment in Primary Care to Identify Undiagnosed Respiratory Disease and Exacerbation Risk; CAT, COPD Assessment Test; CONQUEST, COllaboratioN on QUality improvement initiative for achieving Excellence in STandards of COPD care; COPD, chronic obstructive pulmonary disease; EMR, electronic medical record; GOLD, Global Initiative for Chronic Obstructive Lung Disease; mMRC, modified Medical Research Council.

Evaluating the CONQUEST QI Programme

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Evaluating the CONQUEST Quality Improvement Program

Cyclical review of implementation process and outcomes

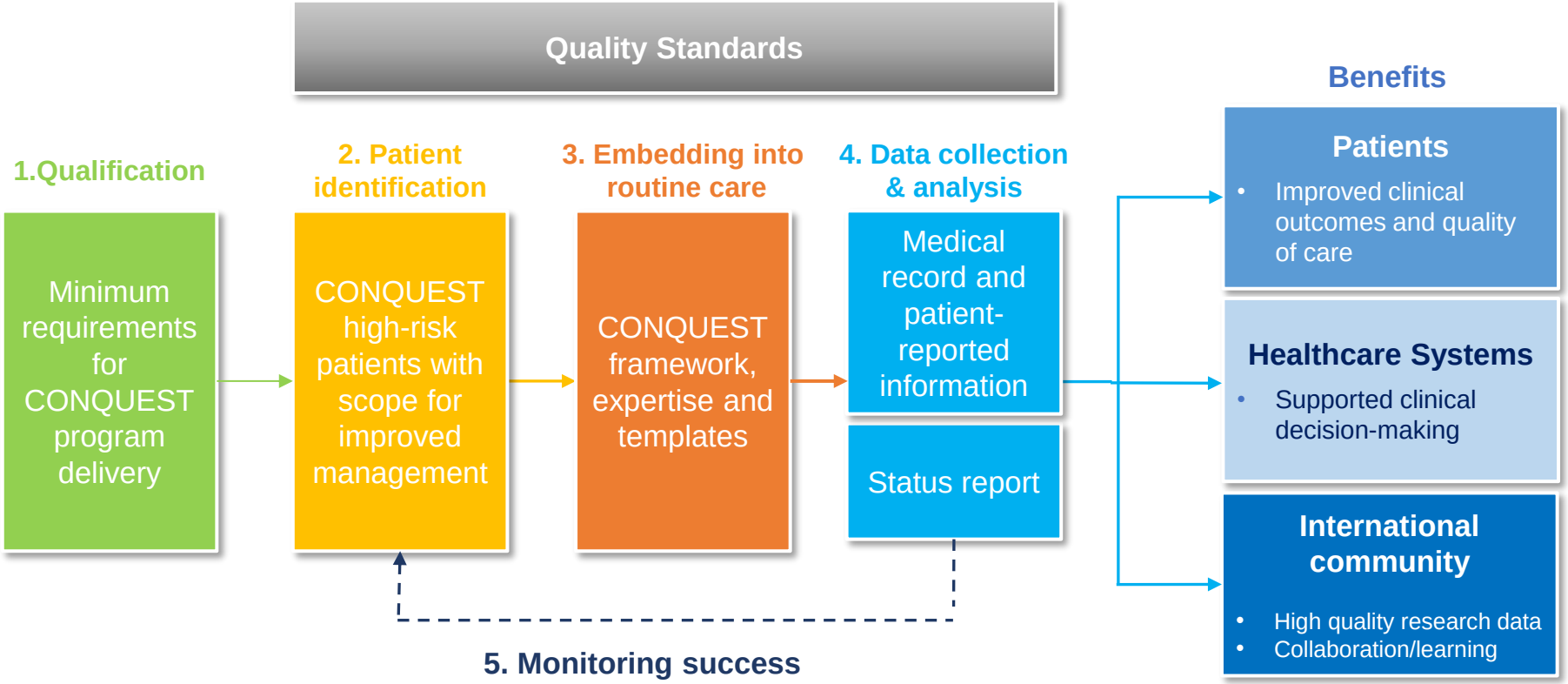
Annual QI status reports utilising quality indicator data to:

- summarise impact on long-term change in practice
- highlight areas for improvement

Formal evaluation through the **PREVAIL cluster-randomised trials**

Monitoring Progress, Sustaining improvement, and Programme Evaluation

Monitoring Success of the CONQUEST QI Programme & The Benefits of Participation



Conclusions

Conclusions & Takeaways from the Protocol Paper

Patient Related Outcome Measures

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REVIEW

CONQUEST: A Quality Improvement Program for Defining and Optimizing Standards of Care for Modifiable High-Risk COPD Patients

- CONQUEST: A unique initiative to improve COPD care, focussing on those at greatest cardiopulmonary risk
- The protocol provides a framework for the translation of CONQUEST quality standards into routine clinical practice
- Implementation is supported by patient reported questionnaire data and clinical decision support
- Cyclical review and programme monitoring: a commitment to long-term implementation and improvement in clinical outcomes

CONQUEST
Quality Improvement Initiative for Achieving Excellence in Standards for COPD Care

For More Information on the Manuscript Summarising the CONQUEST Operational Protocol

- View the full article here: CONQUEST: a QIP for Patients with Modifiable High-Risk COPD

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