An Stiúrthóireacht um Ardchaighdeáin agus Sábháilteacht Othar
Oifig an Phríomhoifigigh Cliniciúil

National Quality and Patient Safety Directorate
Office of the Chief Clinical Officer

Quality Improvement

Terms and Concepts

Used in the Irish Healthcare Setting

Version History

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Introduction

This document is a collection of common terms and concepts used in the fields of quality improvement and improvement science in the Irish healthcare setting. The document provides the reader with broad explanations of terms and concepts used in quality improvement work and provides links to additional information and resources. The terms, concepts and explanations have been collated from a wide variety of national and international resource into one document. A resource section has been provided as an appendix to this document to support in-depth understanding of how these terms and concepts relate to improvement in practice. This is not an exhaustive list and will be updated regularly.

This resource has been developed by the National Quality and Patient Safety Directorate.

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Term	Explanation	Links to Additional Resources
Aim or Aim Statement	An aim statement is a written documentation of what you want to achieve from your improvement project and a timeframe for achieving it. A **SMAR**T Aim is : **Specific:** what is the one thing you are trying to achieve? (The 'what') **Measurable:** How will you know you've reached your goal? (The 'how much') **Actionable and Achievable**: is this actually possible? Could making it smaller make it more possible? **Relevant:** why is this important to stakeholders and the organisation? **Timely:** When will this be accomplished by? (The 'when') **Ref: 17, 18.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/nat-qi-tool-2-stakeholder-map.pdf https://www.england.nhs.uk/wp-content/uploads/2021/03/qsir-developing-your-aims-statement.pdf https://qilothian.scot.nhs.uk/aim-statements-1 https://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementTipsforSettingAims.aspx
Care Pathway	An agreed and explicit route that an individual takes through health and social care services. Agreements between the various providers involved will typically cover the type of care and treatment, which professional will be involved and their level of skills, and where treatment or care will take place. **Ref: 22.**	https://www.tcd.ie/medicine/public_health_primary_care/assets/pdf/Integrated-Care-Policy-LR.pdf
Cause and Effect Fishbone Diagram	A cause and effect diagram is an organisational tool that helps teams explore and display the many causes contributing to a certain effect or outcome. It will show the relationship between causes and their effects, and helps to identify areas for improvement. The Fishbone diagram gets its name from the diagram's **design**, which looks very much like the skeleton of a fish. **Ref: 15.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/nat-qi-tool-8-cause-and-effect-fishbone-diagram.pdf
Change Idea	An action-oriented, specific idea for changing a process. Change ideas can be tested to determine whether they result in improvements in the local environment. **Ref**: 11.	https://www.hse.ie/eng/staff/resources/changeguide/resources/change-guide.pdf
Collaborative	An improvement collaborative facilitates multi-disciplinary teams to come together with a shared aim to improve an aspect of care or system outcomes. It involves: • Team based learning sessions, • Identification and testing of small changes for improvement, and • Continuous sharing of ideas, learning and best practice between participants. The sustainable collaborative approach is based on: • The Framework for Improving Quality (HSE, 2016) and the Institute for Health Improvement (IHI) (2003) Breakthrough Series Collaborative Model. **Ref: 12.**	https://www.hse.ie/eng/about/who/nqpsd/patient-safety-programme/pressure-ulcers-to-zero-putz-.html https://www.hse.ie/eng/about/who/nqpsd/patient-safety-programme/the-quality-improvement-collaborative-participant-handbook.pdf

Term	Explanation	Links to Additional Resources
Stakeholder Communication Plan	Identifies how best to work with key stakeholders and ensures a consistent approach to listening and responding to emerging issues, keeping people up to date on what is happening, receiving and acting on feedback. Communication is the core foundation of good change management and improvement work. **Ref: 11, 14.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/nat-qi-tool-5-communications-plan-and-actions.pdf https://www.hse.ie/eng/staff/resources/changeguide/resources/change-guide.pdf
Continuous quality improvement	A management approach that strives for ongoing and constant improvement (and study) of the processes of providing healthcare services. It concentrates on improving systems rather than focusing on individuals. **Ref: 20**.	https://www.youtube.com/watch?v=jq52ZjMzqyI
Co-production	Co-production of health is defined as 'the interdependent work of service users and professionals who are creating, designing, producing, delivering, assessing, and evaluating the relationships and actions that contribute to the health of individuals and populations'. It can assume many forms and include multiple stakeholders in pursuit of continuous improvement. **Ref: 3, 21.**	http://www.qi.elft.nhs.uk/wp-content/uploads/2017/01/what_is_co-production.pdf https://academic.oup.com/intqhc/article/33/Supplement_2/ii26/6445917
Data Collection Plan	Is a specific plan of what you want to measure, how you will collect the data (e.g. survey, observation, interview) how often you will collect the data, who is responsible for collecting the data and who you will collect the data from. **Ref: 8, 11.**	https://www.hse.ie/eng/about/who/nqpsd/qps-intelligence/qi-self-evaluation-guide.pdf
Deming's system of profound knowledge	A management theory that consists of four components or 'lenses' through which to assess a problem: 1) Appreciation of a system as a network of interdependent components; 2) Understanding variation and its causes; 3) Psychology of change; 4) Theory of knowledge. **Ref: 19.**	https://qi.elft.nhs.uk/resource/demings-system-of-profound-knowledge-1/#:~:text=The%20System%20of%20Profound%20Knowledge,aim%20for%20everybody%20to%20win.
Driver Diagram	The Driver Diagram predicts the changes required to accomplish a given aim or outcome. It shows the links between the improvement aim (describing the desired result), the things that must change to achieve that aim and specific ideas on how to make those changes. **Ref: 15.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/nat-qi-tool-3-aim-statement-and-driver-diagram.pdf
Diffusion of Innovation	The Diffusion of Innovation Theory (E.M. Rogers in 1962) describes the innovation adoption curve and reminds us that all groups have people in each category (early adopter, early majority, late majority, laggards,) which will influence the strategies we use to grow support for our improvement efforts. **Ref; 17, 19.**	https://qi.elft.nhs.uk/wp-content/uploads/2015/05/the-spread-and-sustainability-ofquality-improvement-in-healthcare-pdf.pdf

Term	Explanation	Links to Additional Resources
Early Adopter	The Early adopter is someone who is comfortable with embracing change ,who brings in new ideas, tries them out , and uses experiences they have had with positive results, to influence others to adopt the successful changes. **Ref: 17, 19.**	https://arc-nwc.nihr.ac.uk/wp-content/uploads/2021/03/19-IMP-RESOURCE-KIS-Glossary-2018.pdf http://www.ihi.org/resources/Pages/Tools/GlossaryImprovementTerms.aspx
Early Majority	The Early Majority are people who will adopt a change only after it is tested by an early adopter. They typically need to see evidence that the innovation works before they are willing to adopt it. **Ref: 17, 19.**	
Late Adopters	The Late Adopters have reservations about change, and will only adopt an innovation after it has been tried by the majority and shown to be successful. **Ref: 17, 19.**	
Laggards	The Laggard is more resistant and typically less engaged with change. It is important to remember that the same person can be an early adopter of one change and a laggard when faced with another. **Ref: 17, 19.**	
Framework for Improving Quality in our Health Service	This resource was developed in 2016 to influence and guide our thinking, planning and delivery of care in our services. It is firmly orientated towards quality, safety and to improve patient experience and outcomes. The Framework is comprised of six drivers for improving quality that when used together will support and sustain continuous improvement. **Ref: 7.**	https://www.hse.ie/eng/about/who/qid/framework-for-quality-improvement/framework-for-improving-quality-2016.pdf
Five Whys	Five whys (5 whys) Is a problem-solving technique often used in healthcare and is based on repeatedly asking 'why?' when looking at a problem. Anecdotally, five iterations are needed to uncover the underlying cause of a problem. Also see root cause analysis. **Ref: 15.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/nat-qi-tool-9-5-whys-%E2%80%93-finding-the-root-cause.pdf
Governance for Quality Improvement	This is about understanding the structures, processes, oversight and accountability that enables improvement work. **Ref: 14.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/full-document.pdf
High reliability organisations (HROs)	Organisations that are able to manage and sustain a near error-free performance in an environment where accidents can be expected due to risk factors and complexity. **Ref: 19.**	https://www.ihi.org/resources/Pages/Publications/Is-Your-Organization-Highly-Reliable.aspx
Human Factors	The environmental, organisational and job factors, and human and individual characteristics which influence behaviour at work, in a way which can affect health and safety. **Ref: 6.**	https://www.hse.ie/eng/about/who/nqpsd/qps-incident-management/incident-management/a-guide-to-human-factors-in-healthcare-2021.pdf
Implementation	Taking a change and making it a permanent part of the system. A change may be tested first in one area and then implemented throughout the organisation. **Ref: 17.**	https://www.hse.ie/eng/staff/resources/changeguide/resources/change-guide.pdf

Term	Explanation	Links to Additional Resources
Key Changes	The list of essential process changes that will help lead to breakthrough improvement. **Ref: 17.**	
Leadership for Quality Improvement	This is about understanding the importance of taking responsibility to create the conditions that enables others to engage in improvement work. **Ref: 14.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/full-document.pdf
Measurement for Improvement	A focused, reportable unit that will help a team monitor its progress towards achieving its aim. Most quality improvement efforts have a list of required key measures, as well as additional key measures that may be helpful in achieving desired results. Improvement measures can be divided into three classifications: outcome, process, and balancing measures. Within these three classifications, measures may be clinical, operational, or financial. Measurement for improvement allows us to: •Identify opportunities for improvement •Demonstrate when a change has resulted in an improvement. **Ref: 8, 14.**	https://www.hse.ie/eng/about/who/nqpsd/qps-intelligence/qps-intelligence-resources/measurement-for-improvement-resources.html https://www.hse.ie/eng/about/who/nqpsd/qps-education/full-document.pdf
Measurement Baseline	Measurement of a system prior to the introduction of a change or intervention. **Ref: 8, 14.**	
Outcome Measure	Relates to how the activity within the system is performing on patient outcomes. **Ref: 8, 14.**	https://www.hse.ie/eng/about/who/nqpsd/patient-safety-programme/nat-qi-tool-10-measurement-plan.pdf
Process Measure	Relates to how parts or steps of a system are working. **Ref: 8, 14.**	
Balancing Measure	Relates to how changes in one part of a system are affecting another part of the system, such as monitoring a reduction of hospital lengths of stay should be balanced by measurement of readmission rates. **Ref: 8, 14.**	
Measurement Plan	A tool that is used to plan, record and agree measurement activities. **Ref: 8, 14.**	
Operational Definitions	A clear and detailed description of a measure with the intention of ensuring consistency of data collection and analysis. **Ref: 8, 14.**	
Model for Improvement (MI)	An approach to process improvement, developed by Associates in Process Improvement, which helps teams accelerate the adoption of proven and effective changes. The model asks 3 questions, 1. What are we trying to accomplish? 2. How will we know that a change is an improvement? 3. What change can we make that will result in improvement The model includes the use of "rapid-cycles of improvement" – to test improvement ideas. **Ref 17, 19.**	http://www.ihi.org/education/IHIOpenSchool/resources/Pages/QI-102-How-to-Improve-with-the-Model-for-Improvement.aspx

Term	Explanation	Links to Additional Resources
Organisational Culture	Is a system of shared values, assumptions and beliefs, which influence how people act and behave in an organisation, such as their place of work. It is the unique 'personality' of an organisation. **Ref: 11.**	https://www.bmj.com/content/363/bmj.k4907
Organisational Readiness for Change	A psychological state in which members of an organisation feel collectively able and willing to carry out a change in their organisation, local department or unit. **Ref: 11**.	https://www.hse.ie/eng/staff/resources/changeguide/resources/change-guide.pdf
Pareto Chart	Is a QI tool, consisting of a bar chart and a line chart, for visualising the frequency with which events occur in order to focus on areas of improvement with the greatest impact. **Ref: 19.**	http://www.ihi.org/resources/Pages/Tools/ParetoDiagram.aspx
Patient Safety	The avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the process of healthcare. (Charles Vincent, 2006) **Ref: 9.**	https://www.hse.ie/eng/about/who/nqpsd/patient-safety-strategy-2019-2024.pdf
Partnering with Patients	Partnering with patients and the public is to share decision making power and ensure they can influence decisions on the design, delivery and evaluation of services. Partnering with patients is central to delivering person-centred care; which refers to "services that are respectful and responsive to individual's needs and values and partners in designing and delivering that care". **Ref: 10.**	https://www.hse.ie/eng/about/who/qid/person-family-engagement/patient-and-public-partnership/patient-and-public-partnership-strategy-2019-2023.pdf
Patient Voice	Patients' (and their families') perspectives, opinions and views. **Ref 14.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/national-qi-tool-0-capturing-the-patient-and-staff-voice.pdf
Person and Family Engagement	This is about understanding how we partner with people who use services in the design, planning, delivery and evaluation of healthcare. **Ref: 15.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/full-document.pdf
Person Centred Service	The Health Information Quality Authority (2012) describe a person-centred service as; "A service where providers listen to all their service users and support them to play a part in their own care and have a say in how the service is run". **Ref: 5, 7.**	https://www.hiqa.ie/sites/default/files/2017-01/Safer-Better-Healthcare-Guide.pdf
PDSA Cycle	As part of the Model for Improvement, the PDSA IS a structured test of change which includes four phases: plan, do, study, and act. The cycle begins with a plan and ends with action taken based on the learning gained from each phase of the cycle. The four steps consist of planning the details of the test and making predictions about the outcomes (Plan), conducting the plan and collecting data (Do), comparing predictions to the data collected (Study), and taking action based on the new knowledge (Act). **Ref: 11, 15, 17, 19.**	https://www.hse.ie/eng/about/who/nqpsd/patient-safety-programme/nat-qi-tool-12-plan-do-study-act-pdsa-cycle-template.pdf

Term	Explanation	Links to Additional Resources
Test / Pilot Site	The initial site location for focused changes. After implementation and refinement, the process will be spread to additional site locations. **Ref: 11.**	
Process Mapping	This tool facilitates a conversation with a multi-disciplinary team, so that they agree what the current process 'is' rather than what is 'imagined'. This conversation will help Identify a list of opportunities and issues that the team can work on. It Identifies the value and non-value adding activities e.g. activities that do not add value to the internal or external customer, including: delays; needless storage and transportation; unnecessary work, duplication, added expense; breakdowns in communication. **Ref: 3, 15.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/nat-qi-tool-7-process-mapping.pdf https://www.england.nhs.uk/wp-content/uploads/2021/12/qsir-conventional-process-mapping.pdf
Quality Assurance (QA)	The process of evaluating overall performance on a regular basis to provide confidence that the service will satisfy relevant quality standards. **Ref: 11.**	https://www.hse.ie/eng/staff/resources/changeguide/resources/change-guide.pdf
Quality Control (QC)	The regulatory process through which we measure the actual performance, compare it with standards and act on the difference" (Juran, 1986). It involves comparing the level of performance of a system or organisation against adopted standards or benchmarks that are locally developed and owned, such as quality dashboards and scoreboards, for the purposes of Internal scrutiny and oversight. **Ref: 3.**	https://www.juran.com/blog/the-juran-trilogy-quality-planning/
Quality Improvement (QI)	Quality improvement (QI) is the combined and unceasing efforts of everyone - healthcare professionals, patients and their families, researchers, commissioners, providers and educators - to make the changes that will lead to • Better patient outcomes. • Better experience of care. • Continued development and supporting of staff in delivering quality care. QI is a formal approach to the analysis of performance and systematic efforts to improve it. There are various methods or models of QI such the IHI Model for Improvement, Continuous Quality improvement (CQI), Six Sigma, LEAN, and more. All QI models are aimed at improving performance. In health care, improving performance can result in a reduction of medical errors, morbidity and mortality, and improved quality of life for patients, communities and staff. **Ref: 1, 3, 7.**	https://www.hse.ie/eng/about/who/qid/framework-for-quality-improvement/framework-for-improving-quality-2016.pdf https://www.health.org.uk/publications/quality-improvement-made-simple http://www.ihi.org/resources/Pages/AudioandVideo/MikeEvansVideoQIHealthCare.aspx
Quality Improvement Action Plan	The QI Action Plan will guide the change process. It outlines the outcomes you want to achieve, the actions required to deliver on the outcomes, resources required, persons responsible and timeframes. It is based on the culmination of all your work on defining the need for change and	https://www.hse.ie/eng/staff/resources/changeguide/resources/template-634-action-plan.pdf

Term	Explanation	Links to Additional Resources
	designing a better future. In addition to identifying key actions to get from the current situation to the future, key enabling and sustaining actions also need to be included. **Ref: 11.**	
Qualitative Data	Qualitative data is non-numerical information that can be captured through a variety of qualitative methods including interviews, focus groups, observations and written documents for example surveys. **Ref: 8.**	http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementTipsforEffectiveMeasures.aspx
Qualitative Interviews	Qualitative methods are used to collect qualitative information or data. Qualitative methods include structured or unstructured in-depth interviews, focus groups, participant observation, documentary analysis and visual methods. A qualitative data collection method, where there is direct communication between an interviewer/researcher and a participant, can occur face-to-face, on the telephone or through internet video services. Interviews can be structured (each participant is asked the same list of questions), semi-structured (the interviewer has flexibility to reword the question and to pursue new issues as they emerge) or unstructured (no pre-prepared topic guide or structured questions). **Ref: 8.**	https://learn.nes.nhs.scot/14064/quality-improvement-zone/quality-improvement-journey/measurement/introduction-to-measurement-for-improvement https://www.hse.ie/eng/about/who/nqpsd/qps-intelligence/qps-intelligence-resources/measurement-for-improvement-resources.html
Quantitative Data	Quantitative data is data that is structured and can be represented numerically. **Ref: 8.**	
Run Chart	Is a line graph of data plotted over time, where the measure of interest (e.g. infection rates) is plotted against the measure of time in order to see, track and highlight changes easily. **Ref: 8.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/nat-qi-tool-11-run-chart.pdf
Annotated Run Chart	A run chart showing results of improvement efforts plotted over time. The changes made are also noted (annotated) on the line chart at the time they occur. This allows the viewer to connect changes made with specific results. **Ref: 8.**	https://www.youtube.com/watch?v=ySbhsX-y8zE
Root Cause Analysis	This is a collective term for methods, tools or approaches used to identify the underlying cause of problems. Underlying causes are often not immediately apparent or visible, but may underpin a chain of events that generate the problem. **Ref: 15, 19.**	http://www.ihi.org/resources/Pages/Tools/Patient-Safety-Essentials-Toolkit.aspx
Spread	Is the intentional and methodical expansion of the number and type of people, units, or organisations using quality improvement. The theory and application comes from the concept of "Diffusion of Innovation". In clinical quality improvement work, this expansion could be to other patients, providers, departments and sites. **Ref: 17, 20.**	https://www.healthcareimprovementscotland.org/about_us/what_we_do/knowledge_management/knowledge_management_resources/spread_and_sustainability.aspx

Term	Explanation	Links to Additional Resources
Staff Engagement	"Staff are engaged when they feel valued, are emotionally connected, fully involved, enthusiastic and committed to providing a good service…when each person knows that what they do and say matters and makes a difference". (National Staff Engagement Forum 2016) **Ref: 3, 14.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/full-document.pdf
Stakeholders	People (groups or individuals) who might be affected by the change/intervention you are proposing or who might be interested in becoming involved in your project. Health service stakeholders, include patients and service users, employees, colleagues, medical staff, government, insurers, industry and the community. **Ref: 3, 8, 14.**	https://hseresearch.ie/wp-content/uploads/2021/09/Guide-no-4-Stakeholder-engagement-.pdf
Stakeholder Map	This is a visual representation of people who are involved directly or indirectly with the project and their level of Influence on and reaction to the project. **Ref: 15.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/nat-qi-tool-2-stakeholder-map.pdf
Stakeholder Analysis	Is a process that can help to identify and plan engagement or involvement with groups of people and individuals who might be affected by a project/intervention and/or who can help effect change, both within and outside of your department or organisation. **Ref: 20**.	
Storyboard	Is a set of slides or a word document that will enable the team to display information about their team's progress with their QI work. The storyboard may be displayed at meetings as well as staff break rooms. **Ref: 15.**	https://www.hse.ie/eng/about/who/nqpsd/patient-safety-programme/nat-qi-tool-13-progress-story-board-template.pdf
Subject Matter Expert	In the context of healthcare subject matter experts include, staff and service users with knowledge of a specific healthcare system or service. A technical expert may also provide expertise in process improvement, data collection and analysis, and team function. **Ref: 8.**	
Survey	A set of questions with a set range of answers in a format that enables standardised, relatively structured data to be gathered about each of a (usually) large number of cases, which can be represented numerically. Some surveys include open questions which allow the respondent to answer the question in their own words. **Ref: 8.**	https://www.hse.ie/eng/about/who/nqpsd/qps-intelligence/nqpsd-self-evaluation-guide-copy.pdf
Sustainability of Improvement	Sustainability of improvement exists when a newly implemented process continues to improve over time, becomes 'the way things are done around here,' and does not return to the 'old' processes that existed before the improvement project began. Sustainability will not 'just happen'; you need to plan for it at the beginning of a project. **Ref: 21.**	https://qi.elft.nhs.uk/wp-content/uploads/2015/05/the-spread-and-sustainability-ofquality-improvement-in-healthcare-pdf.pdf

Term	Explanation	Links to Additional Resources
Systems Thinking	Is a problem-solving approach that looks at relationships between parts of the system and how they connect, rather than looking at separate activities or individual parts of the system that are disconnected. **Ref: 20, 21.**	https://www.healthcareimprovementscotland.org/about_us/what_we_do/knowledge_management/knowledge_management_resources/spread_and_sustainability.aspx https://www.youtube.com/watch?v=JuMFBdV-gh8
Test of Change	Once a team has set an aim, established its membership, and developed measures to determine whether a change leads to an improvement, the next step is to test a change in the real work setting. The Plan-Do-Study-Act (PDSA) cycle is shorthand for testing a change — by planning it, trying it, observing the results, and acting on what is learned. This is the scientific method, used for action-oriented learning. **Ref: 17.**	https://learn.nes.nhs.scot/60972 https://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx
Thematic Analysis	Thematic analysis is used in qualitative research as a process of identifying and interpreting key themes or ideas in raw data. **Ref: 8.**	http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx
Use of Improvement Methods	This is about understanding the importance of using a scientific approach to improving quality. **Ref: 7.**	https://www.hse.ie/eng/about/who/nqpsd/qps-intelligence/qi-self-evaluation-guide.pdf
Value-based healthcare	Aims to increase value (get more out) of available resources by reducing unwarranted variation and waste. The aim is to reduce cost whilst at the same time improve outcomes and quality. **Ref: 18.**	https://www.hse.ie/eng/about/who/nqpsd/qps-education/full-document.pdf
Variation (in healthcare	In improvement science we learn to recognise variation. There are two types of variation. Common cause variation, is part of normal daily work, it's built into the system and is random and affects everyone. Special cause variation, is variation that is attributable to a cause and is non-random. If we want to improve a process, we need to know whether the results we are seeing are inherent to the process we are trying to improve or due to some identifiable cause. **Ref: 18.**	https://qi.elft.nhs.uk/resource/controlling-variation-in-health-care-a-consultation-from-walter-shewhart-donald-m-berwick-md-mpp/ https://www.youtube.com/watch?v=a_QskzKFZnI

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