Collaborating for a Healthy Ohio

Improving Health Care Quality, Reducing Harm

OHA Hospital Engagement Network Report (2012-2014)

A three-year hospital and health care provider collaboration of the Partnership for Patients initiative and Leading Edge Advanced Practice Topics program

55% Reduction of Harm | $100 Million in Health Care Savings

OHIO HOSPITAL ASSOCIATION

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Welcome

MIKE ABRAMS

Ohio hospitals had 31.1 million patient encounters last year and welcomed nearly 140,000 new babies into the world. Now in our 100th year, the Ohio Hospital Association is the catalyst for regional and statewide hospital collaborations and a leading policy advocate to ensure a healthy Ohio.

OHA directs hospital patient safety and quality initiatives for Ohio hospitals to improve the outcomes for our patients and to work toward reducing the cost of health care in our state.

This report summarizes the accomplishments of a three-year campaign by OHA's Hospital Engagement Network to attack 10 specific hospital-acquired conditions and to reduce hospital readmissions.

Sixty-eight Ohio hospitals participated in the 2012-2014 HEN, one of 26 engagement networks across the U.S., to achieve improvement throughout the continuum of care.

As the nation's first state hospital association, OHA was a pioneer in focusing the resources of member hospitals and highly trained OHA professional staff to address safety and quality issues – specifically at the regional level. The association is a leader in combining data analytics, education and clinical expertise to convene and facilitate hospital collaborations.

The OHA Institute for Health Innovation launched in June 2015 to evaluate, focus and engage in change activities that drive excellence in safety and quality with Ohio hospitals and the communities they serve. Current initiatives of the OHA Institute include early recognition and treatment of deadly sepsis and reduction in Ohio's very high infant mortality rate.

Looking to the future, OHA is committed to the strategic priority of patient safety and quality, and to leading innovative and creative strategies to deliver the best patient experience for those treated in our member hospitals. We will continue to work with hospitals, health care organizations and other partners to understand and deploy game changing techniques and technology to assure a vibrant, sustainable health care system to ensure a healthy Ohio.

Sincerely,

Michael D. Abrams

Mike Abrams
President and CEO

OHA Leadership Team

- **Mike Abrams**, president and CEO
- **Mary Gallagher**, executive vice president and chief of staff
- **Amy Andres**, senior vice president, quality and data
- **Ryan Biles**, senior vice president, health economics and policy
- **Scott Borgemenke**, senior vice president, advocacy and communication
- **Cliff Lehman**, senior vice president, member services and operations
- **Sean McGlone**, senior vice president and general counsel

OHA Quality Team

- **Robert Falcone, MD**, vice president, clinical strategy and population health
- **James Guliano, MSN, RN-BC**, vice president, quality programs
- **Rosalie Weakland, MSN, RN, CPHQ, FACHE**, senior director, quality programs
- **Ryan Everett, MPH**, director, population health
- **Ellen Hughes, RN, ACA, LNC**, quality coordinator
- **Andrew Detty**, quality analyst

OHA Hospital Engagement Network Team

- **Amy Andres**, data and quality contract officer
- **James Guliano, MSN, RN-BC**, fiscal officer
- **Rosalie Weakland, MSN, RN, CPHQ, FACHE**, project director
- **Ellen Hughes, RN, ACA, LNC**, hand hygiene coordinator
- **Mary Reilly, RN, BSN, CIC**, nursing home coordinator and LEAPT project manager
- **Lori Brohm, DM, MBA, PT**, project manager
- **Linda Dray, MSN, RN**, northern regional coordinator
- **Diane Morgan, MSSA, LISW- I**, central and southeast regional coordinator
- **Brenda Hale, MSN, BSN, RN**, southwest regional coordinator
- **Virginia Swan**, support staff

Our Partner

Ohio Patient Safety Institute

The Ohio Patient Safety Institute, founded by OHA, the Ohio State Medical Association and the Ohio Osteopathic Association, is a leader in developing and transforming health care into a reliable, safe delivery system. OPSI was designated by the Agency for Healthcare Research and Quality as a Patient Safety Organization in February 2009.

Leading a Bold Strategy for a Healthy Ohio

In 2011, OHA was designated by the Centers for Medicare and Medicaid Services as a Hospital Engagement Network (HEN) as part of the national Partnership for Patients program. The HEN's goal was to achieve a 40 percent reduction in patient harm and 20 percent reduction in readmissions. OHA, as lead contractor, and its partner, the Ohio Patient Safety Institute addressed these focus areas:

1. Adverse drug events (ADE)
2. Catheter-associated urinary tract infections (CAUTI)
3. Central line-associated blood stream infections (CLABSI)
4. Injuries from falls and immobility
5. Obstetrical adverse events, including Early Elective Delivery (EED) reduction
6. Pressure ulcers
7. Surgical site infections (SSI)
8. Venous thromboembolism (VTE)
9. Ventilator-Associated Event (VAE), [Ventilator-Associated Condition (VAC), Infection-Related Ventilator-Associated Complication (IVAC), Ventilator Associated Pneumonia (VAP)]
10. Readmissions

OHA's HEN included 68 Ohio hospitals that participated in these clinical focus areas. Participating hospitals included small rural and critical access hospitals, urban and large teaching institutions and one long-term acute care hospital.

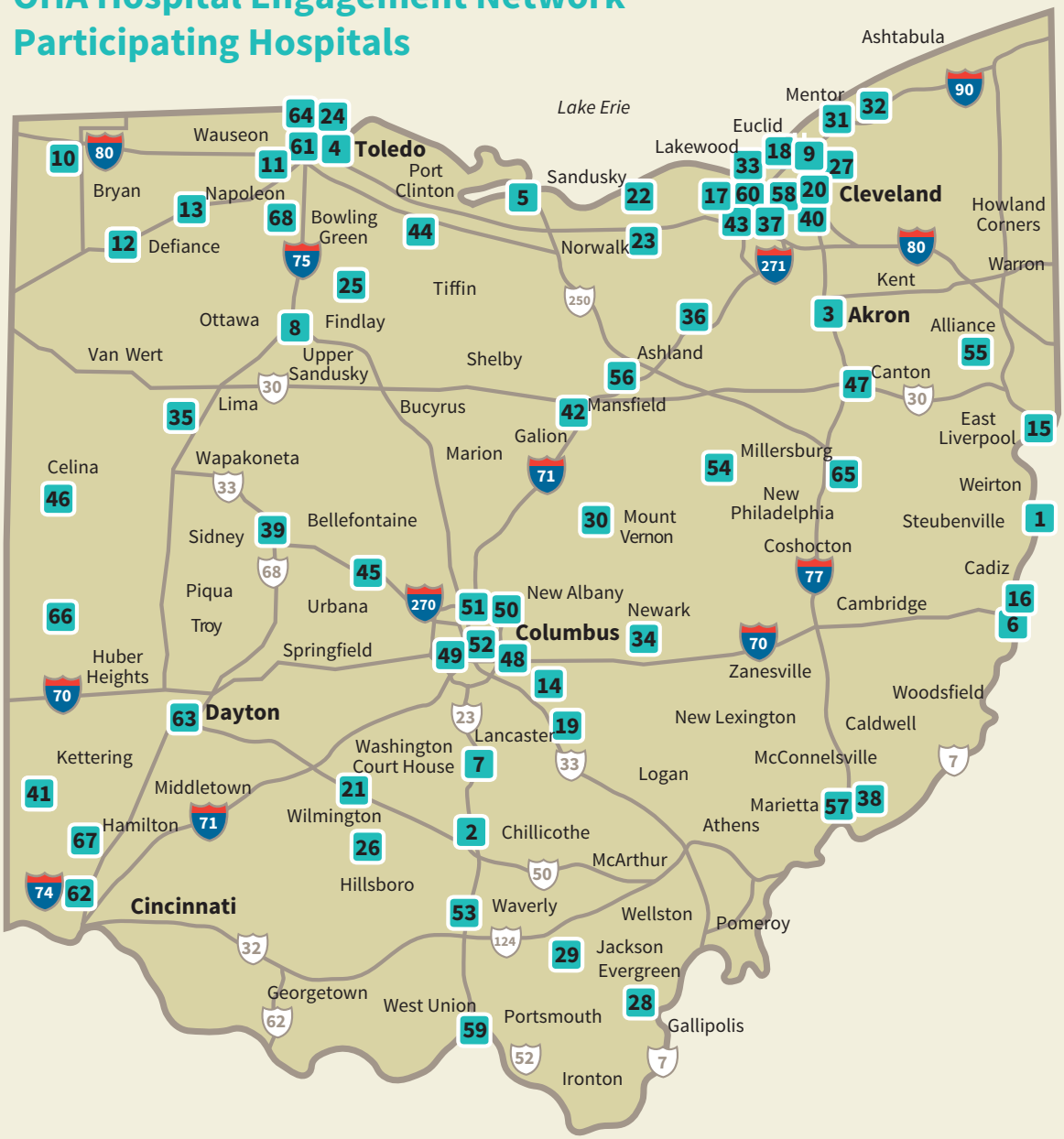
In addition, OHA's HEN engaged nursing homes in infection prevention and transition of care projects.

OHA provided intensive technical assistance and various types of training events and learning sessions for participating hospitals, focusing on the top areas of opportunity for each hospital. OHA's quality team's expertise, infrastructure, collaboratives and systems provided a unique approach to the development and delivery of various education programs.

OHA has implemented educational seminars for as few as 30 health care professionals and as many as 500 or more nurses, physicians and hospital administrators. Education programs were delivered in various formats, ranging from face-to-face meetings, conference calls, webinars, DVD and online training, with materials developed for both providers and patients. The ongoing, relentless pursuit of improvement on the statewide quality agendas is accomplished through the sharing of effective practices and lessons learned, in an effort to promote safety, to prevent harm, and to prevent readmissions. Examples of such forums include collaboratives aggregated by geographic areas as well as by commonalities, such as the critical access hospitals.

In October 2013, the Centers for Medicare and Medicaid Services awarded OHA's HEN the Leading Edge Advanced Practice Topics (LEAPT) contract to further expand our extraordinary work on improving patient safety and health care quality for participating hospitals in the areas of sepsis, hospital readmissions through health literacy, acute renal failure, actual cost of harm and integration of worker and patient safety.

OHA Hospital Engagement Network Participating Hospitals



1. Acuity Specialty Hospital – Ohio Valley – **Steubenville**
2. Adena Health System – **Chillicothe**
3. Akron General Medical Center – **Akron**
4. Bay Park Community Hospital – **Oregon**
5. Bellevue Hospital – **Bellevue**
6. Belmont Community Hospital – **Bellaire**
7. Berger Health System – **Circleville**
8. Blanchard Valley Health System – **Findlay**
9. Cleveland Clinic Foundation – **Cleveland**
10. Community Hospital & Wellness Center – Montpelier – **Montpelier**
11. Community Hospitals and Wellness Centers – **Bryan**
12. Community Memorial Hospital – **Hicksville**
13. Defiance Regional Medical Center – **Defiance**
14. Diley Ridge Medical Center – **Canal Winchester**
15. East Liverpool City Hospital – **East Liverpool**
16. East Ohio Regional Hospital – **Martins Ferry**
17. EMH Regional Health System – **Elyria**
18. Euclid Hospital – **Euclid**
19. Fairfield Medical Center – **Lancaster**
20. Fairview Hospital – **Cleveland**
21. Fayette County – **Washington Courthouse**
22. Firelands Regional Health System – **Sandusky**
23. Fisher-Titus Medical Center – **Norwalk**
24. Flower Hospital – **Sylvania**
25. Fostoria Community Hospital – **Fostoria**
26. Greenfield Area Medical Center – **Greenfield**
27. Hillcrest Hospital – **Cleveland**
28. Holzer Medical Center – **Gallipolis**
29. Holzer Medical Center – **Jackson**
30. Knox Community Hospital – **Mount Vernon**
31. Lake Health – TriPoint Medical Center – **Concord Township**
32. Lake Health – West Medical Center – **Willoughby**
33. Lakewood Hospital – **Lakewood**
34. Licking Memorial Hospital – **Newark**
35. Lima Memorial Hospital – **Lima**
36. Lodi Community Hospital – **Lodi**
37. Lutheran Hospital – **Cleveland**
38. Marietta Memorial Hospital – **Marietta**
39. Mary Rutan Hospital – **Bellefontaine**
40. Marymount Hospital – **Garfield Heights**
41. McCullough-Hyde Hospital – **Oxford**
42. MedCentral – Mansfield Hospital – **Mansfield**
43. Medina Hospital – **Medina**
44. Memorial Hospital Fremont – **Fremont**
45. Memorial Health – **Marysville**
46. Mercer County Joint Township Community Hospital – **Coldwater**
47. Mercy Medical Center – **Canton**
48. Mount Carmel (East Hospital) – **Columbus**
49. Mount Carmel (West Hospital) – **Columbus**
50. Mount Carmel – **New Albany**
51. Mount Carmel St. Ann's – **Westerville**
52. OSU Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute – **Columbus**
53. Pike Community Hospital – **Waverly**
54. Pomerene Hospital – **Millersburg**
55. Salem Regional Hospital – **Salem**
56. Samaritan Regional Health System – **Ashland**
57. Selby General Hospital – **Marietta**
58. South Pointe Hospital – **Warrensville Heights**
59. Southern Ohio Medical Center – **Portsmouth**
60. Southwest General Health Center – **Middleburg Heights**
61. St. Luke's Hospital – **Maumee**
62. The Christ Hospital – **Cincinnati**
63. The Medical Center at Elizabeth Place – **Dayton**
64. The Toledo Hospital – **Toledo**
65. Union Hospital – **Dover**
66. Wayne Hospital – **Greenville**
67. West Chester Hospital – **West Chester**
68. Wood County Hospital – **Bowling Green**

Improving Quality, Reducing Harm, Generating Savings

The collective work of the OHA HEN hospitals reduced overall harm by 55 percent, improved patient and family engagement by 39 percent and improved leadership by 29 percent. In addition, hospitals made significant progress in Safety Across the Board in the three years of the campaign. By the end of the project, the OHA HEN achieved a substantial increase in participation in the patient and family engagement and leadership standards. OHA HEN hospitals demonstrated an estimated cost savings of $100.2 million. In the chart on the following page, the savings earned refers to the estimated number of harms prevented per health care acquired conditions.

scrub up!™
save lives

Improving Health Care Quality

Condition	Definition	Prevention Achieved	Savings Achieved
C. difficile (CDI or C.Diff)	a bacterium causing diarrhea and more serious intestinal conditions such as colitis	742 prevented	$8.4 million
Adverse Drug Events (ADE)	incidents in which the use of medication (drug or biologic) at any dose, a medical device, or a special nutritional product may have resulted in an adverse outcome in a patient	382 prevented	$1.1 million
Central line-associated blood stream infections (CLABSI)	occurs when germs enter the bloodstream through a central line. A central line is a tube that is placed in a large vein to give fluids, blood, or medications	269 prevented	$4.5 million
Ventilator-Associated Events (Pneumonia)	conditions from a significant and sustained deterioration in oxygenation producing an infection in the lungs due to the patient breathing through a ventilator tube	127 prevented	$2.5 million
Surgical site infections (SSI)	an infection that occurs after surgery in the part of the body where the surgery occured	121 prevented	$2.5 million
Catheter-associated urinary tract infections (CAUTI)	an infection involving any part of the urinary system, including urethra, bladder, ureters, and kidney that is associated to having a drainage tube in the bladder	30 prevented	$30,000

Condition	Definition	Prevention Achieved	Savings Achieved
Readmission	the unplanned hospital readmission of a patient within 30 days of being released from the hospital	7,323 prevented	$64.5 million
Obstetric Trauma	damage of vaginal tissues during childbirth	558 prevented	$74,766
Venous thromboembolism (VTE)	a disease that includes both deep vein thrombosis and pulmonary embolism (blood clot)	355 prevented	$7.9 million
Obstetrical adverse events – early elective deliveries	an elective delivery is performed prior to full term for a nonmedical reason	116 prevented	$90,985
Pressure Ulcers (PRU)	an area of skin that breaks down when something keeps rubbing or pressing against the skin	49 prevented	$1.9 million
Falls	a sudden, unintentional change in position, coming to rest on the ground or other lower level	43 prevented	$28,500

Hand Hygiene

One of the overall key strategies to reduce infections was the hand hygiene program. Hand hygiene compliance was measured using independent observers. Hand hygiene compliance almost doubled, resulting in a 48 percent decrease of hospital-acquired infections at participating hospitals.

Ventilator-Associated Pneumonia

During the campaign, participating hospitals eliminated ventilator-associated pneumonia incidents at their institutions by implanting the OHA-developed patient centered infection care bundle. The bundle included oral care that was modified to be conducted every two hours, improved maintenance of a closed circuit system, better extubation techniques (removal of the endotracheal tube), incorporating a physician intensivist on care team to follow ventilator patients and daily rounding, and using a c-pap and bi-pap whenever feasible.

Surgical Site Infections

By reviewing and modifying surgical bundles, deploying modified surgical preparation solutions and ensuring appropriate dimensions of pre-op scrubs, participating hospitals reduced surgical site infections for knee, colon, and hip by 38 percent.

Additionally, hospitals reduced surgical site infections by adjusting their pre-op and post-op cleansing with CHG- chlorhexidine gluconate wipes, conducted more hand hygiene and frequent glove changes, and altered the surgical suite traffic patterns.

C.diff

Hospitals focusing on reducing C.diff achieved a 39 percent reduction. The quality teams accomplished this by enhancing staff training to ensure the proper administration of established protocols. Utilizing cleaning protocols and environmental services training for staff was essential. Antibiotic stewardship was promoted to decrease drug resistance. Community engagement was important to help prevention of C.diff in the acute care setting.

CLABSI

Participting hospitals focused resources to address CLABSI and by the end of the project, they reduced incidents by 59 percent. By establishing an improved process of infection analysis, promoting hand hygiene, improving training on applying appropriate dressing, enhancing team involvement and deploying educational programs, these hospitals were able to generate impressive results.

Pressure Ulcers

A 54 percent reduction of pressure ulcers was achieved through the enhancement of hospital wound teams and designation of unit skin champions. Additionally, hospitals provided new patient beds with pressure-reducing mattresses, consulted with their respiratory therapy teams for ear and nose ulcers, implemented an improved skin assessment process upon patient admission and deployed a new shift rotation.

Falls

Sixty-eight hospitals were able to reduce falls by 49 percent. Fall intervention is a team process and appropriate communication of fall risk was necessary with transition from unit to unit or between facilities. Results showed that falls were preventable with increased rounding, patient and family education, and improving response time of hospital staff to address patients' needs. Additionally, hospitals' improved results by staff assembling after incidents to determine cause and improvement, if necessary.

Early Elective Deliveries

Some non-medical reasons for early elective delivery include patients and physicians wanting to schedule the birth of the baby on a specific date or due to travel distance/radius from the hospital. Some women request delivery because they are uncomfortable in the last weeks of pregnancy. Some women request a Cesarean delivery because they fear vaginal birth. By implementing and enforcing 39 weeks hard stop policies, participating hospitals were able to reduce early elective deliveries by 35 percent. Learning

programs focused on promoting the hospital's policies and the patient outcomes of early elective deliveries.

Readmission

Although readmissions were reduced by only seven percent, hospitals that showed improvement focused on health literacy for patients during discharge and improvement of patient education materials. Additionally, hospitals that engaged community partners to provide patient resources and services increased prevention of readmissions. Hospitals' engagement with pharmacists also improved rates through medication instruction and reconciliation for patients.

Leading Edge Advanced Practice Topics

Hospitals participating in the LEAPT project were engaged in each focus area and used rapid cycles of intervention for improvement methodology. The five LEAPT areas were readmission prevention, health literacy, acute kidney injury (AKI), sepsis, culture of safety-integration of patient and worker safety and cost-analysis events.

A group of seven hospitals formed a workgroup during the campaign to reduce sepsis at their institutions. An event was held with participants to discuss and adopt appropriate training tools to assist health care workers at hospitals.

In the sepsis project, early warning system fields and process, sepsis order sets for different departments and reports for ease of auditing were necessary for complete implementation and evaluation of sepsis program. There was a 32 percent reduction reported in sepsis mortality among participating hospitals.

One of the focus areas that the OHA's HEN chose as a part of the LEAPT project was culture of safety, specifically focusing on integrating worker and patient safety. This project involved six member hospitals who utilized worker compensation claims data to analyze four major focus areas related to worker safety: injuries from lifting and moving a patient, being struck by or other injuries caused by patients, slips, trips, falls and, needle sticks and sharps incidents. Six hospitals produced a 31 percent reduction in worker compensation claims.

Another focus area for LEAPT was determining the cost of harm. After attempting to utilize cost models, participating hospitals landed on using Medicare Spending Per Beneficiary. Using match pairs, the group identified six out of 11 indicators demonstrating significant savings in cost.

The integration and modification of hospitals' electronic health records enhanced quality outcomes. EHR was an essential element for process change. In readmission health literacy assessment project, hospitals that were able to move their assessment tool to EHR and add a field for the "teach back" option for discharge instruction in the EHR showed improved compliance rates and enhanced denominator abstraction for audits. EHR system alerts proved to be powerful tools for staff communication or response required related to patient's clinical status. EHR system alerts had to be created in such a way to not create a process that was ignored by staff by too frequent firing of the alerts which was similar to "alarm fatigue". In the acute kidney injury and sepsis projects, using the laboratory value elevations consistent with these diagnoses staff improved awareness and response to interventions through critical value alerts.

Moving Forward and Sustaining the Achievements For a Healthy Ohio

This three-year campaign provided an enriching experience for OHA, the participants and partners, to improve health care quality and patient safety in Ohio. OHA's HEN promoted collaboration and engagement among hospitals and health care organizations producing substantial results in patient safety and health care quality in Ohio.

OHA's current quality efforts focus on preventing sepsis and infant mortality, promoting hand hygiene and incorporating sophisticated health care data analytics in future quality programs.

Reducing Sepsis Mortality – OHA launched a two-year statewide collaboration with Ohio hospitals in May 2015 to reduce severe sepsis and septic shock and ultimately, sepsis mortality in Ohio by 30 percent. OHA will apply similar strategies of intervention and prevention achieved in the LEAPT program.

Preventing Infant Mortality – Launched in 2014 OHA's statewide program to prevent infant mortality has focused on promoting infant safe sleep, eliminating early elective deliveries, and promoting breastfeeding and safe spacing.

Promoting Hand Hygiene – OHA's hand hygiene initiative featured an iPad tool designed by OHA staff to allow for same-day access to hospital compliance data. Data are unit- and provider-specific, allowing for identification of areas for focus and improvement. This product is very successful and has been implemented at hospitals even beyond OHA's HEN project.

Utilizing Health Care Data Analytics – For years OHA's data team has provided hospitals with a valuable service of collecting and analyzing inpatient and outpatient data records. Through a partnership with Battelle, OHA is offering WayFinder, a new sophisticated data analytical tool for member hospitals to track their patient data more timely allowing for better deployment of quality improvement programs.

Although the Partnership for Patients program and LEAPT projects concluded in 2014, OHA's clinical and professional teams are recalibrating for the future. Through OHA's Institute for Health Innovation, OHA will lead programs and projects to improve the quality of care for Ohioans by creating new strategies and resources to build upon the successes achieved through the Partnership for Patients initiative.

INSTITUTE FOR HEALTH INNOVATION
of the OHIO HOSPITAL ASSOCIATION

Established in 2015, OHA's Institute for Health Innovation is dedicated to providing resources to develop and implement strategies focused on: accelerating health care quality, integrating transition of patient care and advancing community health.

Mission

OHA exists to collaborate with member hospitals and health systems to ensure a healthy Ohio.

Vision

OHA speaks with one unified voice for all Ohio hospitals and health systems and leads the effort in developing a high quality, sustainable system by focusing on: advocacy, patient safety and quality, and economic sustainability.

OHIO HOSPITAL ASSOCIATION

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