

A vibrant, close-up photograph of a wave tunnel. The water is a brilliant, clear blue, with white foam and bubbles visible as the wave curls. Through the circular opening of the tunnel, a tropical beach scene is visible, featuring a sandy shore, a line of palm trees, and distant mountains under a sky with soft, golden light. The overall mood is serene and natural.

*love
matters*

2018
Quality Report

Our Mission

Living God's love by inspiring health,
E ola mau ke Aloha o ke Akua i ke olakino,

wholeness,
i ka pono iho,

and hope.
a me ka mana'olana.

Our Vision

We will transform the health experience of
our communities by improving health,
enhancing interactions, and making care more accessible.

Our Values

Respect | Integrity | Compassion | Excellence

This document is a report on Adventist Health Castle's
performance and activities during the year 2017.

Cover Photo

Blue Ice © Clark Little

Clark is a Hawai'i based photographer of world renown. His award-winning work has been featured in National Geographic, The New York Times, The Smithsonian National Museum of Natural History, and many others. He has a gallery in Hale'iwa, on the North shore of O'ahu.

ClarkLittle.com



Table of Contents

Introduction	2
The Medical Center	3
Awards and Recognition	4
Mission	17
Inpatient Satisfaction with Spiritual Care	24
Patient Satisfaction	25
Inpatient	26
Birth Center	27
Emergency Department	28
Outpatient Surgery	29
Community-Based Clinics Percentile Ranking	30
Physician Satisfaction	32
Associate Engagement	36
Inpatient Care	40
Stroke	42
Venous Thromboembolism	43
Staff Vaccinated Against Influenza	44
Surgical Site Infections	45
Catheter-Associated Urinary Tract Infections	46
Central Line-Associated Bloodstream Infections	47
<i>Clostridium Difficile</i> Infections	48
MRSA Bacteremia	49
Hospital-Acquired Pressure Ulcers	50
Early-Term Elective Deliveries	51
Patient Fall Rate in the Medical and Surgical Units	52
Thirty-Day Readmission Rates	53
Acute Length of Stay	54
Risk-Adjusted Mortality Rate	55
Emergency Care	56
Reroute Hours	59
Patients Left Without Being Seen	60
Wait Times	61
Castle Health Group	62
Advancements and Innovations	64
Volumes	70
Staffing	76
Quality Improvement Goals	78

Introduction



Heidar Thordarson
M.B.A.
VP Finance and CFO

Travis Clegg
M.B.A., F.A.C.H.E.
Operations Executive

Susan Chapman
M.D.
Chief of Staff

Kathryn A. Raethel
R.N., M.P.H., M.H.A., F.A.C.H.E.
President

Laura Westphal
R.N., M.B.A., C.P.H.Q.
Patient Care Executive

Alan H. S. Cheung
M.D., M.B.A.
Medical Officer

During the past year Adventist Health Castle has continued our journey toward excellence and we reached a real pinnacle of success when we received word that we had been selected as a recipient for the very prestigious Malcolm Baldrige Award in 2017.

At Castle we truly believe that love really matters in all of our interactions. We care for one another and about one another as patients, caregivers, associates and volunteers. To us, the idea that “love matters” is palpable. We want everyone to feel it when they enter our four walls.

In addition, we have been tenacious about “chasing zero” harm to our patients. We never want to have patients experience complications or acquire infections while they are with us. We are purposeful in our efforts to follow best practices and achieve top decile performance in publically reported measures.

We hope that you will catch a glimpse of our successes through the data and stories that are included in this 12th edition of our Annual Quality Report, and that you will see the results that are possible when love really does matter!

The Medical Center



Located in Kailua, Hawai'i, Adventist Health Castle serves all of O'ahu and is the primary health care facility for the Windward side of the island. Castle is a full-service medical center offering a wide range of inpatient and outpatient services. With 160 beds, more than 1,000 associates, 140 volunteers, and 350 medical providers on staff, Castle has substantially expanded its services since first opening its doors in 1963. The hospital is owned by Adventist Health, a Seventh-day Adventist health care organization.

Castle focuses on providing patient centered health services in a caring environment that extends well beyond hospital and clinic walls. Our many programs are developed to serve the health and medical needs of our communities.

In 2017, Castle's services included:

- 24-hour emergency services
- Inpatient acute care
- Vera Zilber Birth Center
- Joint Care Center
- Inpatient behavioral health services
- Open heart surgery
- Interventional cardiology services
- The Hawai'i Center for Metabolic and Bariatric Surgery
- Multi-specialty surgical services
- Neurological & Neurosurgical services
- Harry and Jeanette Weinberg Outpatient Center
- Chemotherapy & Infusion Clinic
- Castle Primary Care clinics in Kailua, Kane'ohe and La'ie
- Outpatient Rehabilitation services
- Imaging services, laboratory, and pharmacy in Kane'ohe
- Wellness and Lifestyle Medicine Center.

Awards and Recognition



The Malcolm Baldrige National Quality Award

Adventist Health Castle is extremely honored to have been awarded the Malcom Baldrige National Quality Award in 2017. This is the highest level of national recognition for performance excellence that a U.S. organization can receive. The President of the United States or his designee traditionally presents the award each year at The Quest for Excellence Conference, where award recipients share their role model management systems and practices with other business leaders. To earn

this award, Castle demonstrated continuous improvement practices for delivering health care services, exhibited efficient and effective operations, and revealed systematic methods for engaging and responding to patients and other stakeholders. In addition, Castle demonstrated exceptional results in patient safety, patient experience, workforce engagement, and financial performance. Castle is the first organization in Hawaii and the first Adventist healthcare organization to earn this award.

Awards and Recognition



5-Star Rating from CMS

Castle has once again received an Overall Rating of 5 Stars from the Centers for Medicare and Medicaid Services. The overall rating summarizes up to 57 quality measures on topics such as timely and effective care, survey of patients' experiences, complications and deaths, unplanned hospital visits, use of medical imaging, and payment and value of care.

The overall rating ranges from one to five stars. The more stars, the better a hospital performed on the available quality measures. The most common

rating is three stars. More than 3,500 hospitals nationwide participate in the ratings program. Of these, Castle is one of just 337 hospitals that earned five stars.

Quality ratings are particularly important to hospitals, as they are tied to value-based reimbursement levels set by CMS and are a reflection of the overall quality of care provided.

Awards and Recognition



Leapfrog “A” Grade for Patient Safety

For the second year in a row, Adventist Health Castle has earned an “A” grade for patient safety by Leapfrog’s Hospital Safety Grade program. The Leapfrog Group, a national patient safety watchdog, assigns A, B, C, D and F letter grades to hospitals nationwide to provide the most complete picture of patient safety in the U.S. Castle was one of 844 hospitals to receive an “A”, ranking among the safest hospitals in the United States. Developed under the guidance of an Expert Panel, the Leapfrog Hospital Safety Grade uses thirty measures of publicly available hospital safety data to assign A, B, C, D and F grades to more than 2,600 U.S. hospitals

twice per year. It is calculated by top patient safety experts, peer-reviewed, fully transparent and free to the public.

To see Castle’s full grade, and to access consumer-friendly patient tips for staying safe in the hospital, visit www.hospitalsafetygrade.org or follow The Leapfrog Hospital Safety Grade on Twitter or Facebook. Consumers can also download the free Leapfrog Hospital Safety Grade mobile app for Apple and Android devices.



Healthgrades 2017 Outstanding Patient Experience Award

Castle is one of 443 hospitals nationwide recognized in 2017 with the Healthgrades® Outstanding Patient Experience Award, placing the hospital in the top 15 percent of hospitals in the nation for patient experience.

Healthgrades® analyzed Patient Experience Surveys over an eight-year period to identify questions most closely associated with a top overall rating of 9 or 10 and a response of “Yes, I would recommend this hospital.”

The response that had the highest correlation to both ratings was “nurses always communicate well.”

Healthgrades® evaluated 3,489 hospitals that submitted at least 100 patient experience surveys to the Centers for Medicare and Medicaid Services (CMS), covering admissions from April 2015 – March 2016, to identify hospital performance in this area.

Awards and Recognition

QUEST Award for High-value Healthcare

Adventist Health Castle has been recognized with a Citation of Merit for the 2017 QUEST® Award for Highvalue Healthcare from Premier Inc., a leading healthcare improvement company, for providing outstanding patient care. Only 63 hospitals nationwide received a Citation of Merit for achieving top performance in any four of the six areas measured in Premier's QUEST collaborative, including cost and efficiency, evidence-based care, mortality, safety, patient and family engagement and appropriate hospital use.

All QUEST hospitals submitting data for October 2015 – September 2016 were eligible for the QUEST Award. Top performance thresholds were

established at the top quartile of performance from a baseline period in all measures except cost of care, which was based on top tercile of performance. Top performance methodology for each dimension varied depending on the unique measure calculation and methodology.

Approximately 350 hospitals volunteered to transparently share data and define a common framework with consistent measures that would continually set a top performance goal for both participants and the nation. QUEST participants have prevented more than 198,000 deaths and reduced healthcare spending by more than \$17 billion.



Awards and Recognition

Castle Honored with Four Women's Choice Awards

Adventist Health Castle received four Women's Choice Awards® as one of America's Best Hospitals for Bariatric Surgery, Emergency Care, Obstetrics and Patient Safety in 2017. These evidence based designations are the only awards that identify the country's best healthcare institutions based on robust criteria that consider female patient satisfaction, clinical excellence, and what women say they want from a hospital.

The award for Bariatric Surgery indicates that Adventist Health Castle has met the high standards of The American College of Surgeons (ACS) and the American Society for Metabolic and Bariatric Surgery (ASMBS).

The award for Emergency Care signifies that Adventist Health Castle has provided exceptional patient care and treatment, signifying our commitment to meeting the highest standards in Emergency Care for women, their families and their community.

The award for Obstetrics means that Adventist Health Castle offers exceptional obstetric services, which ranked above the national average for patient safety, thereby supporting a woman's decision when choosing the best for her maternity needs.

The award for Patient Safety denotes that Adventist Health Castle has exceptional performance in limiting a wide range of hospital associated infections and complications from surgery and medical treatment.

The Women's Choice Award® is a trusted referral source, empowering women to make smart healthcare choices by identifying the country's best healthcare institutions based on robust criteria that consider female patient satisfaction and clinical excellence.



The Women's Choice Awards are evidence-based quality designations that drive consumer appreciation through education, empowerment, and validation. Additionally, they recognize that Castle delivers a recommendation-worthy customer experience.

Awards and Recognition



Get With The Guidelines – Stroke Gold Plus Award

Adventist Health Castle has earned the Get With The Guidelines® - Stroke Gold Plus Quality Achievement Award. Tami Swart (in red), Senior Director, Healthcare Quality Improvement, for the American Heart Association and American Stroke Association, was on campus to present Adventist Health Castle with the Get with The Guidelines® - Stroke Gold Plus Quality Achievement Award. The Gold Plus award represent advanced levels of recognition, and acknowledges Castle's commitment and success in implementing a high standard of stroke care by ensuring that their stroke patients receive treatment that meets nationally accepted, evidence-based standards and recommendations for a period of 24 months or more.



Awards and Recognition



WELCOA Gold Workplace Award

Adventist Health Castle has been certified as a Gold Well Workplace by the Wellness Council of America (WELCOA). The Gold Well Workplaces Award recognizes organizations that have successfully built comprehensive worksite wellness initiatives and are demonstrating concrete results.

“By successfully meeting these rigorous health promotion standards, you have clearly demonstrated your commitment to improving the health and wellbeing of your most valuable asset—your employees,” wrote Sara Rauch, WELCOA director of Strategy & Planning. “Moreover, by

achieving this designation, your organization will be recognized by the Wellness Council of America as one of the nation’s healthiest companies in 2016.”

WELCOA’s Well Workplace awards are based on a criteria of seven “Cs”: Capturing CEO support; Creating a cohesive wellness team; Collecting data to drive health efforts; Carefully crafting an operating plan; Choosing appropriate interventions; Creating a supportive environment; and Carefully evaluating outcomes.

Awards and Recognition



Studer Group Excellence in Patient Care Award

The Studer Group® selected Adventist Health Castle to receive its Excellence in Patient Care Award for excellence in physician engagement in 2017. The recipients of the award were selected for achieving high physician engagement scores or significant rates of improvement in recent years. Excellence in Patient Care Awards are presented annually to a select group of organizations from Studer Group's partner base of hospitals, health systems, and physician organizations.

To be eligible for an award, an organization must demonstrate outstanding performance and achievement in patient care, employee engagement, or

physician engagement. The awards were presented at the 15th annual What's Right in Health Care® best practices conference, Aug. 1-3, 2017, in Chicago, Illinois. The conference attracts administrative and clinical healthcare professionals from the U.S., Canada, Australia, and beyond.

What's Right in Health Care aims to improve healthcare for patients, physicians, and staff through peer-to-peer sharing of leading practices. Presenters will share the strategies and tactics contributing to their top results in areas such as patient safety, emergency department wait times and employee satisfaction.

Awards and Recognition



Kathy Raethel inducted into Studer Group Fire Starter Hall of Fame

Studer Group, an outcomes-based healthcare performance improvement the Company, announced that Adventist Health Castle President and CEO Kathy Raethel, FACHE, MHA, MPH, RN, was selected as one of six healthcare leaders from across the U.S. and Canada for induction into the Fire Starter Hall of Fame in 2017.

Studer Group, which partners with healthcare organizations to build a sustainable culture that consistently delivers a great patient experience and the best quality outcomes over time, has announced that CEO Kathy Raethel is one of six healthcare leaders from across the U.S. and Canada selected for induction into the Fire Starter Hall of Fame.

The Fire Starter Hall of Fame Award is the highest award for excellence given by Studer Group. A “fire starter” refers to an individual who ignites the flames of passion for healthcare excellence, thus the award recognizes leaders who, through their dedication and passion, guide and support an organization’s commitment to excellence while keeping the true spirit of their organization alive and flourishing. Since its inception in 2004, fifty healthcare leaders have been named to the Fire Starter Hall of Fame.

Awards and Recognition

Adventist Health Castle honored with 12 Koa Anvil Awards

Adventist Health Castle's Marketing Department was honored in July with 12 awards at the 34th Annual Koa Anvil Awards. PRSA Hawaii organizes the competition to recognize outstanding public relations programs and tactics, and to encourage improved public relations performance and techniques. The Koa Anvil Awards captures and celebrates the four rings of excellence on which the Koa Anvil competition is judged: research, planning, execution and evaluation. AH Castle was recognized for the following Koa Hammer Awards:



IN SICKNESS & IN HEALTH TV

CATEGORY: Marketing Consumer Products: Healthcare

IN SICKNESS & IN HEALTH POSTCARDS (SEMINARS)

CATEGORY: Direct Mail/Direct Response

IN SICKNESS & IN HEALTH INTEGRATED HEALTH CAMPAIGN

CATEGORY: Integrated Communications: Associations/Government/Non-Profit Organizations

IN SICKNESS & IN HEALTH RADIO

CATEGORY: Public Service: Associations/Non-Profit Organizations

IN SICKNESS & IN HEALTH RADIO

CATEGORY: Marketing Consumer Products: Healthcare

IN SICKNESS & IN HEALTH SEMINARS

CATEGORY: Marketing Consumer Services: Healthcare Services

IN SICKNESS & IN HEALTH TV

CATEGORY: Creative Tactics

IN SICKNESS & IN HEALTH TV PROGRAM

CATEGORY: External Video Programs

IN SICKNESS & IN HEALTH RADIO WEEKLY PROGRAM

CATEGORY: Audio Programs

WINDWARD HEALTH

CATEGORY: Newsletters: External Audiences Primarily

ULUPONO MAGAZINE

CATEGORY: Internal Communications: Associations/Government/Non-Profit Organizations

THE EMERGENCY ROOM AT CASTLE MEDICAL CENTER

CATEGORY: External Video Programs

Awards and Recognition



Aster Awards

Adventist Health Castle has received two prestigious Aster Awards. The 2017 Aster Awards recognizes outstanding healthcare professionals for excellence in their advertising/marketing efforts for the calendar year 2016. The Aster Awards, one of the largest national competitions of its kind, is hosted by Marketing Healthcare Today Magazine and Creative Images, Inc.

The medical center won in the following categories:

CATEGORY: Newsletter/Internal – Series

GOLD AWARD: Ulupono Magazine

GROUP: Hospital 150 - 299 beds

Gold Awards – Score of 95 to 99 (top 5% in the nation)

CATEGORY: Newsletter/Internal - Single

BRONZE AWARD: March 2017 Ulupono Magazine

GROUP: Hospital 150 - 299 beds

Bronze Awards – Score of 85 to 89 (top 16% in the nation)

The 2017 Aster Awards received nearly 3,000 entries from across the United States as well as several foreign countries. All entries are reviewed by a panel of industry experts and are scored on multiple criteria with a possibility of 100 total points. Awards were issued for entries that received top marks from judges placing them in the top 16% of the nation for advertising excellence. Judging criteria included creativity, layout and design, functionality, message effectiveness, production quality and overall appeal.



Star Advertiser's People's Choice Award

The Honolulu Star-Advertiser annually proudly presents a collection of "Hawai'i's Best" awards—as chosen by loyal readers. The publication's 500,000-plus readers voted and placed Adventist Health Castle's Hawai'i Center for Metabolic and Bariatric surgery on the list of "Hawai'i's Best" that was published in June 2017.

Mission

"I would like to convey my appreciation to the staff on the Pulama Unit for all the help you've given me, not only with my physical and medical needs, but with my mental and emotional wellbeing. The past 2 months have been the best I've felt in a long time. Whether it was a laugh, making me smile, someone to listen or talk to. It's given me a sense of belonging. I've been lost for a long time, but now I have quality of life rather than just existing. For that I thank you all!!!"

— A thank you note from a patient

Mission



Community Empathy Projects

In 2017, each hospital department and outpatient clinic chose a community empathy project to expand our core competency of “Love Matters” beyond the workplace. “Love Matters in Our Community” was launched, and empathy opportunities included feeding the homeless, cleaning up beaches, visiting retirement homes, donating clothing, encouraging community leaders and sending a care package to University Medical Center Las Vegas after the concert shooting. Castle associates partnered with Camp Agape, Key Project, Mental Health Walk, Susan G. Komen Run/Walk, Ronald McDonald House, Saint George Church, Weinberg Village, Waimanalo Elementary School, Windward

Spouse Abuse Shelter, Hawaiian Humane Society and River of Life Mission, as well as our own Infusion Center and Palliative Care program. Each department was budgeted \$30 to spend as they chose and projects were captured and creatively displayed at both the November leadership training and in the hospital lobby. Our Marketing Department also put together an inspiring video revealing the purpose and passion of our Castle Ohana. It was estimated that 1296 volunteer hours were spent and over \$63,000 in donated goods and services were distributed to inspire health, wholeness and hope in our community. Mission accomplished!



Mission

Mission Week

This year, during Mission Week, June 19-23, Adventist Health Castle focused on its new mission statement, “Living God’s love by inspiring health, wholeness and hope.”

The week began with Chaplain Bryan Lewis, who presented an overview on how our Castle ‘Ohana live God’s love every day as they deal with patients and each other. On Tuesday, Darrin Gould, MD, hospitalist and psychiatry and neurology physician, spoke on inspiring wholeness by choosing to view challenges as opportunities. On Wednesday, Nicole Kerr, Director of Wellness & Lifestyle Medicine, inspired health with a spirited presentation on Digital Toxicity, and how to navigate safely though our digital age, and set healthy boundaries.



Mission



I Love Kailua Town Party

As it has for many years, Adventist Health Castle presented a mini health fair at Kailua's biggest event of the year: the 25th Annual "I Love Kailua" Town Party. Visitors learned valuable health information, met with our physicians, and picked up free giveaways.



Mission

Boys and Girls Club

The partnership between Adventist Health Castle and the Kailua Boys and Girls Club completed a third year in 2017. As healthcare providers focused on whole health, Castle recognizes our responsibility to promote and support wellness beyond our medical center and into the community. The focus of the association with the Boys and Girls Club is to help children develop healthy lifestyle habits at an early age through teen years, thus setting them on the path to a longer and healthier life.

Castle's Wellness and Lifestyle Medicine Department has provided 72 twice-monthly cooking classes at the clubhouse. Classes promote basic nutrition, simple cooking tasks, principles of food safety, cooperation, etiquette, and the value of gathering, sharing food, and socializing. Classes consist of club members ranging in age from 7 to 17 and the mixed age group setting encourages older children to learn mentoring skills as they interact and assist



the younger children. In 2017, 16 Castle administration and wellness staff joined 27 club members in cleaning up our local beach, enjoying the afternoon, our beautiful environment, and one another's company. In 2018, our focus is on building teen resiliency to help our youth make smart, healthy decisions, avoiding behaviors such as smoking, alcohol, and technology misuse. Select current events will be reviewed, and conversation will be facilitated, as the teen club members reflect upon their choices to make healthy decisions rooted in prevention and safety. Themes covered will include forgiveness, gratefulness, respect, and self-esteem.

Mission



“Lethal Breeze” drill prepares hospital staff for terrorist attack

Adventist Health Castle partnered with Marine Corps Base Hawai’i in an exercise that simulated a terrorist attack on the base. Local, state and federal agencies took part in the drill named Lethal Breeze, in which a drone attack and explosions resulted in numerous casualties.

After the simulated attack, more than 31 “patients” were taken by ambulance and other vehicles to the ED at Castle. Castle’s Emergency Services Department staff received “patients” with broken bones, impaled individuals, respiratory issues, and head injuries. The mass casualty drill was just one of several exercises that Castle conducts each year to serve our community in the event of an actual disaster.



Mission

Holiday Community Outreach

- In an annual event at AH Castle, hospital associates collected funds in their various departments and units totaling \$3,600.00, which provided 20 needy Windward O'ahu families with gift cards for Thanksgiving meals and 20 homeless families with a hot Thanksgiving meal.
- For the fifth year, Castle associates and administrators arrived in the early morning hours at the three homeless shelters run by the Honolulu-based Institute for Human Services to serve Christmas breakfast for approximately 450 residents. Vegetarian chili, rice, eggs, au gratin potatoes, croissants, oranges, and candy kisses were donated by the hospital. After breakfast, gifts totaling

\$1,000 in value and donated by Castle's leadership and associates were distributed by Santa and Mrs. Claus to the children who were staying at the shelter. Gifts of toiletries donated by associates were also distributed.

- This past Christmas, Castle's Medical Staff and Castle Health Group, a consortium of physicians affiliated with the hospital, made contributions once again to Weinberg Village Waimanalo, a nearby independent non-profit facility that provides transitional housing and other services to families that are homeless or at risk. The physicians donated thirty Christmas trees, thirty tree stands, and thirty bags of tree ornaments that were all very much appreciated.



- This year's annual Medical Staff Christmas Party Auction raised \$3,717. Proceeds were evenly split between Family Promise and the Windward Spouse Abuse Shelter.
- For more than twenty years now, Castle's Giving Tree Project has assembled collections of gifts during the Christmas season for Windward families who otherwise would have to go without. Last year, twenty-nine such families were treated to gifts, and several more families received canned and non-perishable food, all donated by Castle associates and physicians. The total value of the gifts donated was over \$11,000.

Mission

Inpatient Satisfaction with Spiritual Care

Adventist Health Castle is a faith-based organization dedicated to meeting the spiritual needs of our patients and their families.

In addition to the initiatives described in the preceding pages, we focused in 2017 on the following:

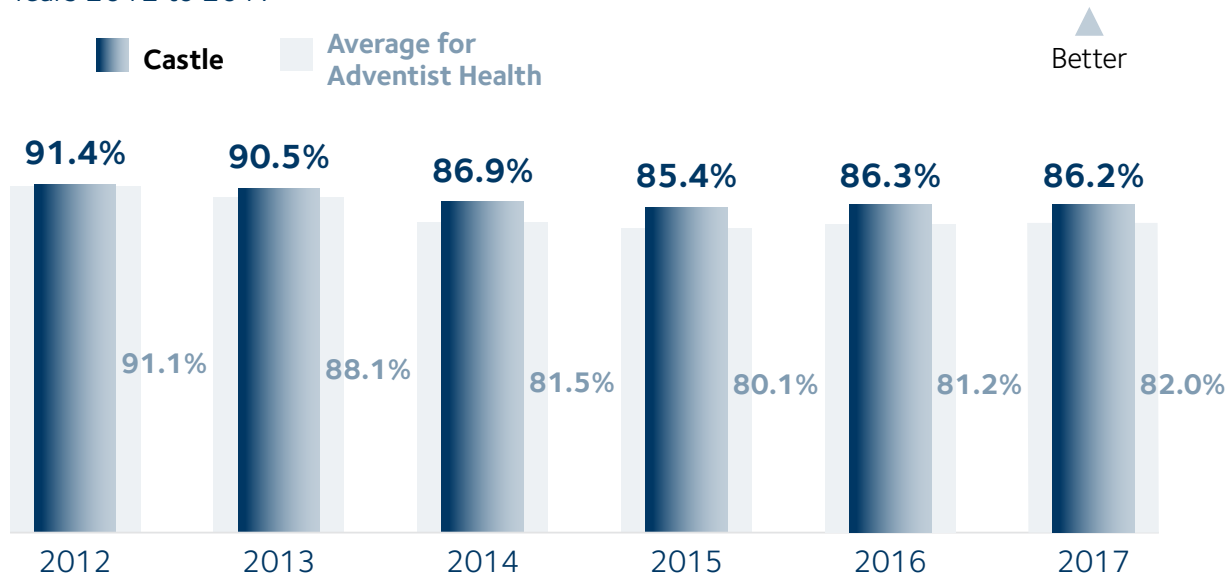
- Overhead prayers every morning at 8 a.m. and every evening at 8 p.m.
- Inspiration prayer cards on all patient meal trays
- Daily rounding on patients by Castle chaplains

- Encouraging associates to listen to the spiritual needs expressed by their patients and to pray with them or refer them to the chaplain when appropriate
- Bereavement and grief support by members of our Pastoral Care staff.

The chart below compares the level of satisfaction that Castle's patients have with their spiritual care to the average found at the other 20 hospitals within the Adventist Health system.

Satisfied with Attention to Unique Religious/Spiritual Needs

Years 2012 to 2017



Patient Satisfaction

“We are very, very, impressed with the hospital, the staff and the Dr. Brunel. Everything. You guys were outstanding. I can’t say enough about the nursing staff, the assistants, the cleaning people, the pharmacy, and the pastors. It is like they are doing a job that they like. This could have gone south real quick. I have been in hospitals in Boston and not treated as well. Everyone at Castle is so kind and considerate. Every good adjective you could think of. At the end of their shift they would say ‘thank you for letting me care for you today.’ It blew my mind. The medical establishment on the east coast has to go a long way before they achieve what you already have. I was blessed it happened when it did. It was divine intervention. I was on a plane the day before and was going to be on a cruise the day after. If it would have happened one day differently, I would not have ended up at Castle. They did a cat scan and sent it to Dr. Brunel. He choose to come in and see me then, he didn’t wait until the next morning. There is no way that would have happened in Boston. Every day the man would come to see me, examine my wound and sit down and talk to me until I asked everything I need to ask. He would answer in a way I could understand. He never seemed like he was in a rush to leave me. The hospital doctors that I have had before, they have little to no bedside manner. I did not realize that this kind of hospital service is available. Today he is on vacation in Canada. He answered the phone and talked to me today while he is on vacation. I am supposed to call him back tomorrow with an update while he is on vacation. I am amazed and grateful.”

— Comments from a post discharge call

Patient Satisfaction

Inpatient

Adventist Health Castle participates in the Hospital Consumer Assessment of Healthcare Providers and Systems survey, known as HCAHPS, which measures the patient's perspective on hospital care. This standardized tool allows objective and meaningful comparisons between hospitals in areas that are important to consumers.

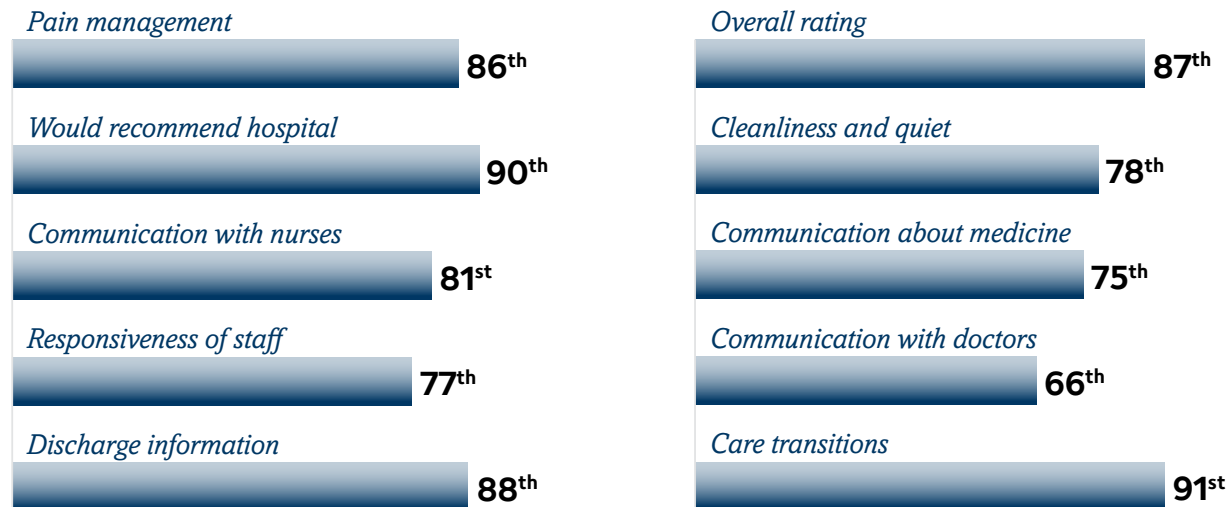
The charts on this and the following three pages show Castle's patient satisfaction ratings from 2017.

As can be seen in the chart below, Castle scores at or above the top 25% of hospitals nationwide in most areas of inpatient satisfaction.

Inpatient Satisfaction National Percentile Ranking

Year 2017

Better ►



Patient Satisfaction

Birth Center

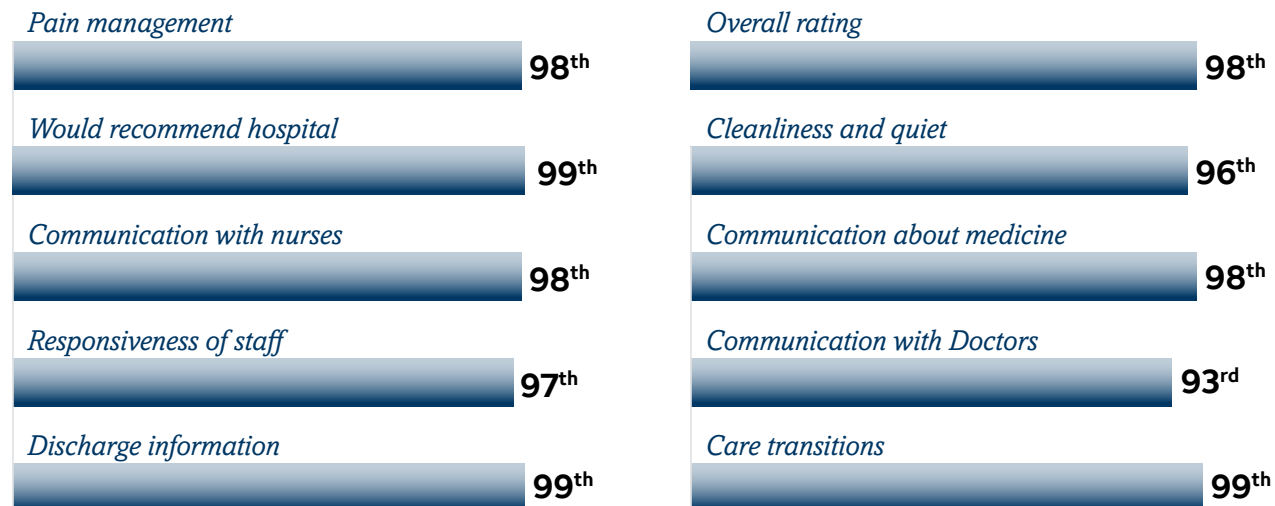
Satisfaction of patients with Adventist Health Castle's Birth Center is nothing short of extraordinary.

We are very proud that the number of patients who said they would recommend our Birth Center to others has placed us in the top 1% of hospitals nationally.

Birth Center Patient Satisfaction National Percentile Ranking

Year 2017

Better ►



Patient Satisfaction

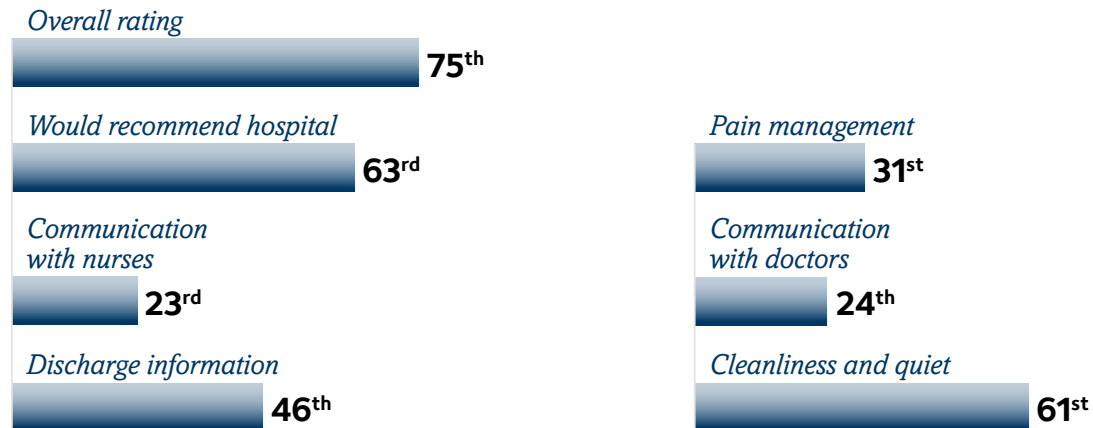
Emergency Department (ED)

Patient satisfaction with our Emergency Department has improved since completing a full-scale renovation project in 2016, with our overall rating reaching top quartile performance. Focused efforts are in place to improve these scores further in 2018.

ED Patient Satisfaction National Percentile Ranking

Year 2017

Better ►



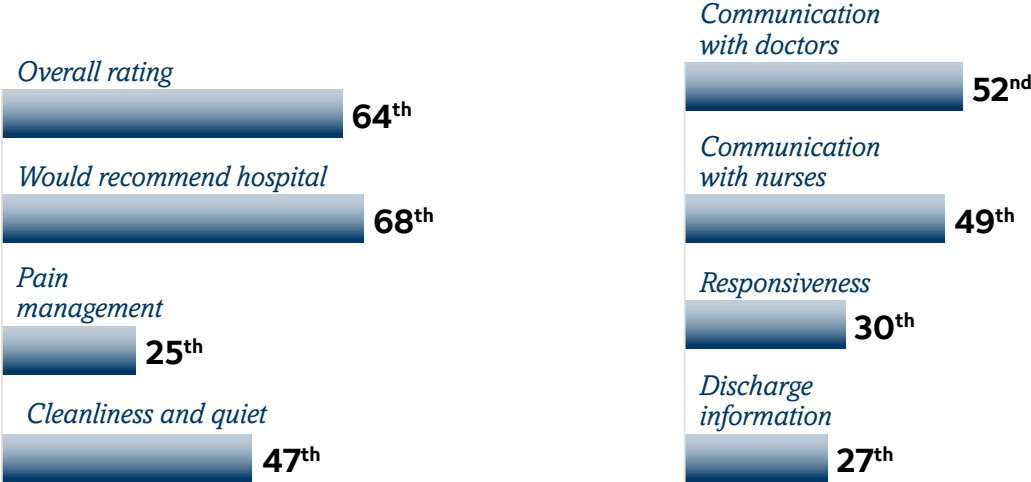
Patient Satisfaction

Outpatient Surgery

Increased surgical volumes have created challenges in the area of patient satisfaction with outpatient surgery, however improvements to pre-op teaching, the timeliness of first cases of the day, and decreasing cancellations and delays have improved the patient experience in the second half of 2017.

Outpatient Surgery Satisfaction National Percentile Ranking

Year 2017

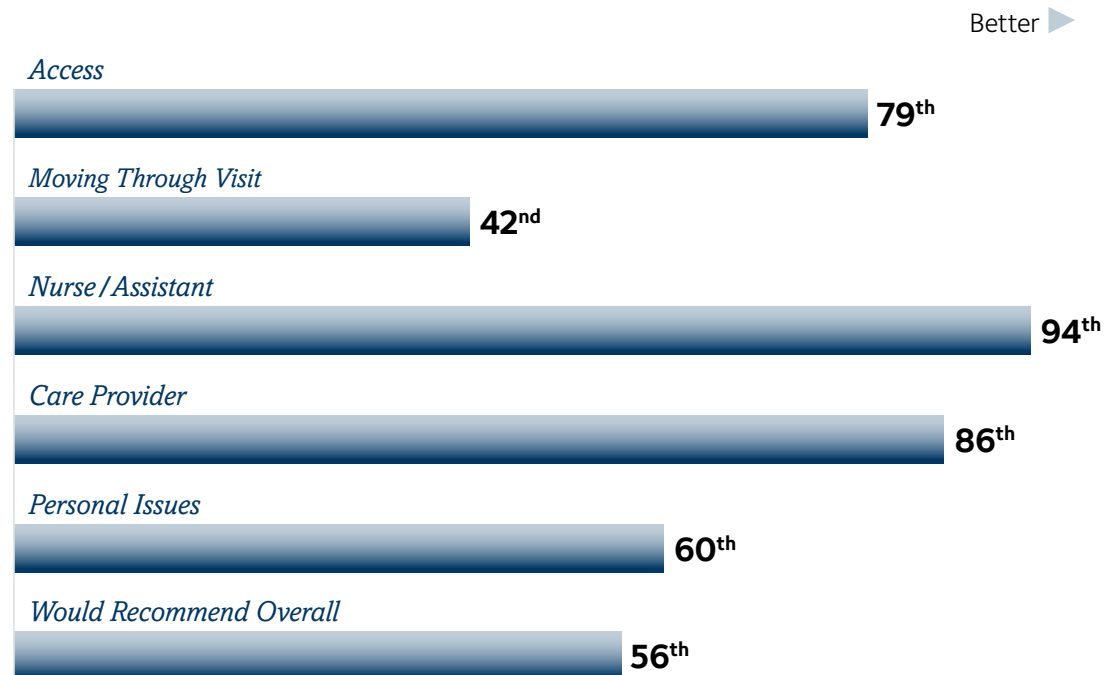


Patient Satisfaction

Castle's community based clinics participate in the Clinician & Group Survey known as CG CAHPS, which assesses patient's experiences with health care providers and staff in doctors' offices. This standardized tool allows objective and meaningful comparisons between physician clinics in the areas that are most important to consumers.

Community-Based Clinics Percentile Ranking

Year 2017





Physician Satisfaction

Although I grew up in Indiana, my journey to Adventist Health Castle began when I married an Oahu native in 2008. At that moment I had committed to a life in Hawaii. After finishing training in California, I quickly took a hospitalist position at Castle and we moved to Oahu.

During my medical school and residency training, I had rotated through 10+ hospitals. My experience includes first access county hospitals, large community hospitals and prestigious academic centers. Although I took the job at Castle with apprehension, I knew within my first week that Castle was different, and that it was my home for the foreseeable future.

I felt immediately accepted and respected amongst the medical staff and peers. Just as I could talk about a patient with a nurse, I could just as easily have a discussion with a veteran surgeon, chief of staff or administration. This culture permeates Castle and I believe leads to our excellent patient outcomes and high physician satisfaction.

Aloha exudes from the associates, the nurses, the administration and the medical staff, making Castle a joyful place to practice. As a hospitalist, we bounce from unit to unit and floor to floor. When entering a new floor, it's common to get be greeted with questions like "How are your daughters?" or "Did you catch any surf yesterday?" before turning our attention patient care. You feel the ohana in the work environment and I believe this ohana extends to the patients.



At Castle, you truly are member of the community you are caring for. In my first year working at Castle, I was talking to a patient and her cousin at bedside. It didn't take long to realize that through my wife, we were in fact distant cousins! This past Christmas Eve, a family member visiting from the mainland could not stop talking about service and care he received at Castle.

I am truly blessed to have found Castle and have the opportunity to care for the Windward community. I am proud to be part of an ohana of outstanding physicians and hospital staff that gives patients exceptional care.

Physician Satisfaction



Mahalo nui loa and God Bless,
— Robert Smitson, MD

Physician Satisfaction

Castle's medical staff provided feedback on the hospital's clinical service areas, administration, and overall quality by participating in the Physician Engagement Survey. This survey is administered by Professional Research Corporation (PRC), which compares our results with over 350 other hospitals nationally that also participate in the survey.

This year's results were excellent. We were able to use the results from the previous year's survey to design and implement substantial improvements in the following areas:

ADMINISTRATION: *Administration met regularly on a 1:1 basis with individual physicians to receive input and feedback.*

CARDIOLOGY: *An additional team was added to the Cardiac Cath Lab so both cardiac labs are available Monday through Friday. Additional radiation protection equipment (lead shields and lead caps) and new equipment (ultrasound probe and radial devices) were also purchased for Cath Lab physicians.*

LABORATORY SERVICES: *Laboratory staff conducted a meet and greet in the lobby of the Harry and Jeanette Weinberg Medical Plaza and Wellness Center to receive feedback from office staff on how to improve communication with the Laboratory.*



NURSING CARE: *Multi-disciplinary rounding was hardwired so that everyone involved in the patient's care meets together once a day to discuss the patient's care plan.*

RADIOLOGY SERVICES: *Radiology leaders attended physician meetings and visited physician offices to receive input and feedback.*

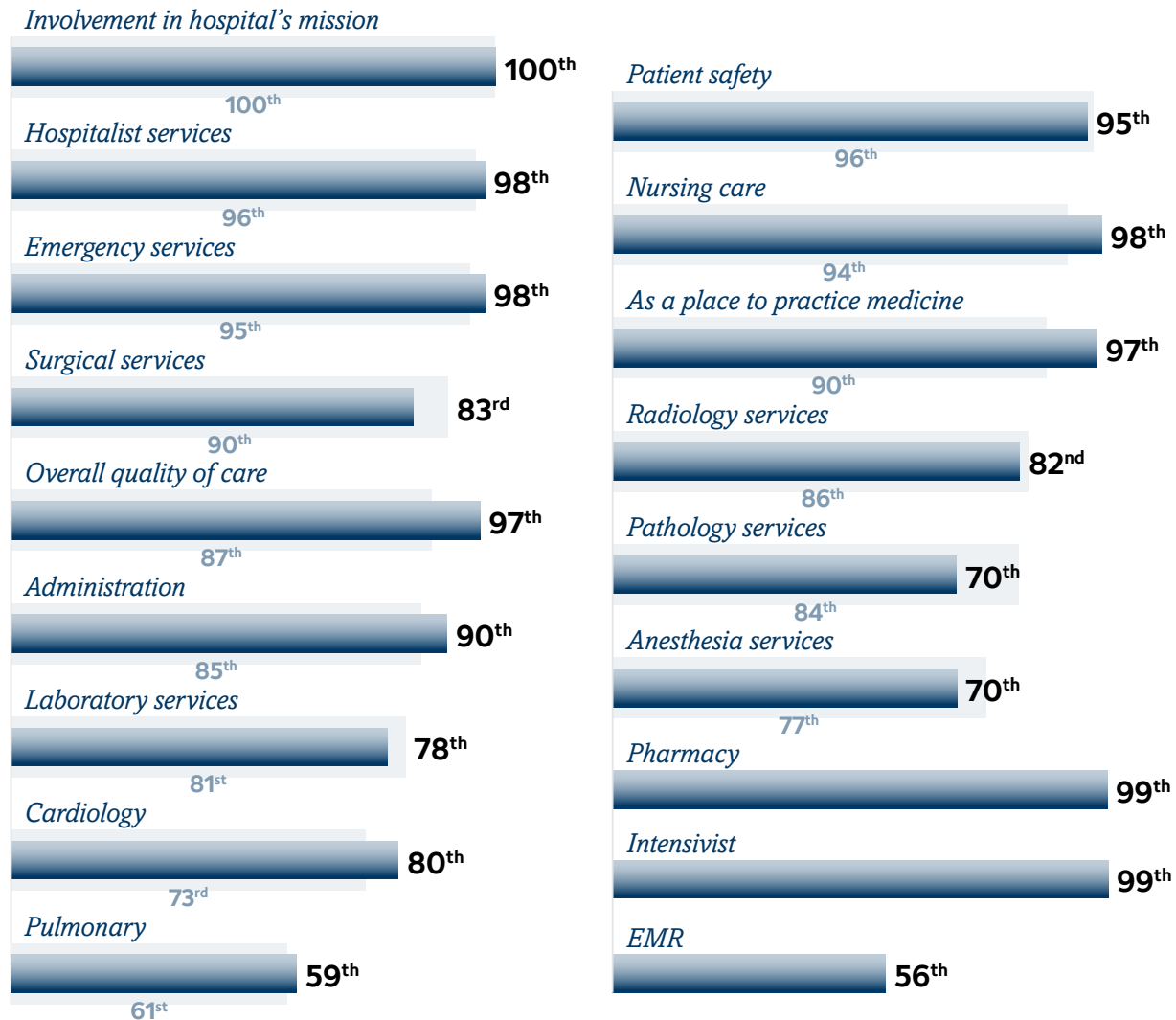
Castle is proud that 13 service areas were classified as top performing areas, with rankings at or above the 75th percentile. 3 other areas were classified as middle performing areas, with rankings between the 25th and 75th percentile. No areas were classified as low performing areas.

Physician Satisfaction

Physician Satisfaction PRC Percentile Ranking

2017 and 2016 Surveys

2017 2016 Better ▶



Associate Engagement

It must have been my destiny to work at Adventist Health Castle. It was during my senior year in high school a group of us decided to come to Castle and sing Christmas songs to the SNF patients. I was touched by the patients and how staff interacted with them. There were a lot of smiles and loving support for one another. Before we left, I asked the staff if I could come back and visit. From that day on I would swing by on Fridays to sit and talk with patients.

Coming home to the island after two years away, I applied here at Adventist Health Castle (Castle Memorial Hospital at the time). I was hired in the Facility Department in September 1979 as a maintenance helper and after a year I moved up as a technician and was added to the after-hours on-call rotation. Over the years I have gained skills and knowledge that I now share with the facility team. Back when I first started the department had many of the same responsibilities as it does now; preventive maintenance to be done, generators to be tested and completing work orders just to name a few.

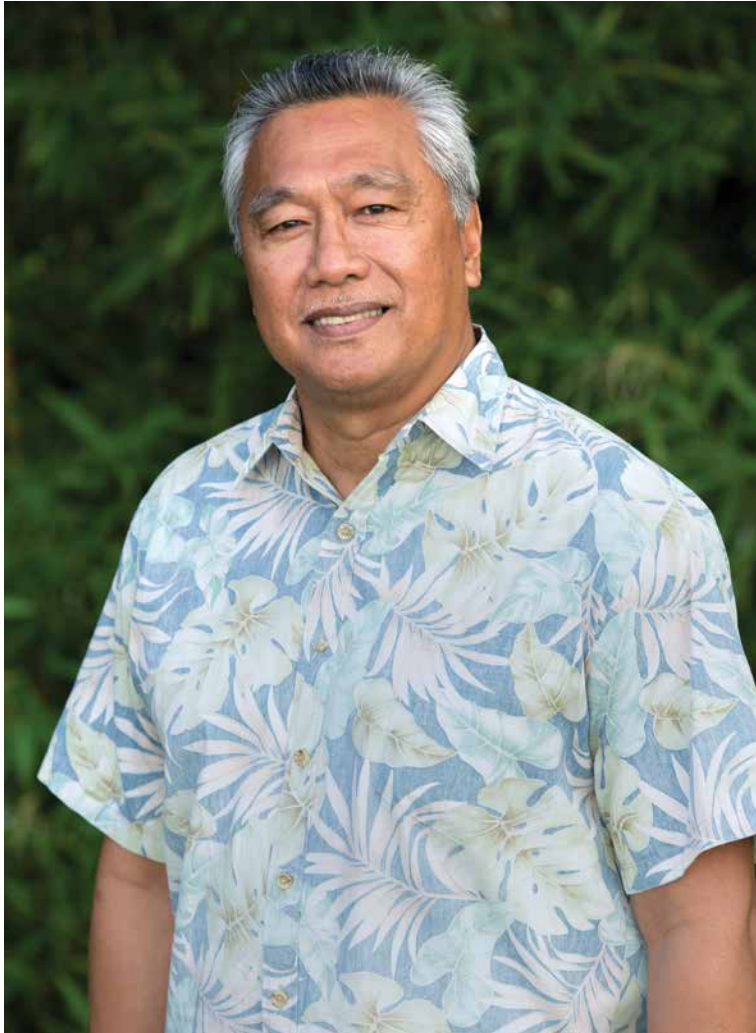
Change is inevitable and with it comes with both challenges and opportunities. For me the biggest change of my career has been my transition from technician to manager. The daily challenges of problem solving, juggling various department needs, vendors, and developing goals and supporting our Facility team has kept me on my toes (and running on some days). With the support of my Directors, Administration and the Management team at Castle, I find the



challenge very rewarding. I've been given the opportunity to be part of a team to ensure we are meeting expectations for all who we provide service too. I'm thankful for the opportunity to work with a skilled Facility team who are committed to fulfilling the Hospital's values and mission. I learn from them every day.

I have been fortunate to have worked for Castle for my entire career. It has afforded me a rewarding career with financial stability, excellent health care for my family, wonderful friends and a sense of belonging. In the 38 years I've worked here, I have met wonderful people, physicians, volunteers and co-workers. I am humbled and proud I have been a part of this team. Each person I have worked with throughout my career has help mold me into the person I am today. This is a place of OHANA and for that I am truly grateful.

Associate Engagement



— Joel Pedrina

Each year Castle associates provide feedback using a survey developed by Gallup, Inc., to measure associate engagement. This survey is used by numerous health care and social service institutions across the United States including Adventist Health, with a total of 1.3 million persons participating.

The chart on the facing page shows Castle's national percentile rankings of our associate engagement scores in twelve different areas. These rankings are compared to the average of all hospitals in the Adventist Health system.

We are pleased that since we began using the Gallup survey, Adventist Health Castle has been a top performer in Adventist Health. The hospital has also distinguished itself by having the highest level of associate participation in the survey.



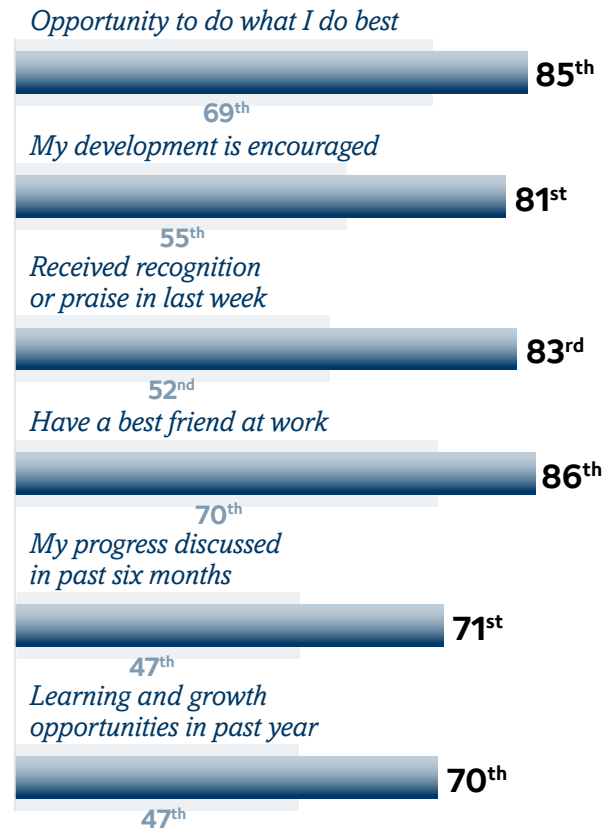
Associate Engagement

Associate Engagement Gallup Percentile Ranking

2017 Survey

■ **Castle** ■ Average for Adventist Health

Better ►



Inpatient Care

“I felt like I stayed at a 5 star hotel. Everyone from nurses, doctors, PT, dietary, housekeepers had wonderful hospitality and service. They were so professional. Everyone knocked on my door and asked if they can come in, introduced themselves, told me why they were there, washed their hands, checked my name band, explained everything they were doing, and reassured me. They went above and beyond. The nurses spent time, explained my procedure, my aftercare, and my pills. Dietary brought me yogurt every morning that wasn’t even on the menu. One even came in and gave my daughter, who had been with me all day, a meal. I live in town and am going to spread the word to go to Castle, no traffic, best and safest staff.”

— A thank you note from a patient

Outpatient Care

“The nurses, doctors, receptionist and entire staff treated me as if I was a queen! I definitely will return to Castle for any future procedures.” “I am grateful for the caring staff that took care of me. All my anxieties that I feared before the procedure were relieved by the great care that I experienced.” “The nurse mailed me a card saying that it was her pleasure to take care of me. And thanked me. That was really special.”

— Outpatient surgery comments

Inpatient Care

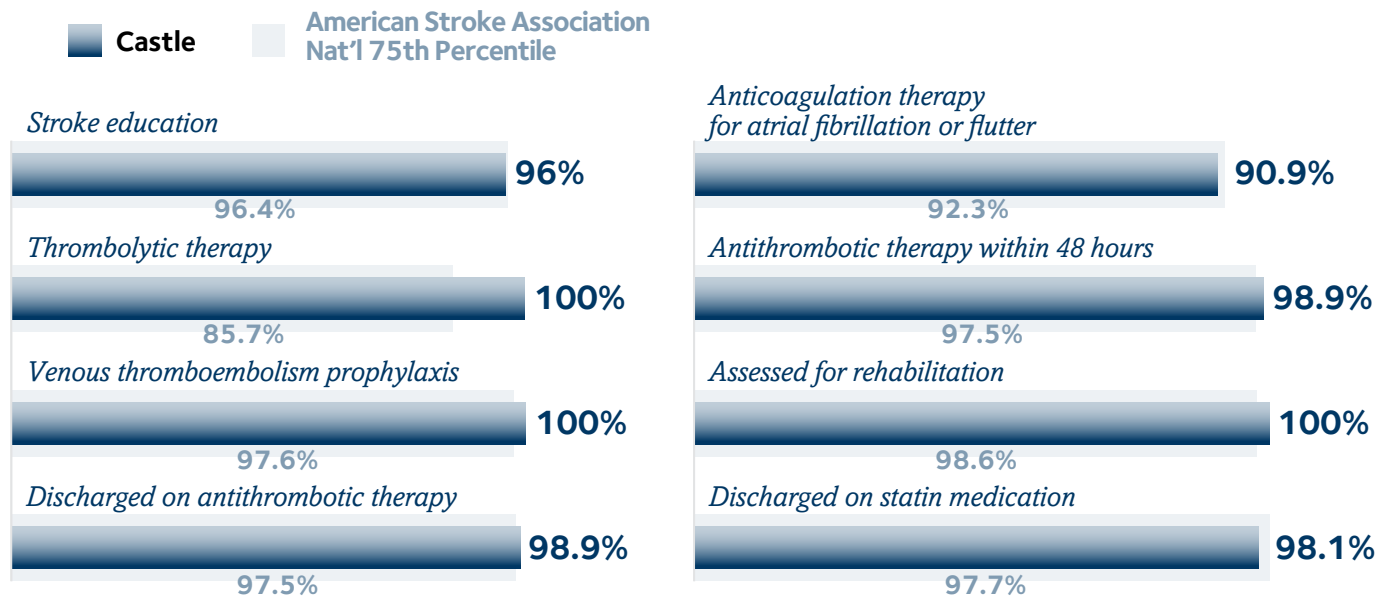
Stroke

Castle has maintained its designation as an official “Get With The Guidelines®” (GWTG) hospital for stroke since 2006, after implementing the secondary prevention guidelines issued by the American Heart Association and the American Stroke Association. Research has established these guidelines for the optimal treatment of patients experiencing stroke.

We are pleased to note that in 2017, we achieved near 100% compliance with most of the GWTG guidelines for the treatment of stroke. The hospital continues to focus its efforts on clinical feedback and collaboration with physicians to make further improvements.

Stroke Guideline Compliance

Year 2017



Inpatient Care

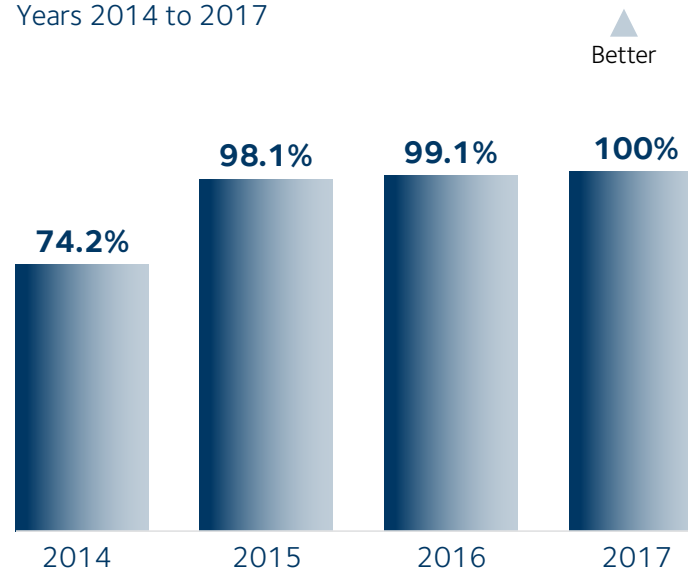
Venous Thromboembolism (VTE)

Venous thromboembolism is a disease that includes deep vein thrombosis (DVT) and pulmonary embolism (PE). DVT is a condition that happens when a blood clot forms in a deep vein, usually in the leg. PE then happens if a clot breaks off and travels through the bloodstream and into the lungs.

VTE is the leading cause of preventable hospital deaths. Research has established best-practice guidelines that, when followed, produce the best clinical outcomes for hospital-acquired but potentially preventable VTE. Castle has dedicated resources to consistently implement these life-saving guidelines.

VTE Prophylaxis Guideline Compliance

Years 2014 to 2017



Inpatient Care

Staff Vaccinated Against Influenza

Influenza, also known as the flu, is a contagious respiratory illness caused by the influenza viruses. Serious outcomes of influenza infection can include hospitalization or death. Some persons, such as older adults and those with certain health conditions, are at higher risk for serious flu complications, and many patients at an acute care hospital would normally be part of this higher-risk group.

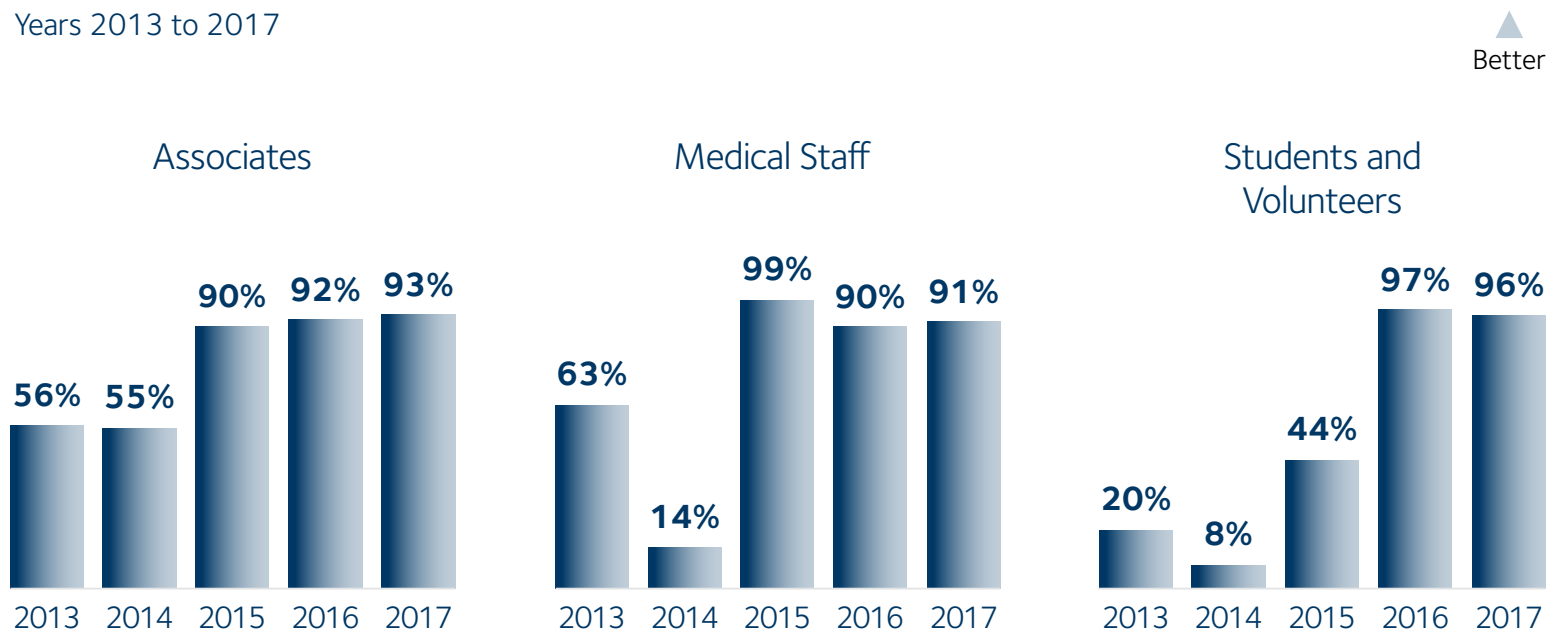
Receiving an influenza vaccination each year is the best way to keep from becoming infected and then spreading the flu to others. The U.S.

Department of Health and Human Services has set as a “Healthy People 2020” goal for health facilities influenza vaccination coverage of 90% of a facility’s work force.

Over the last four years, Castle has substantially increased the percentage of our associates vaccinated against the flu through the use of special flu vaccine events and prize drawings for associates who are given the vaccination. As a result of the flu vaccine events, Castle was the first hospital in Hawaii to attain and exceed the “Healthy People 2020” vaccination rate of 90%.

Staff Vaccinated Against Influenza

Years 2013 to 2017



Inpatient Care

Surgical Site Infections

Surgical site infections (SSIs) are the most common health care-associated infections in the United States. SSIs occur in approximately 1.9 of every hundred patients undergoing a surgical procedure. SSIs can result in substantial morbidity, prolonged hospitalizations, and even death.

The charts below show rates of SSIs at Castle in two classes of surgical procedures. Class I procedures are performed on non-infected sites excluding the respiratory, digestive, genital, and urinary tracts. Class II

procedures are performed on non-infected sites in the respiratory, digestive, genital, or urinary tracts.

Castle has implemented evidence-based practices to reduce the number of SSIs, including bathing patients with chlorhexidine prior to surgery, surgical personnel performing a surgical scrub of hands, up to the elbows, with an antiseptic agent, administering appropriate pre-operative antibiotics, and providing separate sterile instruments to close complex surgical incisions.

Surgical Site Infections per 100 Procedures

Years 2013 to 2017

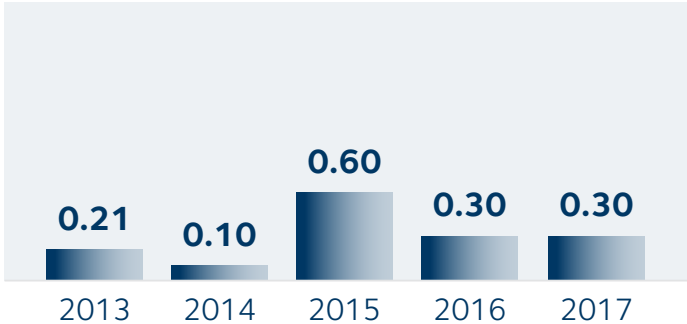
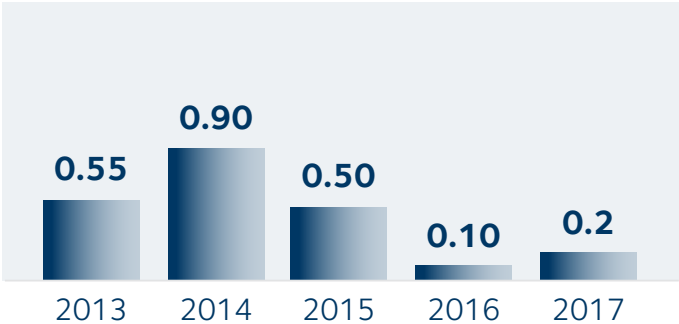
Better
▼

Class I

Class II

National Average = 1.9

National Average = 1.9



Inpatient Care

Catheter-Associated Urinary Tract Infections

Catheter-associated urinary tract infections (CAUTIs) cause over 35% of all hospital-acquired infections in the United States. CAUTIs can lead to subsequent bacteremia, extended illness, higher hospital costs, longer lengths of stay (LOS), and even patient death.

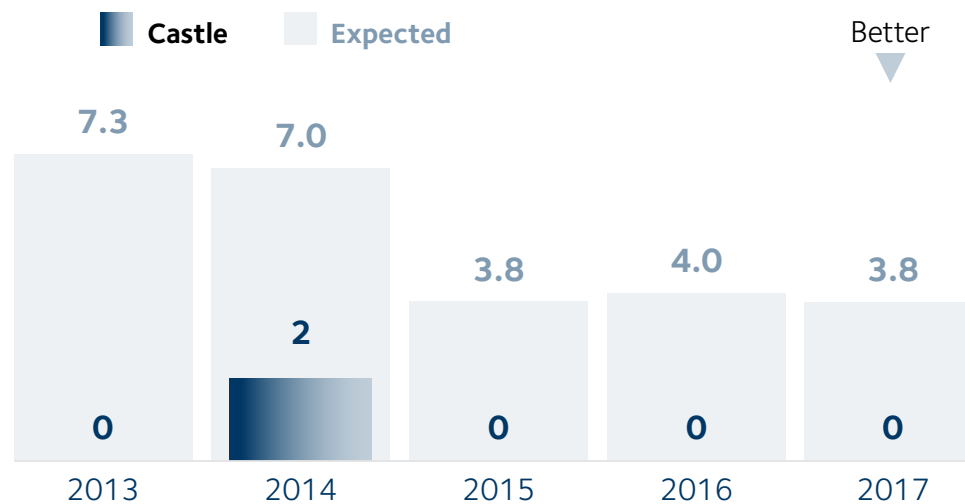
At Castle, healthcare workers wash their hands before and after putting in or removing a urinary catheter, wear gloves when handling the urinary

catheter, and wash their hands after removing their gloves. Every day doctors evaluate whether the patient still needs the urinary catheter. The urinary catheter is removed as soon as it is no longer needed.

Over the last five years, Castle has outperformed most hospitals in the United States in this measure. We are particularly pleased that the hospital has experienced no CAUTIS in the last three and a half years.

Catheter-Associated Urinary Tract Infections per 1,000 Catheter Days

Years 2013 to 2017



Inpatient Care

Central Line–Associated Bloodstream Infections

Central line–associated bloodstream infections (CLABSIs) can cause severe illness, extended lengths of stay (LOS), and loss of function, and can even be life-threatening.

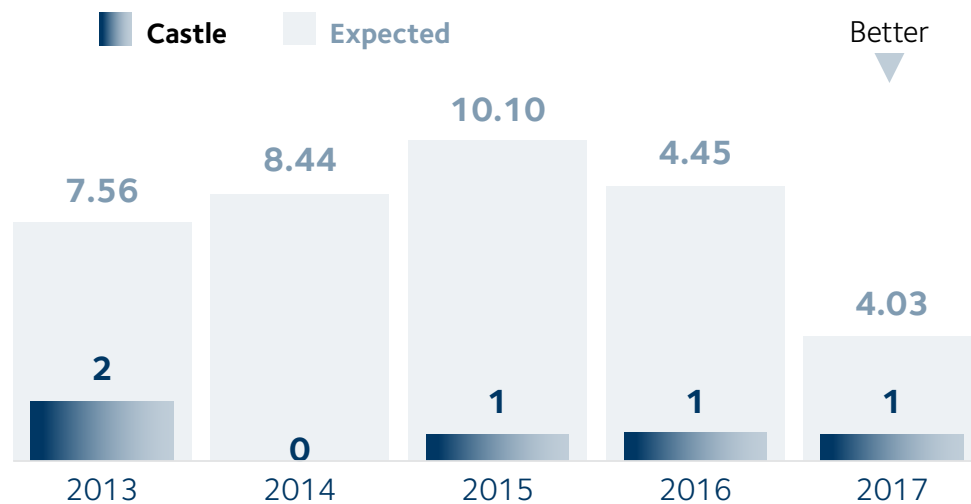
Castle’s goal is to eliminate these infections by implementing evidence-based practices to reduce bacteria that could enter the central line catheter. The doctors clean their hands, don a mask, bouffant cap, sterile gown, and sterile gloves before putting in the central line. Nurses clean their hands, wear gloves, and clean the central line opening with an

antiseptic solution before using the central line to draw blood or give medications. Nurses also clean their hands and don sterile gloves and a mask to change the bandage covering the area the central line enters the skin. Every day, the doctor evaluates every day whether the patient still needs to have the central line. The central line is removed as soon as it is no longer needed.

As with catheter-associated urinary tract infections, Castle has performed better in this area in recent years than most other hospitals in the nation.

Central Line–Associated Bloodstream Infections per 1,000 Line Days

Years 2013 to 2017



Inpatient Care

***Clostridium Difficile* Infections**

Clostridium difficile infections (CDIs) can cause severe complications for hospital patients that may compromise their ability to recover from illness. In health care settings, CDIs are linked to the use of antibiotics, which sometimes eliminate natural bacteria that help keep *Clostridium difficile* in check, and to environmental contamination by its spores.

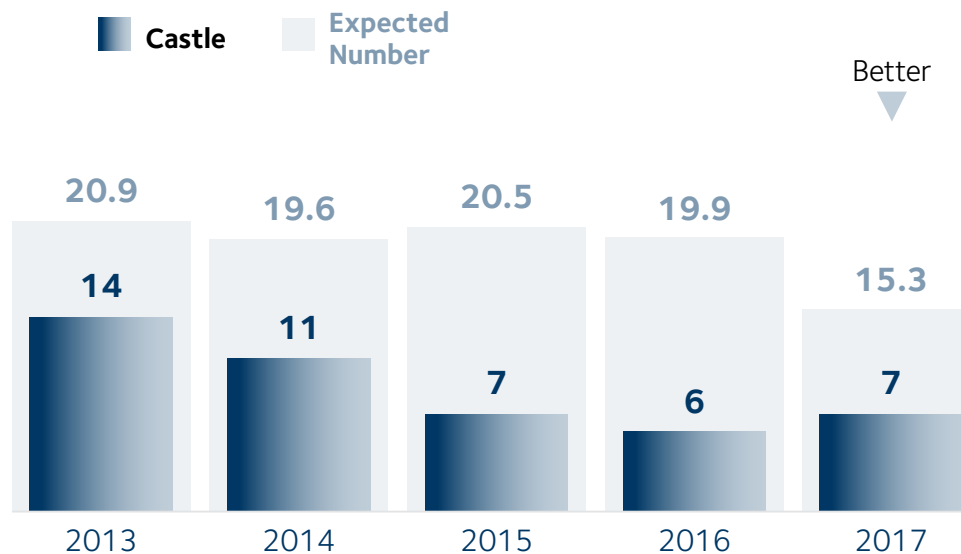
Castle uses a *Clostridium difficile* Bundle to reduce the incidence of CDI including early identification of patients at risk for CDI, prompt testing

and isolation precautions, pharmacy review of antibiotics, and cleaning shared patient equipment and the environment with bleach-based products. Castle also participates in a statewide hospital antimicrobial stewardship collaborative.

Over the last three years, Castle has further decreased the number of hospital-onset CDIs so that it is now well below the number expected by the Centers for Disease Control and Prevention (CDC).

***Clostridium difficile* Infections**

Years 2013 to 2017



Inpatient Care

MRSA Bacteremia

Methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia is a bloodstream infection caused by staph bacteria that have developed resistance to many antibiotics. This resistance makes MRSA infections difficult and expensive to treat, while extending the patient's length of stay and increasing the risk of death.

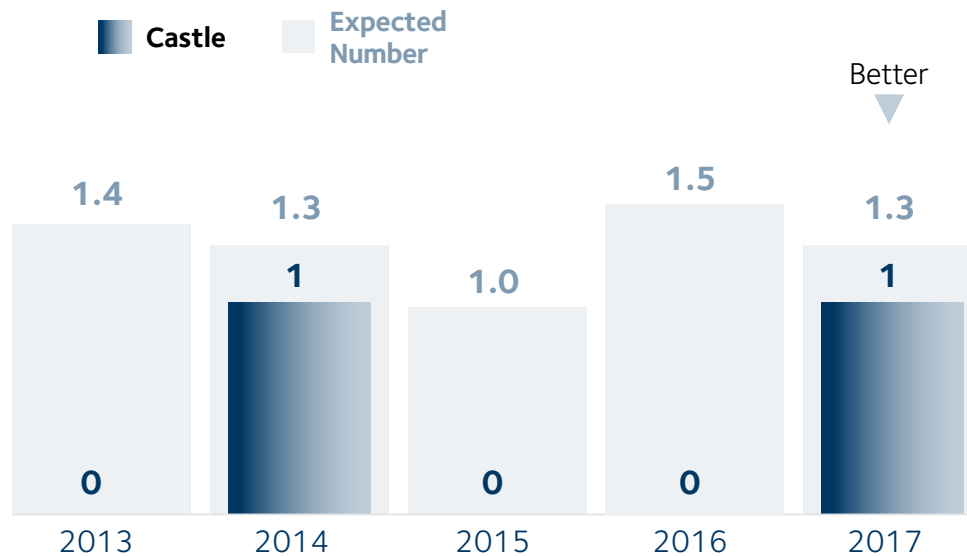
Castle prevents MRSA bacteremia through multiple approaches, including admission screening of high risk patients, isolation precautions,

monitoring of hand hygiene compliance, environmental cleaning with MRSA-active disinfectants, daily bathing of high risk patients with chlorhexidine, and electronic alerts to ensure isolation is initiated upon patient readmission.

During the last five years, the incidence of MRSA bacteremia at Castle has remained well below the number expected by the Centers for Disease Control and Prevention (CDC).

MRSA Bacteremia

Years 2013 to 2017



Inpatient Care

Hospital-Acquired Pressure Ulcers

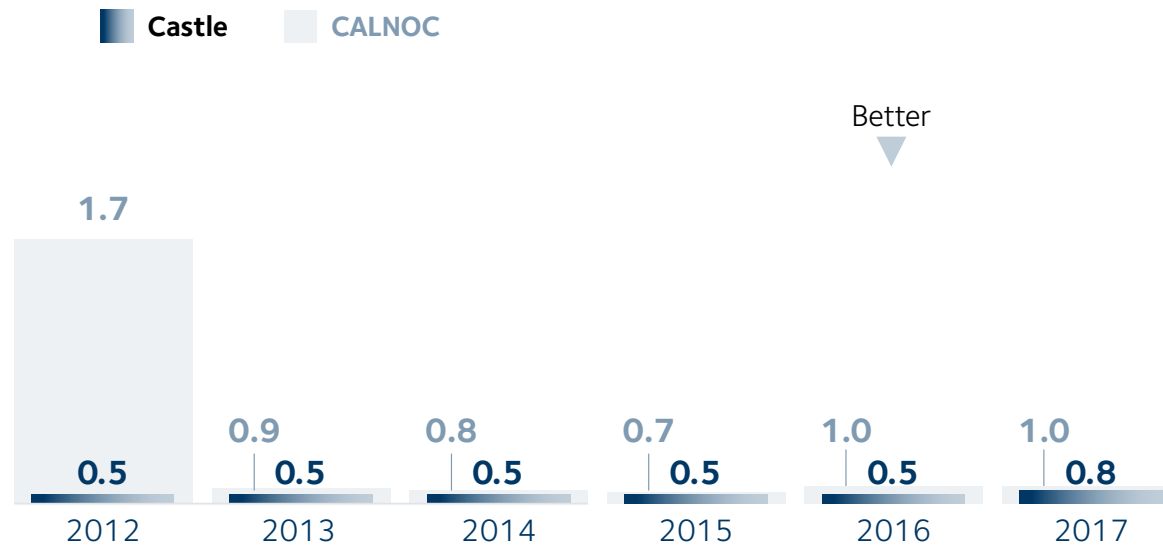
Pressure ulcers are areas of damaged skin caused by a variety of environmental conditions. Pressure ulcers can lead to patient discomfort, increased length of hospitalization, and other more serious complications.

Strategies to prevent pressure ulcers include keeping the patient's skin clean and dry, changing position frequently, and using pillows and other products that relieve pressure.

We are pleased that Castle's rate of hospital-acquired pressure ulcers remains well below the national average reported by the Collaborative Alliance for Nursing Outcomes (CALNOC).

Hospital-Acquired Pressure Ulcers per 1,000 Patient Days

Years 2012 to 2017



Inpatient Care

Early-Term Elective Deliveries

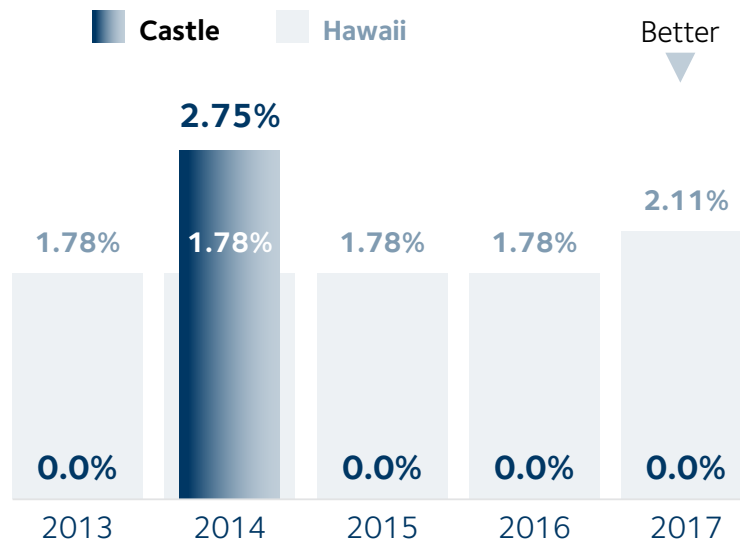
An elective delivery is a delivery done for a non-medical reason, such as the desire of the parents to schedule the baby's birth at a particular time. The American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP) have a standard that requires 39 weeks of gestation to be completed before an elective delivery, either vaginal or operative. Compared with newborns delivered at 39 weeks of gestation, early-term newborns born at 37 to 38 weeks are at higher risk for transient tachypnea of the newborn, pulmonary hypertension, hospital

stays greater than five days, and diagnoses associated with severe morbidities or death.

The number of elective deliveries that a hospital performs earlier than 39 weeks has recently become a measure of quality emphasized by The Joint Commission and the Centers for Medicare and Medicaid Services (CMS). Since 2015, Castle's Birth Center has developed procedural controls to prevent such deliveries.

Elective Deliveries Performed Before 39 Weeks

Years 2013 to 2017



Inpatient Care

Patient Fall Rate in the Medical and Surgical Units

Based on the average number of patient falls reported by the California Nursing Outcomes Coalition, and in accordance with our parent corporation, Adventist Health, Adventist Health Castle set a stringent target for 2017 of no more than 2.0 falls per 1,000 patient days. The hospital has consistently met this fall prevention target over the last five years.

We attribute this success to ongoing measures recommended by Castle's Fall Task Force, which is made up of team members from a variety

of disciplines, including nursing, pharmacy, imaging, physical therapy, and quality.

While we successfully met our target for 2017, we believe that even a single patient fall is one too many. We continually and aggressively seek ways to prevent falls and any associated injuries entirely.

Patient Falls per 1,000 Patient Days

Years 2008 to 2017



Inpatient Care

Thirty-Day Readmission Rates

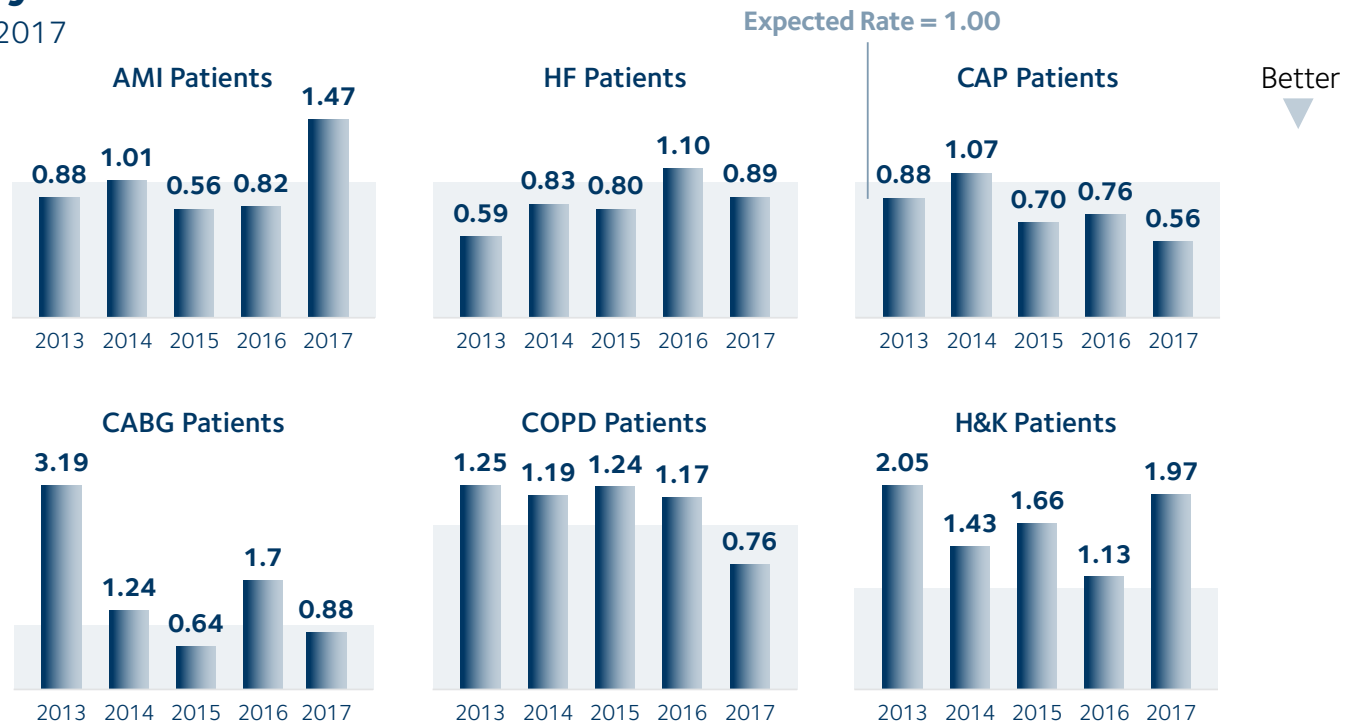
The readmissions program, created under the Affordable Care Act, was initially established to determine how often patients treated for acute myocardial infarction (AMI), heart failure (HF), and community-acquired pneumonia (CAP) had to return to the hospital within thirty days of discharge.

The rates on the chart below are risk-adjusted based on the patient's age, gender, past medical history, and other diseases or conditions. The expected risk-adjusted rate is 1.00.

Castle has implemented processes to help prevent readmissions, some of which include daily rounding with the physician and primary nurse to plan for discharge, medication reconciliation, and collaboration with those who are assisting with transition of care.

Thirty-Day Readmission Rates

Years 2013 to 2017



Inpatient Care

Acute Length of Stay

For several years, Adventist Health Castle has focused efforts on streamlining care processes so that patients can be discharged from the hospital and be returned to the healing environment of their own homes as soon as it is appropriate for them.

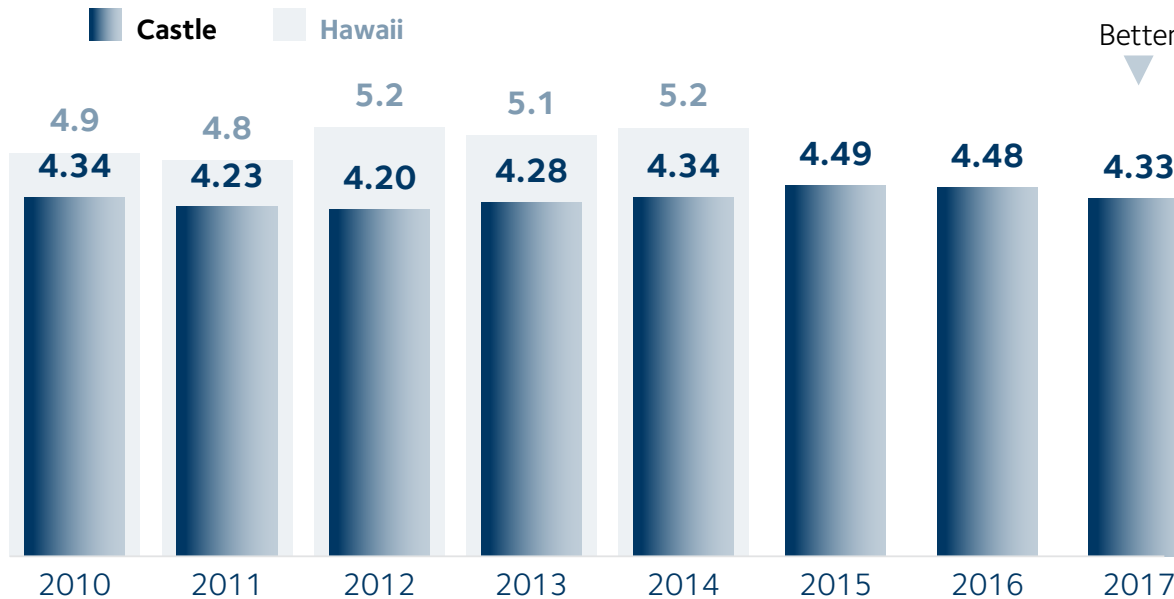
Our biggest challenge in this area continues to be finding appropriate placements for our patients who are economically and/or socially

challenged, may not have health insurance that covers external placements, and who need long-term therapy.

Efforts have been made to strengthen relationships with community-based facilities through Windward Community Partners, a coalition of health care organizations, in order to expedite long-term care placements for those patients who require them.

Average Acute Length of Stay

Years 2010 to 2017



Inpatient Care

Risk-Adjusted Mortality Rate

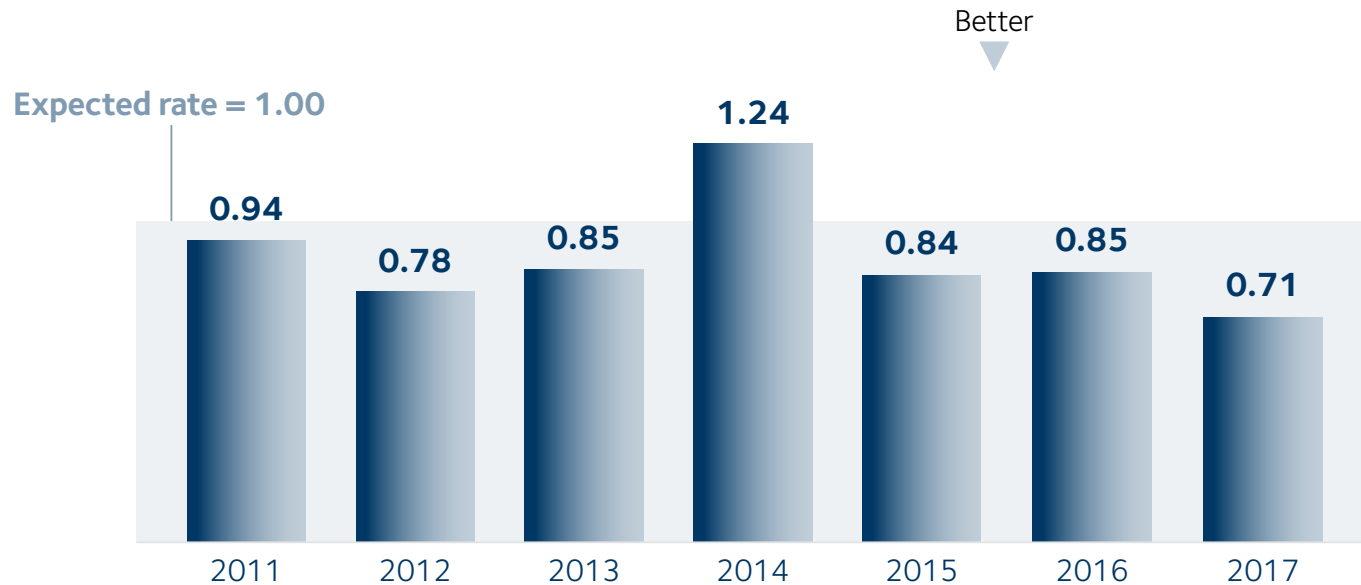
The risk-adjusted mortality rate is a rate of death that is adjusted for predicted risk based on a patient's diagnosis. The expected rate is 1.00.

Below is Castle's risk-adjusted mortality rate for patients with diagnoses of total hip or knee arthroplasty, acute myocardial infarction, chronic obstructive pulmonary disease (COPD), coronary artery bypass graft, heart failure, pneumonia or stroke.

While our risk-adjusted mortality rate is below the expected value of 1.00, it is our goal to reach a top-performer target rate of 0.78.


Risk-Adjusted Mortality Rate

Years 2011 to 2017



Emergency Care





“I wanted to write you a thank you letter for my recent care in your emergency room. I am a diabetic using an insulin pump. The pump line developed a kink and cut off my insulin supply so I fell into diabetic ketoacidosis. My wife found me in this condition and drove me to Castle where your staff took over. The ER staff quickly examined me and began my treatment. Their dedication and professionalism were evident. I know that some medical treatments may be painful to receive but necessary to treat you. Your staff displayed such compassion while assisting me and appeared to be truly sorry for any discomfort they might have caused while treating me. Their competence and concern made me trust them completely. Everyone from the person who drew my blood samples while apologizing for the needle sticks, the doctors who provided my care, the nurses who applied the treatments and comforted me, and the angel who gave me a few ice chips when my mouth was dry. I am here today, will be here this spring for my daughter’s high school graduation, and will be here for the rest of my children’s life events due solely to their efforts.”

— A letter from a patient

Emergency Care



Emergency Care

Reroute Hours

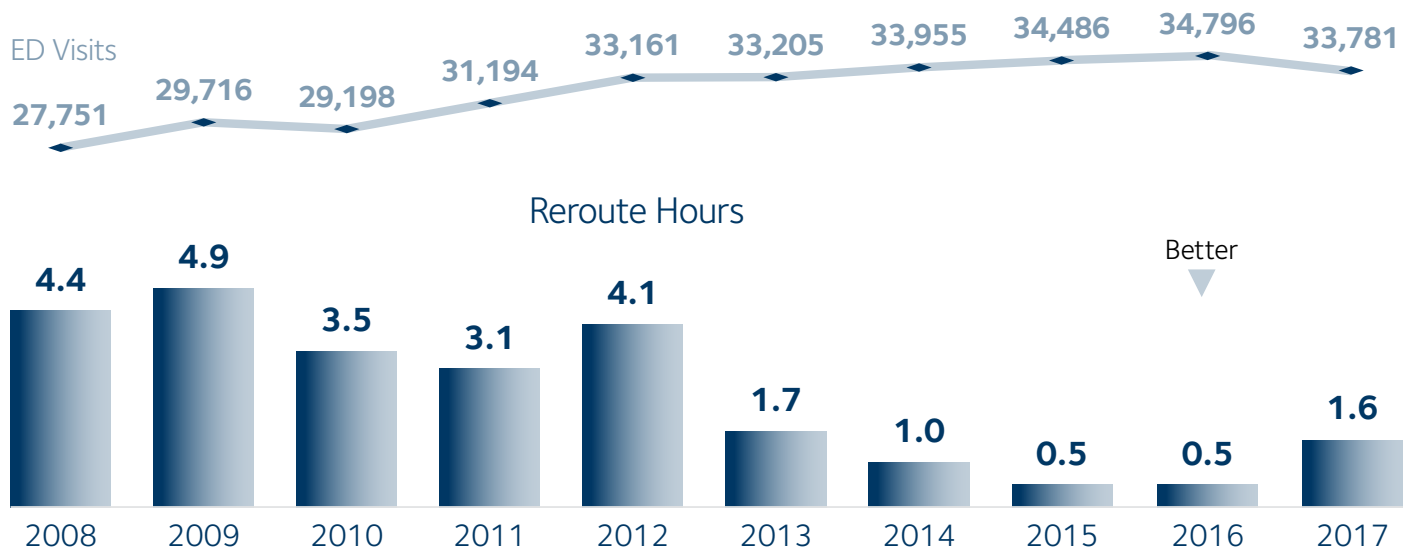
Reroute hours are the hours of an emergency department's operation during which ambulance patients are unable to be admitted because of high patient volumes and consequently need to be rerouted to other hospitals. Castle monitors its reroute hours on a monthly basis to ensure that the Windward O'ahu community has unrestricted access to our

Emergency Department (ED). Reducing the number of reroute hours may become more difficult with greater patient volume.

Remarkably, Castle's ED was able to maintain low reroute hours despite the continued high level of patient visits.

Reroute Hours per 1,000 ED Visits

Years 2008 to 2017



Emergency Care

Patients Left Without Being Seen

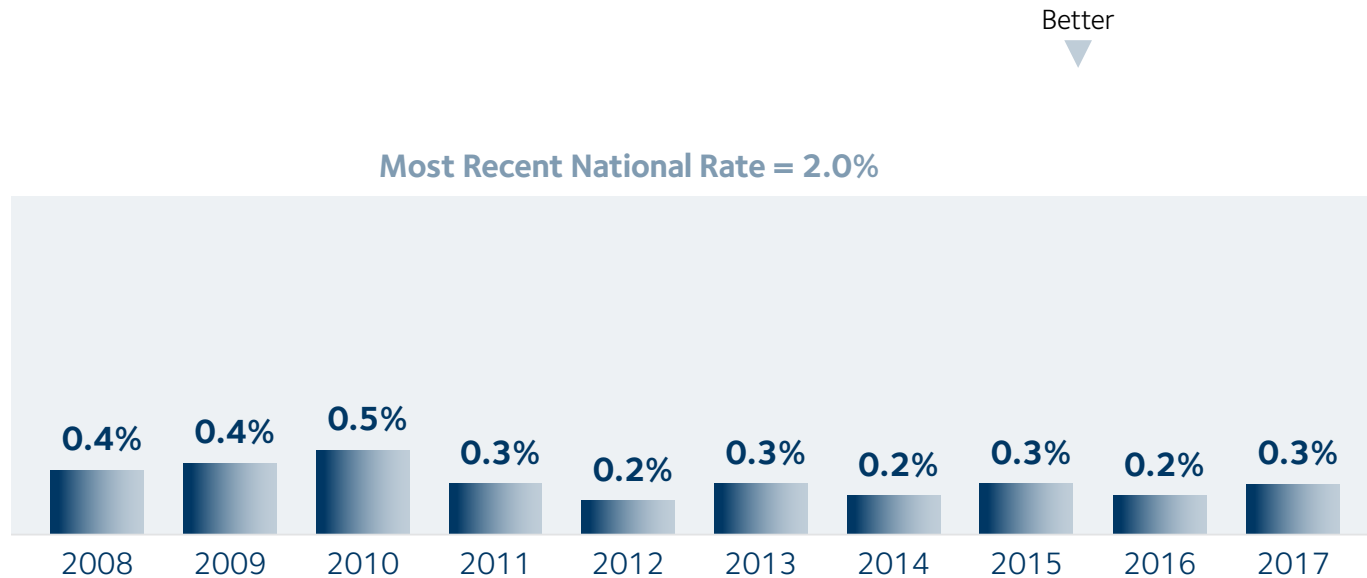
The most recent publicly available analysis shows that about 2.0% of emergency patients in the United States leave an emergency facility without ever being seen, frequently due to long wait times. Even though Castle's patient volume has grown over the years, only 0.3% of our patients in 2017 left the Emergency Department (ED) without being seen.

Castle attributes our success to the following efforts:

- Moving ED patients from intake to treatment as quickly as possible
- Getting a physician rapidly to each patient's bedside
- Ensuring efficiencies that reduce the time patients must spend in the ED.

ED Patients Left Without Being Seen

Years 2008 to 2017



Emergency Care

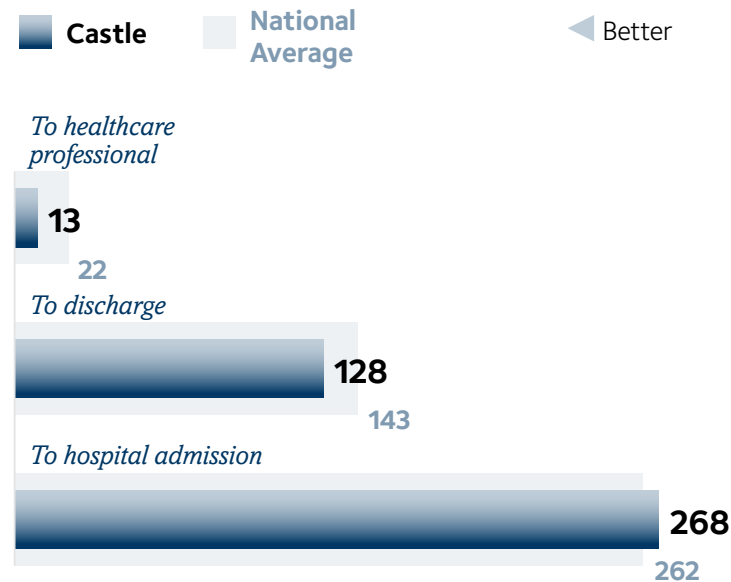
Wait Times

A major part of a patient's experience at any ED is how long the patient has to wait for care. The chart on this page shows our ED wait times, from the moment a patient enters the door to the times the patient sees a doctor, is discharged, or is admitted to the hospital.

In 2017, patients coming to Castle's ED had shorter wait times in two out of three categories compared to the national averages.

ED Wait Times Minutes after Entering

Year 2017



Castle Health Group



Castle Health Group (CHG) is a partnership between Adventist Health Castle and 112 area physicians.

Originally founded in 1996 as a group of physicians associated primarily for the purpose of contracting for managed care with health insurance carriers, in 2012, Castle Health Group became what is known as a Clinically Integrated Network. This is a specific type of collaboration between a hospital, its ancillary services, and local physicians that implements programs for the prevention and treatment of medical conditions in the community. Clinically Integrated Networks have been established nationwide to better achieve some of the goals of the Affordable Care Act, including the aims of improving patient satisfaction, greater quality outcomes, and contained cost.

In 2007, the major associations of primary care physicians in the United States developed and endorsed a model for the delivery of health care

called the Patient-Centered Medical Home (PCMH). The principles of the PCMH model stipulate that health care ought to be comprehensive, patient-centered, coordinated, accessible, and committed to quality and safety.

Castle Health Group has partnered with HMSA, the largest health insurer in Hawai'i, to fully implement the PCMH model for patients who are covered by most HMSA plans. The group is also beginning to include specialists, thereby moving towards what is known as a Patient-Centered Medical Neighborhood.

CHG has become a top performer in the state in its adherence to the PCMH principles and strives to perform in the top decile nationally in all metrics.

Castle Health Group

As a Clinically Integrated Network, Castle Health Group (CHG) implements various programs both to prevent and to treat medical conditions in the community.

As shown in the chart below, CHG's performance in the implementation of many of these programs is in the top decile in the nation, as calculated

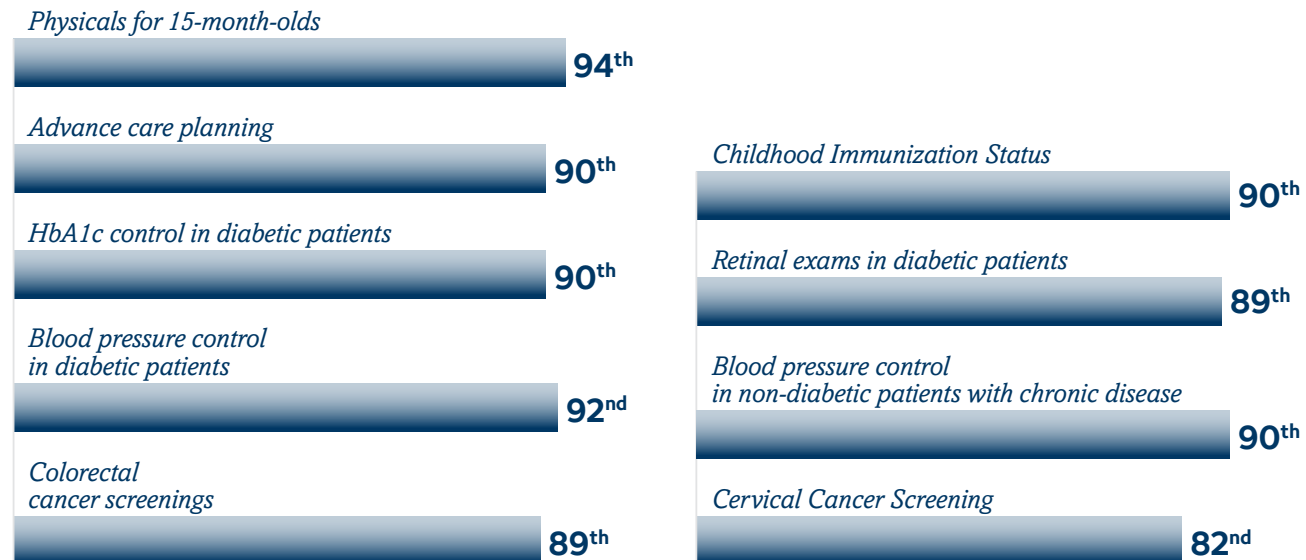
by the National Committee for Quality Assurance (NCQA), a national non-profit organization dedicated to improving health care quality.

CHG is working on continued improvement for compliance with Cervical Cancer Screening.

Castle Health Group Performance National Percentile Ranking

Jan 2016 to Dec 2017

Better ►



Advancements and Innovations



NAVIO: Next-gen Knee Replacement

The next generation of robotics-assisted systems for knee replacement surgery has arrived and Adventist Health Castle is the sole healthcare provider on O‘ahu where this newest technology is available.

For patients needing knee replacement, the new technology offers the benefits of earlier robotics-assisted systems—a precise, minimally invasive procedure with a shorter hospital stay, smaller scar, improved outcomes and quicker recovery period than traditional knee replacement surgery—but with several advantages. Significantly, NAVIO can perform total knee replacement, compared to previous robotic systems that could only

perform partial knee replacements. In addition, NAVIO allows the surgeon to reconnect all four knee ligaments compared to just 2 ligaments.

Other important NAVIO advantages includes its use of implants made of a material called oxinium. The material is twice as hard as the standard cobalt chrome implants, making it longer-lasting, and it reduces the risk of metal allergy. In addition, NAVIO does not require a pre-op CT scan to map out the surgical plan like earlier systems. Instead, it has a built-in tool to do the job. This feature eliminates the extra cost and time spent for a CT scan, and patients aren't exposed to unnecessary radiation.

Advancements and Innovations

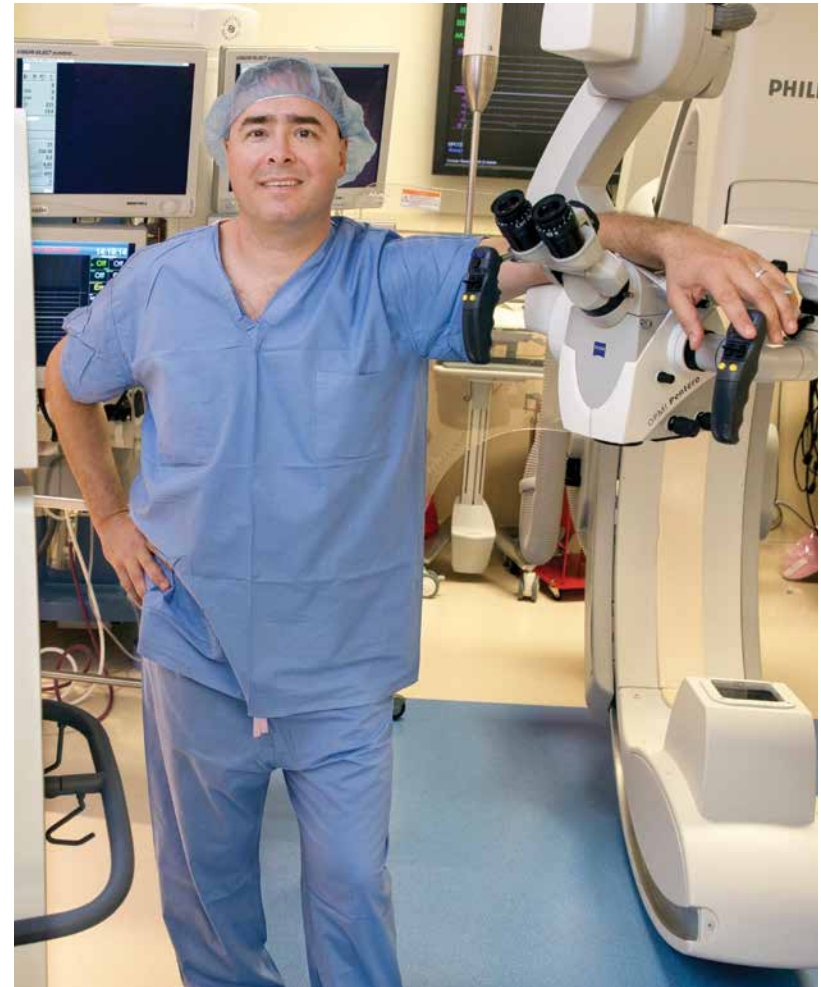
Neurosurgery Program for Windward Oahu

William Beringer, DO has joined Adventist Health Castle with the vision to offer Windward residents the most comprehensive minimally invasive spine surgery program in the state. By using a less-than-1-inch incision and muscle-sparing techniques, minimally invasive spine surgery can help patients find relief from debilitating neck and back pain. This technique reduces unnecessary injury to surrounding bone, ligaments, skin and nervous tissue so patients can rehabilitate faster with less pain.

Castle's comprehensive spine program includes a Spine Academy to help patients prepare for surgery. A nurse navigator educates patients on the surgery and what to expect and answers questions to ensure patients are ready and have a successful outcome. Back and neck conditions that can be treated include:

- Degenerative disc disease.
- Disc herniation.
- Spinal stenosis.
- Spondylosis.
- Spinal compression fractures.

Dr. Beringer is a skilled neurosurgeon who will be able to provide neurosurgical treatment options for the Windward community with the ability to perform moderate acuity elective neurosurgical procedures to treat head injuries, bleeding in the brain, brain tumors, and Parkinson's disease (deep brain stimulation).





Bistro 2 Go Project receives \$40K In:novation Seed Money

Adventist Health Castle's Bistro 2 Go (B2G) Project was one of nine projects awarded In:novation seed money for 2017. The project received a grant of \$40,000. The aim of the project is to provide a convenient and economical way associates can take a healthy vegetarian prepared dinner (for two or four) home after a busy day at work, instead of picking up

take-out food, or having to purchase ingredients to make a dinner at home. B2G is a LivingWell alternative to "take out" food and a means to reduce stress. B2G allows associates to purchase the meals online or via payroll deduction, for pick up at the end of a shift. The meals will also be available for purchase as a recognition reward for a co-worker.

Advancements and Innovations

Business Transformation Program

The Business Transformation Program — supported by cloud technology — is one of the key enablers to achieving our goal of becoming ONE Adventist Health and making Castle the best place to work and the best place to receive patient. The program includes the following features:

TALEO

Taleo is an easy to use, online experience that enables our organization to access the best people with the right talent for the roles we need. It's also a great way to match current employees' passions with available roles across our ministries.

ORDERING SUPPLIES & SERVICES

Purchasing will now be centralized to allow for more standardization and efficiency. Departments will have designated individuals who will order all supplies through Premier Connect. Then a central buyer at Shared Services will work with our vendors to ensure we receive the best quality product at the best price, in a timely manner.

EMPLOYEE SELF SERVICE

The new Oracle system empowers associates to make changes to their own profile. With Employee Self Service, associates can view their

pay slip, add or edit their direct deposit information, update or add phone numbers, update their address, including emergency contact information and dependent information.

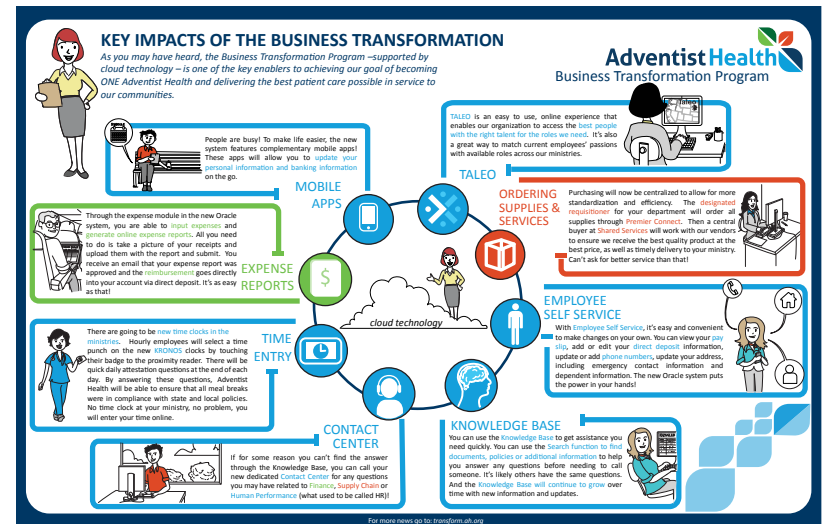
KNOWLEDGE BASE

Knowledge Base allows associates to get information and assistance quickly without needing to call someone. The Search function can locate documents, policies or additional information to help associates answer any questions. Knowledge Base will continue to grow over time with new information and updates.

CONTACT CENTER

If for some reason an associate can't find the answer through the Knowledge Base, the new Contact Center will be the one stop shop for any questions they may have related to expense reports, invoices, procurement, requisitioning, or Human Performance such as:

- How do I request time off?
- How do I update my licenses or certifications?
- How do I update my direct deposit information?
- Where do I access my tax documents?
- What is my salary information (e.g. wage scale)?



TIME ENTRY

New KRONOS time clocks will ensure associates get the breaks they need to function their best at work. Hourly employees will select a time punch on the new time clocks by touching their badge to the proximity reader. There will be quick daily attestation questions at the end of each day. By answering these questions, Adventist Health will be able to ensure that all meal breaks were in compliance with state and local policies.

EXPENSE REPORTS

Through the expense module in the new Oracle system, associates will be able to input expenses and generate online expense reports. Associates can scan or take a picture of their receipts, then

upload them with the report and submit. Associates will then receive an email regarding the approval of their expense report. Reimbursements will go directly into the associate's account via direct deposit.

MOBILE APPS

Associates are busy! To make life easier, the new system features complementary mobile apps.

These apps will allow associates to update their personal information and banking information on the go.



Adventist Health named one of HealthCare's Most Wired

For the fourth consecutive year, Adventist Health has been named one of the nation's most wired health systems in a survey conducted by Hospitals & Health Networks magazine.

Hospitals & Health Networks recently released its 19th annual list of the nation's "Most Wired" hospitals, recognizing more than 300 hospitals. The

annual Most Wired Survey is an industry standard benchmark study. The survey is designed to measure the level of IT adoption in U.S. hospitals and health systems, and is a useful tool for hospital and health system leadership to map their IT strategic plans.

Advancements and Innovations

Shared Governance

Associate involvement in quality improvement was enhanced in 2017 with the implementation of shared governance through the use of unit-based councils. The goal of shared governance is to ensure that frontline associates are empowered to improve the processes they use every day to meet our patients' needs. After all, front line associates know best what works and what doesn't work in their own jobs. They also know what solutions will have the most realist chance of success so they need a professional forum where their opinions, ideas and solutions are valued and respected.

With the support of senior leadership, training and education was provided about the functions and responsibilities of unit-based councils, including refresher information on Castle's quality improvement process

using Plan, Do, Check, Act (PDCA) and Change Acceleration Process (CAP) tools to help enhance meeting flow/productivity. Sample templates were provided to make it easier to create agendas, flyers and minutes.

In addition to solving their most pressing problems, unit-based councils enhance associate satisfaction and engagement. Gallup, who delivers analytics and advice to help organizations solve their most pressing problems, reports that, "employees want to feel valued, they want to know their input is important, that they are making a significant contribution and a difference to the environment in which they work." Castle believes that unit-based councils will increase autonomy, accountability, engagement and retention among associates.



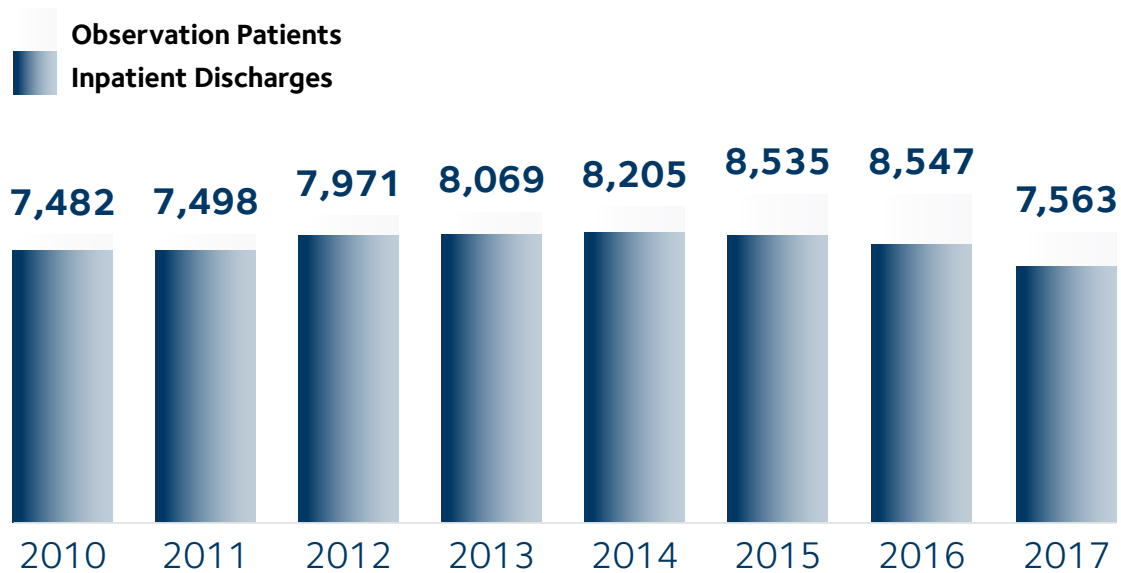
Volumes

Inpatient Volume

The slight decrease in inpatient admissions is largely due to the following improvements in patient care: improved social work referrals in our ED, decreased readmissions, and outpatient services that used to only be available on an inpatient basis.”

Inpatient Volume

Years 2010 to 2017



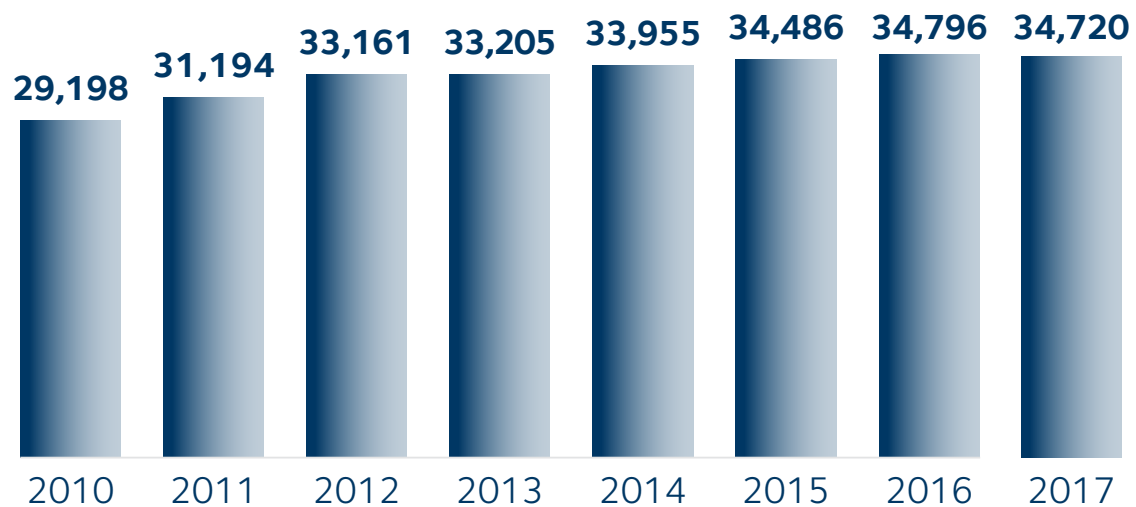
Volumes

Emergency Department Visits

Castle's ED had yet another highly active year in 2017. It is fortunate that Castle completed its full scale renovation project from 18 to 25 beds in 2016 to accommodate this volume."

Emergency Department Visits

Years 2010 to 2017



Volumes

Behavioral Health Discharges

Last year, Castle's Behavioral Health unit had the highest number of patient discharges in the medical center's history, as volumes continue to grow nearly every year.

Some of this growth is due to a reduction in BHS beds statewide. Castle is working with the Department of Health to increase health care access for this underserved portion of our community.

Behavioral Health Discharges

Years 2010 to 2017



Volumes

Births

Castle's Vera Zilber Birth Center had yet another busy year in 2017. Patients come from all parts of the island of O'ahu to take advantage of the quality birthing options provided by our beautiful facility.

Births

Years 2010 to 2017



Volumes

Outpatient Visits

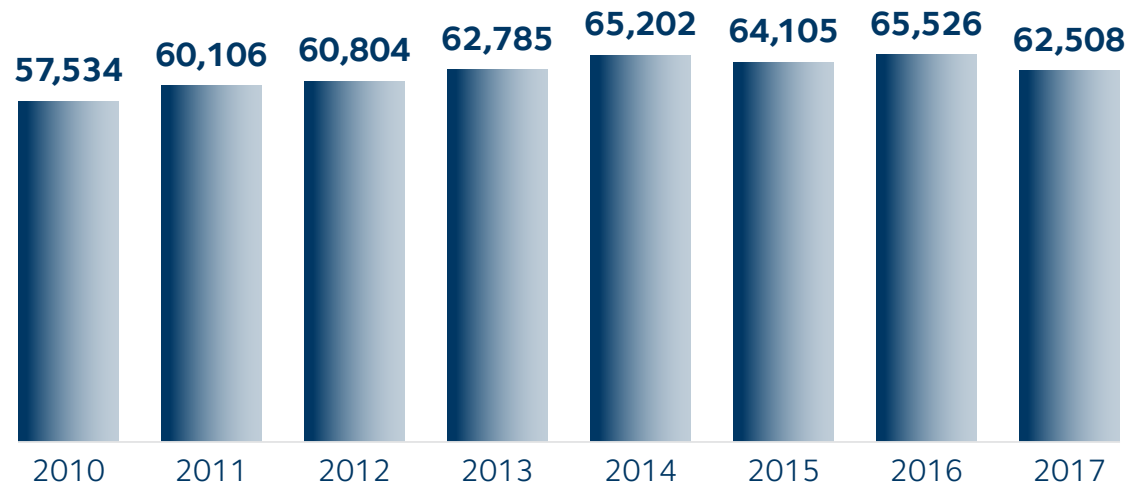
The chart below shows the number of outpatient visits to the Outpatient Clinic, Outpatient Surgery, Respiratory Care, Cardiovascular Services, the Cardiac Cath Lab, Imaging, Angiography, Neurophysiology, the Laboratory, Rehabilitation Services, and the Wellness and Lifestyle Medicine Center.

Also included in the 2017 total are patient visits to the two primary care clinics Castle began operating in the second half of the year in La‘ie and Kailua.

With the addition of these two clinics, we expect to see more growth in the outpatient services we provide during the coming year.

Outpatient Visits (excluding Emergency)

Years 2010 to 2017



Wellness and Lifestyle Medicine Center

During 2017, Castle's Wellness and Lifestyle Medicine Center provided inspiration and tools to help participants build a healthy body, mind, and spirit through an array of programs.

- More than 1,359 people from our community participated in the center's health and wellness outreach programs at 53 events. Twenty-five of these events included children and/or adolescents.
 - 498 people received tobacco treatment services in the hospital and 692 Behavioral Health Service inpatient group encounters on healthy lifestyle and tobacco prevention education were provided.
 - Through a Hawaii Community Foundation Grant, we also provided outpatient tobacco treatment counseling to 162 participants who were primarily low-income, low-education, or unemployed (important, vulnerable groups who have higher tobacco use prevalence and may face additional barriers to quitting tobacco). If appropriate, these people were provided with grant-funded tobacco treatment medications. Additionally, a tobacco support group was created and 71 encounters were provided.
 - In 2017, we saw 1,180 diabetic patients in our diabetes program, which is accredited by the American Association of Diabetes Educators. We provide small group classes twice a week and quarterly grocery shopping tours.
 - Our Aloha Kidney Class, taught by nephrologist Ramona Wong, M.D., serves those individuals who have stage 3, 4, or 5 chronic kidney disease but who are not on dialysis. 189 such patients completed this six-class series, which was offered four times. This translates to 7,560 person hours of Kidney Disease Education.
- 8 different types of group fitness classes (4 days a week) were offered throughout the year, with 7,139 contacts.
 - Ten Wellness Cuisine Cooking classes were held, with 283 people participating.
 - Six different community support groups met regularly, with more than 575 people attending altogether.
 - The Wellness Center receives referrals for children and adolescents diagnosed with obesity or diabetes.
 - In our third year partnering with the Boys and Girls Club of Kailua, Castle provided bi-monthly cooking classes for middle-schoolers. We provided 23 classes serving 224 children (Class size is limited to 14 children.)
 - Castle continues to offer massages provided by licensed massage therapists to our associates and the community.



Staffing

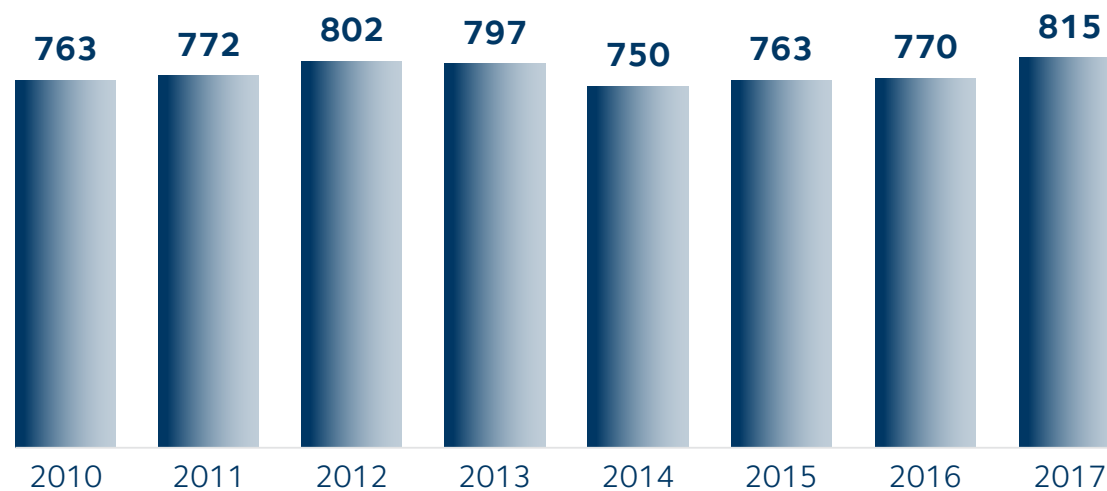
Total Hospital Full-Time Equivalents (FTEs)

Over the years, the number of Castle's FTEs has generally grown along with patient volume.

The apparent reduction in our FTEs seen in 2014 can be entirely attributed to the transfer of Castle's home care division to our corporate parent, Adventist Health.

Total Full-Time Equivalents (FTEs)

Years 2010 to 2016



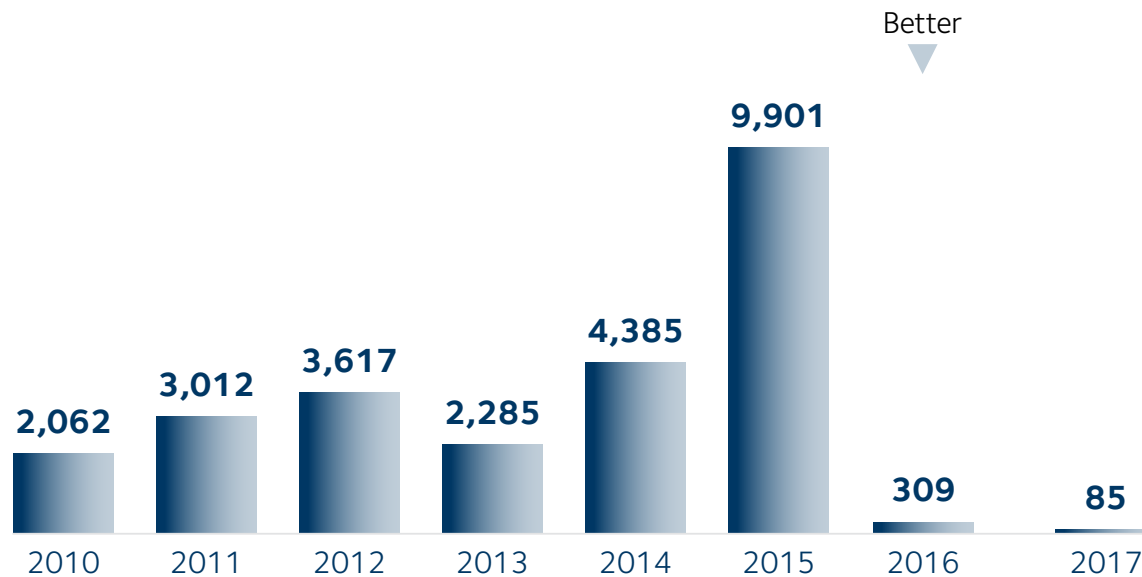
Staffing

Agency Use

During 2017, we continued to reduce the use of agency staffing, and eliminated use of agency staffing effective April 2017.

Agency Hours

Years 2010 to 2017



Quality Improvement Goals for 2017 and Their Results

Goal

Improve patient satisfaction with:

- Inpatient Care
- Outpatient Surgery
- The Emergency Department

Results

Improvements have been made, but efforts continue to reach the 90th percentile in all three areas.

Improve Physician Satisfaction with:

- Pathology
- Anesthesia Services

(Awaiting survey results since last interventions.)

Achieve certification as a primary stroke center

On schedule to become a primary stroke center in 2018.

Reduce readmission rates

Successfully reduced readmission rates for patients with heart failure, community acquired pneumonia, coronary artery bypass graph, and chronic obstructive pulmonary disease.

Continue to work on reducing readmissions for patients with acute myocardial infarction (AMI), and hip and knee replacements.

Quality Improvement Goals for 2018

Improve patient satisfaction with:

- Inpatient care
- Outpatient surgery
- Emergency Department
- Primary care clinics

Improve physician satisfaction with:

- Pathology
- Anesthesia Services
- Pulmonary

Reduce readmission rates for:

- AMI (heart attack)
- Hip and knee replacement

Notes



adventisthealthcastle.org