Jobs of the Future:
Workforce Planning for 21st Century Care

November 2014 • Southern California Workforce Planning & Development

KAISER PERMANENTE®

TABLE OF CONTENTS

INTRODUCTION

Innovation in care delivery and new technologies are transforming the health care industry. These changes will have significant impact on the health care workforce. How is Kaiser Permanente (KP) preparing to staff the future delivery of care? What are the jobs and skills of the future?

THE WORLD IS CHANGING. Technological advancements and digital connectivity have transformed the way we work, communicate, and interact. Almost everyone these days can be found with their smart phones in hand, texting, taking photos, ordering products online, or instantly scheduling travel. Sophisticated robotics and automation have also transformed the way products are manufactured, assembled, and distributed.

Yet, while we take technology advancements for granted in industries such as retail, hospitality, and manufacturing, the health care industry has been traditionally slow to adopt many of these innovations. But now, health care is experiencing a period of innovation and technology advancements which are transforming the way care is delivered. This transformation is driven primarily by consumer reaction against decades of rapidly increasing health care costs and a provider-centric approach to service delivery.

Health care consumers are now demanding more affordable, personalized, and premium services as they have received for years in retail and other industries.

HEALTH CARE AND THE CONSUMER MARKETPLACE

As the second year of the Affordable Care Act (ACA) begins, we are witnessing a gradual shift away from an employer-based provision of health care, towards an increasingly individualized, consumer-oriented, health care marketplace facilitated by the state and federal insurance exchanges. Within these exchanges, health care consumers can now compare and contrast participating health care insurers/providers based on information detailing company quality, cost, access, etc. just as they would within an informed, online retail experience. Through this new health care "shopping" experience, consumers are demonstrating their preference for convenience, affordability, online and tech-capable services, and more accessible, physical facilities integrated into their daily lives.*

The implications of this shift are significant for health care providers who must now compete aggressively for these new consumers with a host of new services instead of passively waiting for patients coming to them for care.

A one-size fits all model of health care is no longer sufficient. The diversity of the health care marketplace requires an increased diversity of services and delivery methods to address patient preference. Whether it is Millennials getting convenient online care access, chronic and/or elderly patients receiving virtual care comfortably in their home, or ethnic groups getting service in their native language, the health care consumer is increasingly dictating the future of care delivery.

Kaiser Permanente understands this and has leveraged its integrated structure, and preventive and evidence-based health model to lead care delivery innovation. For years now, KP members have already been able to use smartphones to remotely access **kp.org** to retrieve lab results, order pharmaceuticals, and email doctors and their care teams.

Now, more recent advancements in remote health monitoring devices and sensor technologies, expanded use of virtual care, and

* **http://www.advisory.com/research/marketing-and-planning-leadership-council/expert-insights/2014/get-the-primary-care-consumer-choice-survey-results**

social media/Big Data stand to further redefine the care delivery experience. This increased tech-based capacity will enable healthcare providers to meet evolving consumer expectations for more affordable and personalized services, offered within a 24/7, virtual, retail, and home-based environment.

And, KP is positioning itself to lead again. From KPSC's Re-imaging Ambulatory Design (RAD) to "Imagining Care Anywhere" and Vision 2025, KP is embracing innovation, technology, and a seamless integration of its health services into the lives and communities of its members.

KP'S EVOLVING HEALTH CARE DELIVERY SYSTEM

		Care "how you want it"	
	Care Setting	Physical Touch	Virtual & Mobile
Care Anywhere	Home	– In home nursing team – Hospital at home	– Telehealth/ medicine – Remote monitoring – Sensor technology – Online virtual care – Mobile health van
	Work	– Onsite clinic – HealthSpot	
	Community	– Health HUB Medical Office Building (MOB) – Blink clinic – Retail – Health partners	
	Traditional	– Hospital/ER – MOB/Clinic	

The graphic illustrates part of KP's strategy to meet the needs of its members in an increasingly competitive health care marketplace. KP's objective is to provide its members with care "anywhere" and "how you want it" to offer increased access, convenience, and affordability, in addition to quality. Whether with its new retail clinic partnership with Target®, its new innovative HUB MOBs, or services available online at kp.org, KP is reinventing the care experience to meet consumers on their terms. The Jobs of the Future Committee's objective is to ensure that KP has the right workforce ready to support these innovative care initiatives.

But in order for care innovation to be successful, we need to ensure that KP has an innovative staffing plan in place as well as a workforce ready to provide 21st century care. To achieve this, we must first understand how technology and innovation will impact staffing in the coming years.

Unlike other industries, the delivery of health care will never be completely automated or digitized. While some manufacturing plant floors have almost completely replaced workers with robots and computer software, in health care, people will always play a primary role in the delivery of care.

That said, many health care jobs will change as automation, technology, and new care settings play an increasingly significant role in the efficient delivery of services.

So, how will these changes impact the workforce? How can we prepare a workforce to align with the strategies outlined by these initiatives? What are the health care jobs and skills of the future? What kinds of people will we need to recruit?

These are the questions the SCAL labor and management Jobs of the Future Committee set out to address in 2014.

JOBS OF THE FUTURE COMMITTEE

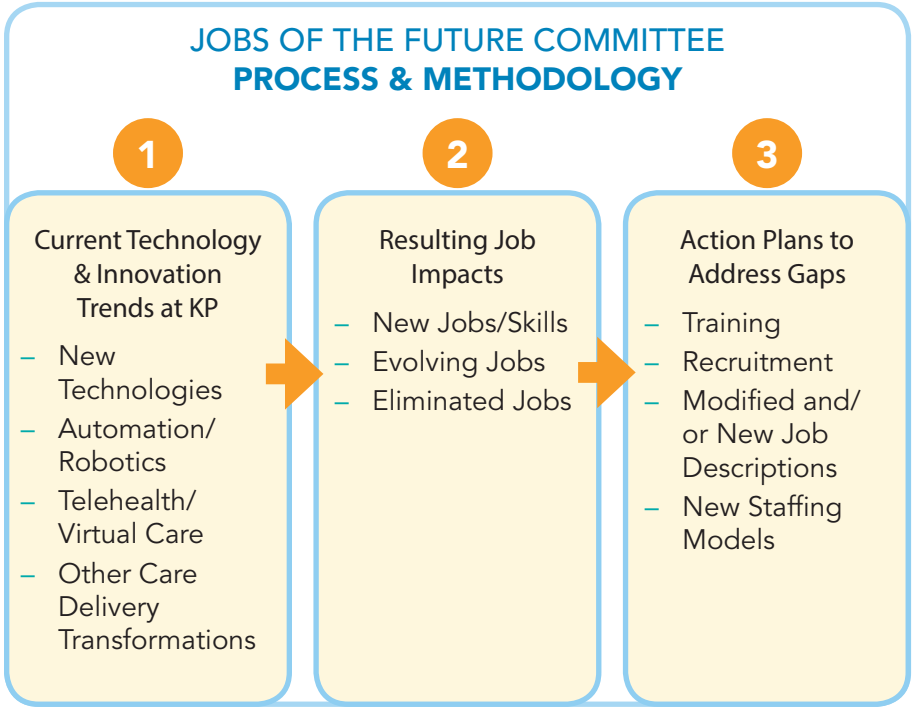
The Jobs of the Future Committee is a labor and management committee which was formed to better align staffing with changes in care delivery, innovation, and new technologies.
The Committee set out to address the fact that, despite being the most important and costly component of health care delivery, staffing has traditionally been treated almost as an afterthought in the care redesign process.

COMMITTEE APPROACH

To better understand and align with changes in care delivery, Jobs of the Future comprised groups targeting four key workforce areas including Diagnostic Imaging, Laboratory, Patient-Centered Continuum of Care (Nursing and Ambulatory Care Team) and Reception. Groups were comprised of regional and local operations, labor partners, front-line employees, recruitment, and subject matter experts (SMEs).

The Committee subgroups followed a methodical process of identifying care delivery transformations and new technologies, evaluating resulting workforce impacts and, finally, developing action plans around training and job redesign to address and anticipate gaps. (See graphic).

The Committee used the guiding principles of innovation initiatives such as the KPSC RAD project as well as the personas representing future consumers envisioned in Vision 2025 to align with the jobs and skills needed for the future. The Committee also consulted with numerous other technology and innovation groups in SCAL and Program-wide. Finally, the Committee ensured alignment with the KP Strategic Plan with its emphasis on affordability, a consumer-centric focus, transforming care, and One KP.



The following report summarizes our work to date. It is important to note that the report addresses only those identified in the above workforce areas. It does not address potential jobs and staffing changes in IT, Pharmacy, etc. We hope that labor and management leadership will consult the findings and employ some or all of our recommendations for designing the jobs, skills, and workforce of the future.

Change can be scary, but it can also be exciting. It's clear that innovation is necessary for KP to remain competitive and relevant in the rapidly evolving marketplace. And, if managed properly, change through care innovation can offer exciting new opportunities for our workforce to learn, grow, and engage.

By working together to prepare the KP workforce for the 21st century, we will not only adapt to the evolving marketplace; we will lead it.

Zeth Ajemian, director, Workforce Planning and Development
Kaiser Permanente Southern California and Hawaii Regions

FROM STRATEGY TO IMPLEMENTATION:
Realizing the Workforce of the Future

In order to better align workforce planning and staffing with care innovation and the strategic priorities of the organization, the Jobs of the Future Committee integrated the following National and Regional perspectives into its mission:

KP People Strategy

KP'S STRATEGIC PLAN

The Jobs of the Future Committee is guided by emphasis on affordability targets, meeting rising consumer expectations, transforming care, and One KP. Specifically, the People Strategy speaks to a workforce which is innovative, engaged, change ready, healthy, and accountable.

VISION 2025

The Jobs of the Future Committee also aligns with Vision 2025, an ongoing project, that seeks to understand how the future may unfold – and how Kaiser Permanente will achieve its mission in that future. The project includes a focus on what healthcare consumers will look like in the future and how KP can position itself to meet the needs of rapidly changing market conditions.

LMP NATIONAL AGREEMENT

(L+M)P
The Power of Partnership

As part of its larger commitment to workforce planning and development, the 2010 LMP National Agreement makes recommendations for labor and management to participate in joint staffing processes. The objective to work collaboratively to better connect business operations and finance with staffing solutions aligns perfectly with the mission of the Jobs of the Future Committee.

REIMAGINING AMBULATORY DESIGN (RAD)

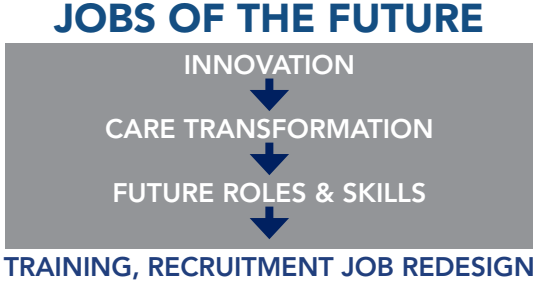
RAD
REIMAGINING AMBULATORY DESIGN

In order to address innovative staffing needs in the SCAL Region, the Committee partnered with Reimagining Ambulatory Design (RAD) initiative. Project RAD is a KP Southern California initiative to articulate a vision of ambulatory care delivery in the future, and to bring this vision to reality. The underlying premise for Project RAD is "Life Integration Vision", where healthcare is interwoven into people's lives. This vision includes a system designed to shift the center of care from KP venues into members' activities, relationships, and communities. This new system is organized around 5 platforms or frameworks that support a range of innovations around a shared outcome. (The platforms include MEDKIT, BLINK, PIVOT, HEALTH HUB, and CULTIVATE.)

In the course of the project, the Project RAD team has incorporated the input of 150 Kaiser Permanente members, 200 physicians, and 500 frontline staff and administrators.

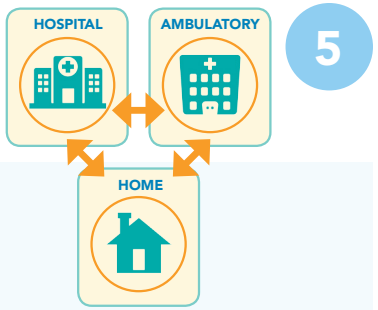
SCAL JOBS OF THE FUTURE

By aligning its mission with these various strategies, Jobs of the Future ensures that its innovative staffing work effectively supports the overall direction of the organization as well as our regional initiatives. The Jobs of the Future Committee mission is to provide innovative staffing solutions to effectively support KP transformation of care delivery for the 21st century.



PATIENT-CENTERED CONTINUUM OF CARE

Trends



Care delivery is evolving to combine inpatient, ambulatory, and home health nursing services into a seamless continuum of care experience for our patients, enabled by technology advancements and ventures into new patient care settings. This increased coordination between care points will offer a more fluid experience for members, making our system easier to navigate, reducing unnecessary readmissions, lowering costs, and improving health outcomes. This new care continuum will also require new skills and a reorganization and redefining of care roles across the continuum.

1 Shift of Acuity from Hospital to Ambulatory and the Home

Due to the high cost of care within the inpatient environment, there is a shift of relatively lower acuity patients from the hospital to ambulatory facilities and to home care. In addition to care moving physically to the home, this transition has also been facilitated by the development of virtual care, remote monitoring, and sensor technology.

2 Transition of In-Person to Virtual Care

Virtual care delivered to members via email, phone, and video is an evolving method of care delivery which can improve access, reduce costs and make care more convenient and flexible for the patients. Virtual care stands to significantly transform the way patients interact with their care team.

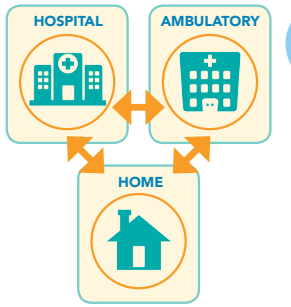
3 Remote Monitoring, Sensors, and Big Data

In recent years there have been significant advancements in remote monitoring equipment and software applications enabling care providers to efficiently and quickly monitor patients from remote locations. These devices will allow for more monitoring of patients' vitals, pharmaceutical intake, patient safety, etc., especially those with chronic conditions.

4 New Patient Care Settings

KP is expanding the settings where it provides care to its members in order to increase access and convenience. Retail Clinics, Care Corners, mobile van, HealthSpots, and Blink Clinics are examples of basic ambulatory settings proximate to patient homes which offer extended,flexible hours, and convenient access.

TREND #1:
Shift of Acuity out of Hospital to Ambulatory and the Home



Benefits:

- Shift of higher acuity patients out of the inpatient setting decreases costs and increases patient satisfaction while continuing to maintain quality
- Home and ambulatory settings are more accessible, cheaper, and flexible form of care for patients
- Lower readmission rate

IMPACT OF TREND ON STAFFING

NEW/EVOLVING SKILLS

- Requires up-skilling of RNs, ambulatory care teams, and home health aides to handle higher patient acuity
- Increased coordination of care provided across continuum (handoffs, communication, assessment, etc.)
- Evolving skillset of RNs as teacher/educator
- Evolving skillset of RNs more enhanced analytical skills for interpreting trends from remotely monitored patient data
- Increased assessment and triaging skills required for ambulatory/home RNs
- The home will become the new environment for traditional medical surgical care RNs, physically and virtually
- Scope of practice will be optimized and duties may evolve based on shifting of duties across the continuum and between clinicians, enabled by technology

EVOLVING JOBS

- Overall demand for RNs and nursing care teams will continue to grow, but their role will shift as care settings and technology evolve.
- As care shifts out of the hospital, there will be increased demand for ambulatory and home- RN and care teams (aides), navigators, as well as expanded need for RN case managers, clinical coordinators, etc.
- There will be additional demand for non-clinical patient navigators, workflow consultants, data analysts, and scribes.

RECOMMENDATIONS FOR WORKFORCE READINESS

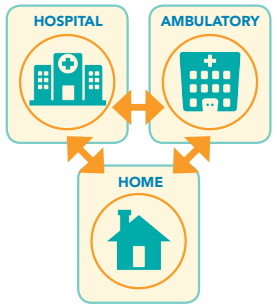
TRAINING/RECRUITMENT

- Training and orientation for RN and care teams to work in new environments and with higher acuity.
- Training for RNs as educators in home and clinics.
- Ambulatory and homecare RNs will need training to develop assessment and triage skills appropriate to the setting
- Need for more advanced and/or specialty training for and hiring of RNs (Wound, ostomy, and continence nursing (WOCN), chemo, etc.) and highest acuity patients
- Work with colleges and universities to update nursing and care team curriculum to align changes in health care delivery models and settings
- Updating nursing career pathways to align to continuum of care.
- Increased hiring of case managers or RN clinical coordinators as patient load becomes more complex across continuum.

MODIFIED/NEW JOB DESCRIPTIONS

- Need for RN Coordinator/Navigator for complex acute conditions (ex. cancer, neurological, transplant, etc.)
- Creation of non-clinical Patient Navigator role to help with the complex coordination
- Better alignment of job descriptions (JDs) to account for discrepancies between SCPMG and KFH, based on merging via continuum of care.
- JDs need to be updated to account for roles and duties as they apply to continuum of care, monitoring devices, new technology.
- Creation of "Central Command" Virtual RN for delivery of virtual services to home, monitoring panel of patients
- Need for more RNs in home care setting with geriatric care experience.

TREND #2:
Transition of In-person to Virtual Care



Benefits:

- Improved and more efficient service delivery for patients via virtual care delivery
- Increased opportunities for individual/group care via social media, i.e. facilitated chat rooms or 1:1 live chats, online advice, etc.
- Enhanced population care management
- Lower cost and increased patient satisfaction associated with virtual vs. in-person care

IMPACT OF TREND ON STAFFING

NEW SKILLS FOR AMBULATORY AND HOME CARE TEAMS

- Employees will need to be able to feel comfortable with email, phone and video interaction. RNs and other members of the care team will sometimes be working in totally virtual environments and may never have physical touch — represents shift in culture of nursing care.
- Various members of the care team (RN, LVN, MA, within appropriate scope of practice) will need to employ new virtual technology and equipment. This will be dictated by level of scope, complexity, and blending of roles via team-based care.
- Will promote practice at the top of position scope facilitated by shift of some generic/automated tasks down through the care team, enabled by technology.
- Evolving skillset of nurse as a virtual coach/teacher

EVOLVING SKILLS FOR INPATIENT RNS

- RN skillset will evolve to require enhanced analytical skills vs. task based, as a result of virtual observations and monitoring. Technology savvy skillset required.
- Will create demand for virtual RNs and care team members (MA, LVN, home health aide) who participate in virtual care of patients at home.

RECOMMENDATIONS FOR WORKFORCE READINESS

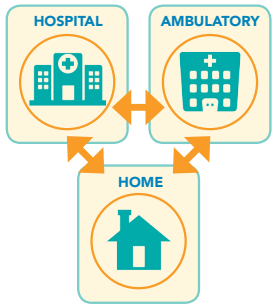
TRAINING

- Training for RN and care team to function effectively within increasingly virtual environment.
- Creation of internal RN Informatics certification to address increasingly tech and Big Data-oriented nursing workload
- Implement experienced-based training for virtual-based RN who will not get it from normal patient in-person touch points.

MODIFIED/NEW JOB DESCRIPTIONS

- RN and care team JDs will need to be updated to address increased use of technology, monitoring devices, and apps to provide care as well as instruction and education of patients on new equipment.
- Creation of "Central Command" Virtual RN for delivery of virtual services to home, monitoring panel of patients.

TREND #3:
Remote Monitoring, Sensors, and Big Data



Benefits:

- Better population management of members, especially those with certain chronic conditions resulting in improved patient outcomes and lower patient readmission
- Accurate and more consistent monitoring of patient records:
  - Allows for patients to have control over health services in the home or any location.
  - Shorter turnaround time diagnosis, lab results, meds, etc.
  - Cost benefit of keeping less critical patients out of hospitals
  - Increased capacity to delivery patient education, monitor patient safety, etc.

IMPACT OF TREND ON STAFFING

NEW SKILLS FOR AMBULATORY AND HOME CARE TEAMS

- RNs will need technology and critical thinking/assessment skills as well as capacity to identify patterns within massive data sets for individuals and/or populations via remote monitoring.
- Nurses and care team will need working knowledge of monitoring devices/apps as well as ability to effectively train, educate or inform members on how to use them.

RECOMMENDATIONS FOR WORKFORCE READINESS

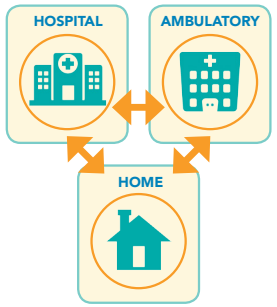
TRAINING AND RECRUITMENT

- Training for RN, ambulatory and home care teams on critical thinking, and assessment to interpret large data sets from remote monitoring.
- Vendor training on all devices as well as for teaching patients on use of devices.
- Development of internal certification in Informatics to provide incentive for upgrading skills in increasingly tech and Big Data care environment.

MODIFIED/NEW JOB DESCRIPTIONS

Updating of JDs to include knowledge of how remote monitoring equipment functions as well as how to interpret data effectively.

TREND #4:
New Patient Care Settings



Benefits:

- Provision of basic ambulatory services in retail or other locations proximate to patient homes. Extended/Flexible hours, telehealth consults, etc.
- Smaller, lower volume, flexible spaces utilizing technology/virtual visits, and smaller, multi-skilled/combo workforce.
- Examples include Blink Clinics, Health Spots, retail, mobile health vans, etc.

IMPACT OF TREND ON STAFFING

NEW SKILLS FOR AMBULATORY AND HOME CARE TEAMS

- Single cross-functional position such as "multi-skilled worker" may execute multiple tasks that in a traditional Medical Office
- Building (MOB) may be done by 2-3 people. Could include basic back office duties combined with blood draw, limited X-ray, receptions, etc.
- Role would include basic nursing procedures, injections and immunizations
- Requires team-based, cross-trained, customer-oriented and tech savvy workforce

RECOMMENDATIONS FOR WORKFORCE READINESS

TRAINING

Depending on which position would be targeted to cross-train, curriculum could include blood draw, limited X-ray, MA, reception, customer-service, etc.

MODIFIED/NEW JOB DESCRIPTIONS

Creation of multi-functional healthcare worker job description. Must be multi-skilled, tech savvy, customer-oriented, flexible and able to work effectively in team-based environment where patient load and mix could change daily.

CONTINUUM OF CARE INNOVATION AND TECHNOLOGY TIMELINE

Dan Weberg, Director of Nursing Innovation for Innovation and Advanced Technology (IAT) and National Patient Care Services and the IAT team have provided the following approximate timeline of technological advancements and subsequent shift to the digital and virtual care environment. Much of the virtual technology and equipment exists today and is being used on a mostly pilot basis at KP. However, significant growth of remote monitoring technologies, sensors and virtual care is expected over the next few years. While patient data security and regulations still represent barriers to full utilization and implementation, KP is expected to fully embrace these technologies as it seeks to increase access and convenience and lower costs. Because of the rapid deployment and advancements of these technologies, this timeline should be updated several times a year to keep up with changes.

SHORT (0–3 years)

SOCIAL MEDIA — increase utilization and creation of social media apps to keep the population informed and healthy.

MOBILE — increased use of mobile devices and apps for texting, inputting of biometric measures, mobile charting, etc.

CLOUD — nursing staff and care team interacting with cloud services: data anytime, anywhere.

MOBILE/REMOTE DIAGNOSIS — with new technology, patients can be tested for common ailments such as strep throat and begin treatment sooner. RN needs to assess all incoming test data.

MEDIUM (3–5 years)

SENSORS — increase utilization and creation of social media apps to keep the population informed and healthy.

EXPANDING REMOTE CARE (Telehealth & Virtual Visits) — RNs could provide home safety checks, coaching, education, medication adherence, etc.

ANALYTICS — nursing staff taking on analytical role for assessing Big Data collected via KPHC, other devices. Connector-role via virtual triage, self-guided services, etc.

LONG (5–7+ years)

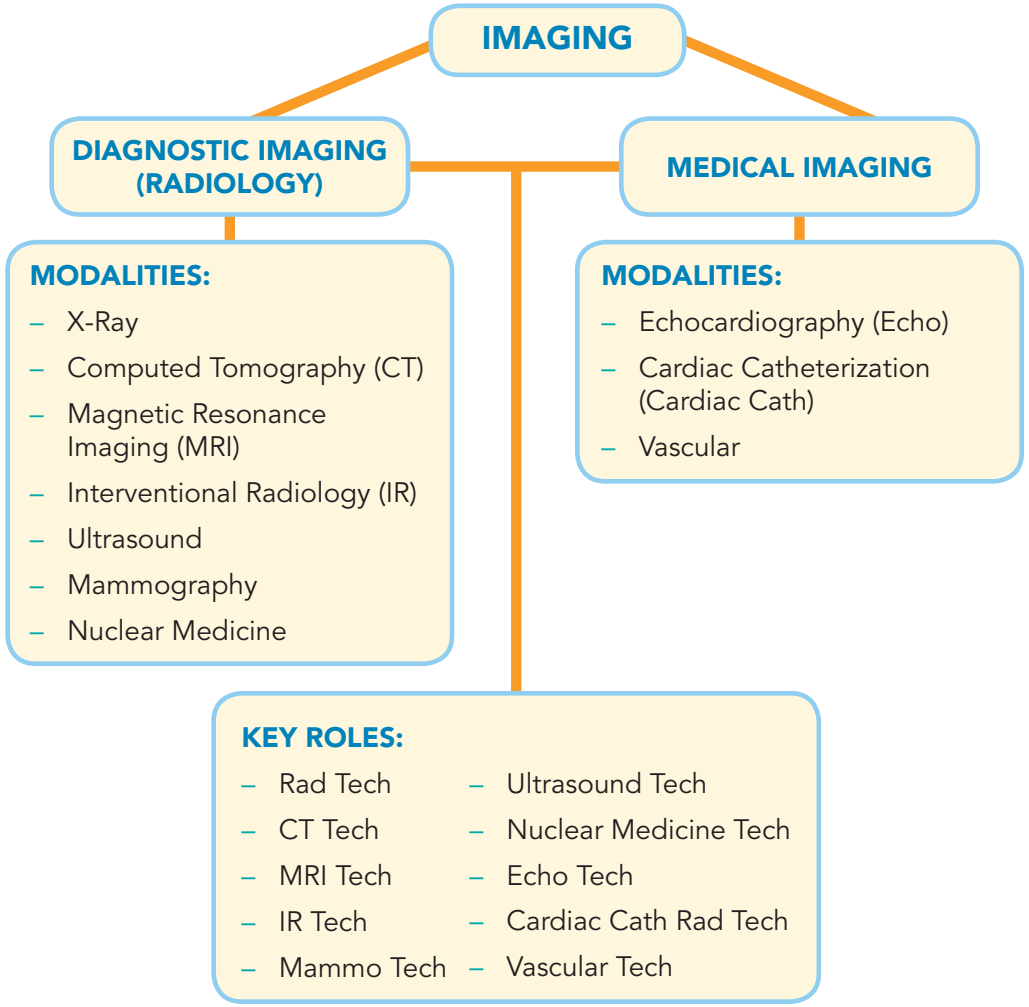
EXPANDING CARE ANYWHERE — variety of technologies (sensors, remote monitoring devices, avatars, etc.) growing the ability to provide care anywhere to patients.

DIAGNOSTIC AND MEDICAL IMAGING

Diagnostic and medical imaging has already experienced tremendous advancements in the improved access, transfer and viewing of digital images, via the several year-long transition from an analog film to digital environment. Additional technological advancements include equipment which integrates various types of imaging, as well as smaller, more portable devices utilized in non-traditional care settings (Cardiac Cath Lab, IR, HUB clinics, etc.). All of these trends will require a digitally fluent workforce and creation of multi-functional worker to provide imaging services for lower volume facilities.

Trends

- Conversion from Analog Film to Digital
- Combined Imaging
- More Sophisticated Imaging & Technology Advancement
- Provision of Imaging Services in New Care Environment



DIAGNOSTIC AND MEDICAL IMAGING

Technology/Innovation and Resulting Workforce Impacts

TREND	SPECIFIC NEW TECHNOLOGY OR INNOVATION	IMPACT OF TREND ON STAFFING
Conversion from Analog to Digital	– **Digital Film Room Solution**: allows for film copying, importing and exporting of images – **Secure Image Exchange Solutions technologies** will replace CDs as medium for transferring images (will now be sent electronically) – **Conversion of analog film to digital** in General Radiography (Gen Rad), Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Ultrasound and Mammography. – **Cardiovascular Information System (CVIS)**: integrated digital environment for image storage, viewing and reporting of echocardiography and cardiac catheterization exams – **Vascular Lab Imaging and Information Environment (VLIIE)** is an integrated collection of applications that support image storage, viewing and reporting of vascular ultrasound exams.	**ELIMINATED JOB** — Some file clerk staff reductions occurred as demand for film based retrieval was eliminated **NEW SKILL** — Technology advances require employees to have up-to-date technology skills.
Combined Imaging	**Single Photon Emission Computed Tomography (SPECT-CT)** combines CT scanner and gamma camera to view anatomical references and radioactive material.	**NEW SKILL** — If the CT scanner is used for diagnostic purposes, Nuclear Medicine Technologists will need CT certification.
More Sophisticated Imaging & Technology Advancement	– **O-Arm** used for performing more accurate neck, head, and spine surgery producing CT-like images. – **True Portable CT Scanner** – **Smaller/lighter Echocardiography ultrasound technology** – **Transition of procedures away from the OR to the Cardiac Catheterization Lab and Interventional Radiology (IR)** due to procedures being less invasive, more affordable and safer outside of the OR – **Intravascular Ultrasound (IVUS)** in IR – **Advancement of probes and pumps** in Vascular Lab	**EVOLVING SKILLS** — Imaging Technologists need technology skills to be able to work with new equipment and in new departments/environments
Provision of Imaging Services in New Care	Need for imaging services in new care environments such as the **Health Hub, Blink clinics, retail environments, mobile healthcare, and potential Outpatient Regional Imaging Center**.	**NEW JOB** — Creation of multi-skilled, cross-trained worker to perform variety of imaging procedures in addition to other duties such as back office, phlebotomy, reception in smaller, low-volume facilities.

DIAGNOSTIC AND MEDICAL IMAGING
Recommendations

Based on gaps in staffing and skills due to technological and care delivery advancements, Diagnostic and Medical Imaging subgroup recommends the following action plan related to training, recruitment, and job descriptions.

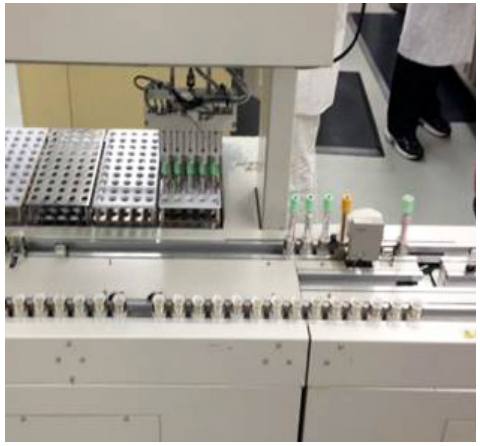
	RECOMMENDATIONS FOR WORKFORCE READINESS
TRAINING	– There is a need for online didactic training for the MRI, IR, and Cardiac Cath Rad Techs. The online didactic training should be modeled after the Mayo Clinic CT Program – In anticipation of potential changes to Imaging certification and regulatory requirements, incumbent Techs who are not certified will require training to help prepare for certification testing. – Cross-training of employees in lower volume settings to perform a variety of imaging procedures in addition to other duties such as back office, phlebotomy, reception, etc.
RECRUITMENT	Recruitment of multi-skilled, cross-trained worker who will perform a variety of imaging procedures in addition to other duties such as back office, phlebotomy, reception, etc. in smaller, lower-volume facilities.
NEW OR REDESIGNED JOB DESCRIPTIONS	– CT, MRI, Ultrasound, Mammography, File Clerk, Echo Tech JDs (in UHW, OPEIU, UFCW and Teamsters) need to be updated to reflect general language of the transition from analog to digital environment and the use of new technology – NEW JOB: Creation of multi-skilled, cross-trained worker to perform a variety of imaging procedures in addition to other duties such as back office, phlebotomy, reception, etc. in smaller, lower-volume facilities.

LABORATORY
Trends

Recent advancements in laboratory technology and automation have made significant improvements in the turnaround time for the collection, processing, examination and reporting of specimen samples. KP members already view many same day ambulatory lab test results. Now additional use of advanced automation equipment both by lab assistants/phlebotomists and clinical laboratory scientists will further improve efficiencies and reduce turnaround time for patients and physicians to view lab results.

The laboratory departments and key roles that would be or were affected by new innovation, technology, and care delivery are defined.

Tracking & Process Flow Advancement



Technology advancements in the tracking, processing of specimens prior to testing at Medical Centers and MOBS will lead to greater workflow efficiencies and ultimately result in a shorter turnaround of results.

Automation System & Auto Verification

The implementation of the Automation Systems and Auto Verification automation system allows for immediate release of test updates without prior review by Clinical Lab Scientists (CLSs). As a result of the gains of the automated system, the impact of the system will result in demand for CLS staffing to grow at a slower rate.

LABORATORY

DEPARTMENTS:

- Immunology
- Chemistry
- Blood Bank
- Pathology
- Cytology
- Bacteriology
- Histology
- Pathology
- Genetics
- Urinalysis
- Coagulation
- Allergy
- Virology

KEY ROLES:

- Clinical Lab Scientist (CLS)
- Phlebotomist/Lab Assistant
- Medical Laboratory Technician (MLT)
- Cytology Tech
- Histology Tech
- Cytogenetic Tech
- Pathology Tech
- Pathology Tissue Tech
- Molecular Genetics Tech

LABORATORY
Technology/Innovation and Resulting Workforce Impacts

TREND	SPECIFIC NEW TECHNOLOGY OR INNOVATION	IMPACT OF TREND ON STAFFING
Tracking & Process Flow Advancement	– **RFID Solution** is the automatic passive tracking system of samples in Cerner System resulting in the elimination of manual scan of samples. It does not currently exist at KP but being considered for future implementation. – **Tracking Puck System** is an assembly line tracking system/ conveyor belt which transfers specimen from blood draw location to Phone Booth. Does not currently exist at KP but being considered for future implementation. – **Phone Booth** is a machine which automates the processing, sorting and scanning of specimens for delivery to Medical Center or RRL. The system is an extension of the Labotix Automation System (see Automated System and Auto Verification). Currently only a demo version exists at RRL but is being considered for future implementation. – **Total Automation System** is a system that automates feeding of sample tubes onto processing line, sorts for testing after the Phone Booth, and works in conjunction with Auto Verification (see Automated System and Auto Verification). It currently exists at the San Diego and South Bay Medical Centers and will expand to Los Angeles Medical Centers. It is being considered for future implementation regionwide.	– While RFID Solution allows for better tracking and reduces variability in turnaround time of the samples, there is no anticipated direct impact on the job and/or skill of the Phlebotomists/Lab Assistants. – The Tracking Puck System will allow for Phlebotomists/ Lab Assistants to become more efficient and productive as they will be able to focus more of their time on drawing patient blood. – While the Phone Booth does automate a current component of the phlebotomist's job (processing, sorting and scanning of specimens) thereby increasing productivity, it is not expected to have significant decrease in demand for phlebotomists. Instead, it will allow them to spend more time with patients drawing blood. – Total Automation will reduce variability in turnaround time of specimen testing. Nonetheless, there is no anticipated direct impact to staffing demand or skills of the CLS. However, automation could lead to increased use of MLTs.
Automation System and Auto Verification	– **Auto Verification** is an automated system that allows for immediate release of test results for 80-90% of select ambulatory tests and some inpatient tests, without prior review by a CLS. The system currently exists at San Diego (Chemistry), Irvine (Hematology), South Bay and Los Angeles Medical Centers (Hematology and Chemistry), and Urinalysis in all Medical Center labs. The system is being considered for region-wide use. – **Labotix Automation System** is a specimen processing automation system that is an extension of the Phone Booth. It currently exists at the RRL with no current plans for expansion. – **Abbott Automation System** is a specimen processing automated chemistry system that will result in a shorter turnaround for test results with fewer errors. Deployment is planned for the fully automated Chino Hills Lab only. – **Bacteriology System** is a specimen processing automated Bacteriology system that will result in a shorter turnaround for test results with fewer errors. As with the Abbott System, it does not currently exist but deployment is planned for Chino Hills Lab only.	– The Auto Verification system automates a significant component of the testing currently performed by CLSs. As such, this increased productivity will alleviate current forecasted shortages of CLS supply and require current and future CLSs to be able to operate new technology. Automation could also lead to increased use of MLTs. – Labotix Automation System allows for efficiency of workflow and for CLSs to better manage large batches of specimen tests but is not expected to have significant impact on CLS position demand. – The automation of chemistry tests will allow for increased productivity and efficiency of the CLS. As such, this will decrease the relative future demand for CLSs therefore alleviating forecasted staffing shortage. – The automation of Bacteriology tests will allow for increased productivity and efficiency of the CLS. As such, this will decrease the relative future demand for CLSs, thereby alleviating current CLS position shortages.

LABORATORY
Recommendations

Based on gaps in staffing and skills due to technological and care delivery advancements, the laboratory subgroup recommends the following action plan related to training, recruitment, and job descriptions.

	RECOMMENDATIONS FOR WORKFORCE READINESS
TRAINING	– As the lab becomes increasingly automated, staff will need to possess technology skills and familiarity with highly automated equipment. – Continue to explore on-the-job options for training new CLS hires (Ex. CLS preceptor and/or Lab educator model) in order to address lack of experience of new grads/hires on KP lab systems. – As Medical Laboratory Technicians (MLT) become more widely used, a bridge training program that allows for a career advancement training of Lab Assistants to become MLTs to become CLSs will be needed. – Training of multi-skilled workers to become certified for blood draws, back office, reception, and other duties in lower volume facilities as part of a multi-skilled team.
RECRUITMENT	Technological advancements will lead to increased use of MLTs.
NEW OR REDESIGNED JOB DESCRIPTIONS	– Creation of new, multi-skilled classification related to perform multiple tasks including blood draws in smaller, low volume care settings. – As the lab becomes increasingly automated, there will be a need to update JDs to reflect required technology skills and familiarity with highly automated equipment.

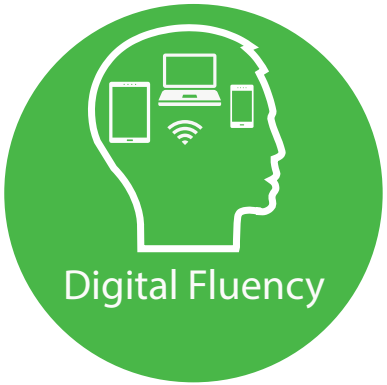
CRITICAL SKILLS OF THE FUTURE

In addition to new and evolving jobs, the workforce of the future will need to possess critical skills to optimize 21st century care. In addition to skills for specific workforce areas, already highlighted in this report, National Workforce Planning and Development has identified the following critical skills as foundation for all the future employees at KP. These skills directly align with the objectives and priorities of the Strategic Plan and will create capacity to effectively support innovative care delivery.

Consumer Focus

KP's success in delivering great care and great outcomes requires employees to engage and connect with members. Skills that improve listening, empathy and the ability to communicate effectively with diverse populations are extremely important.

Digital Fluency



Enabling access anywhere for members, as well as the continued pace of technical innovation, creates new issues and opportunities to use technology in work. Advancement of computer skills and use of all digital devices — as well as developing skills to quickly adapt to new technology in the workplace will be key.

Collaboration

The way employees interact as a team gives a strategic advantage to those organizations that can make best use of new care delivery methods and communication techniques.

Process Improvement

The evaluation and implementation of new programs and processes is an essential ingredient of successful organizations. Skills to translate new business concepts and capabilities into action will be essential.

Source: National Workforce Planning and Development

NEW AND EVOLVING JOBS

Which new jobs will be created as a result of these various innovations? Which jobs will evolve? The following section will expand on three positions (Receptionist of the future, multi-functional healthcare worker, and patient navigator) identified by the committee as key to the effective future delivery of care.

EVOLVING JOB: RECEPTIONIST OF THE FUTURE

Evolving patient needs, technology advancements, and growth of innovative care settings are driving reception/service representative positions to significantly transform.

As technology increasingly automates and digitizes the appointment, check-in and scheduling process, the role of the receptionist will evolve into more of a greeter/way-finder/educator/problem solver for patients entering our facilities either physically or virtually. In addition to becoming more mobile throughout the facility (especially in smaller MOBs), the receptionist will also be key to educating patients on health learning tools in the reception area. The future receptionist will be empowered to connect patients with resources in benefits, finance, appointment making, etc. Finally, in some smaller, lower volume facilities members of the clinical care team will also assist with reception and check-in as part of a team and cross-functional staffing model.

LIMITATIONS OF CURRENT RECEPTION MODEL

- Stationary Check-in
- Limited technology
- Lack of needed connectivity to member benefits, finance, etc. for patients

FUTURE ROLE OF THE RECEPTIONIST

- Wayfinding
- Roving check-in
- Expert resource with better connectivity to member benefits, finance
- Integration of consumer and reception-friendly technology

NEW JOB: MULTI-FUNCTIONAL HEALTHCARE WORKER

Flexible, Cross-trained Staffing for Innovative RAD HUB MOB Design and Lower Volume Care Settings

RAD HEALTH HUB CONCEPT

- Efficient environment designed using more standardized, flexible spaces that support multiple types of service.
- Improved member experience using new operating models and technology to streamline check-in and other administrative functions.
- Work spaces to promote greater physician connectivity with the healthcare team.
- An enhanced environment includes tele-consultation capabilities, comfortable consult rooms, spaces for group visits and education, and waiting areas that educate, entertain, and reinforce the KP brand.

EXAMPLE: Manhattan Beach HUB MOB

"Care How You Want It"

- Walk-in Nurse Clinic
- Multiple check-in options (smart phones, tablet, kiosk, etc.)
- Hybrid exam/consult/virtual visit room
- Shared space for permanent and rotating physicians
- Video connectivity for specialty visits
- High technology utilization
- Roving Reception
- Multi-disciplinary team

RESULTING WORKFORCE IMPACT

MULTI-FUNCTIONAL HEALTHCARE WORKER

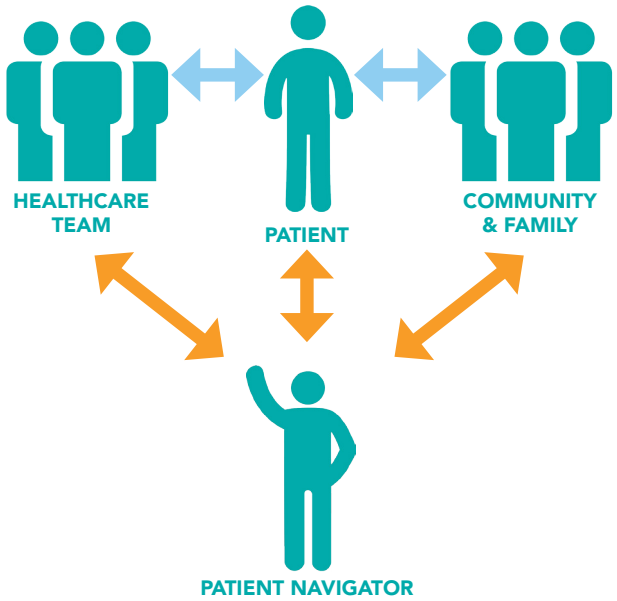
- Crossed trained for traditional clinical care and is a member concierge
- MA, LVN or other
- Competent with technology
- Champion of care experience

NEW JOB: PATIENT NAVIGATOR

Para-Professional and Clinical Care Team Members Navigating Patients through the Continuum of Care

WHAT IS A PATIENT NAVIGATOR?

- Trained, culturally sensitive health care worker
- Provides support and guidance throughout the acute care continuum/chronic disease.
- Helps "navigate" through the maze of doctors' offices, clinics, hospitals, outpatient centers, insurance and payment systems, patient-support organizations, and other components of the health care system.
- Services are designed to support timely delivery of quality standard acute care and ensure that patients and families are satisfied with their encounters with the care system.



LOW — LEVEL OF ACUITY — HIGH

PARAPROFESSIONAL — LEVEL OF PROFESSION — CLINICAL

PATIENT NAVIGATION ROLES[1]	
Promotora de Salud	Promotoras are a trusted source in their community to provide information and resources regarding health. The goal is to deliver interventions through social support.[2]
Community Health Worker	A frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served. The CHW serves as a liaison between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery.[3]
Patient Navigator	Trained, culturally sensitive health care workers who provide support and guidance throughout the cancer care continuum/chronic disease. They help people "navigate" through the maze of doctors' offices, clinics, hospitals, outpatient centers, insurance and payment systems, patient-support organizations, and other components of the health care system. Services are designed to support timely delivery of quality standard cancer care and ensure that patients, survivors, and families are satisfied with their encounters with the cancer care system.[4]
Health Coach	A supportive mentor of patients that encourages healthy lifestyles. Helps patients achieve wellness goals through behavior changes. Helps patients have a better understanding of food and lifestyle choices that affect their health.[5]
RN Case Manager and Clinical Coordinators	Educates, guides, and assists patients with complex chronic conditions to help navigate through health care system to ensure seamless continuum of care. Also serves as connection between patients, families, and health care providers.

1. Compiled by National Workforce Planning & Development
2. Messias, DeAnne K. Hilfinger; Parra-Medina, Deborah; Sharpe, Patricia A; Trevino, Laura; Koskan, Alexis M; Morales-Campos, Daisy. " Promotoras de Salud: Roles, Responsibilities, and Contributions in a Multi-Site Community-Based Randomized Controlled Trial" Hisp Health Care Int. Jun 1, 2013; 11(2): 62–71.
3. American Public Health Association. 2014. APHA. July 10, 2014. <http://www.apha.org/membergroups/sections/aphasections/chw/>
4. National Cancer Institute. July 23, 2009. Center to Reduce Cancer Health Disparities. July 10, 2014. http://crchd.cancer.gov/pnp/what-are.html
5. Institute for Integrative Nutrition. March 2, 2011. State of New York Education Department. July 10, 2014. <http://blog.integrativenutrition.com/2011/03/how-to-become-a-health-coach>

CONCLUSION

The Jobs of the Future Committee's charge in its first year was to better align staffing and workforce planning with the rapid transformations occurring in patient care via new technologies and innovative care delivery settings. In order for these initiatives to be successful and for KP to remain competitive, it is vital that our workforce is prepared to function effectively in the evolving, consumer-oriented marketplace. It is also important for our incumbent workforce to be provided with a road map of what the jobs and skills of the future will be in demand at KP so that they can begin to prepare through training, education, and experience to meet evolving demand.

Whether it was creating a multi-functional, team-based approach for Project RAD's innovative MOBs, preparing RNs and the ambulatory care team for the virtual realm, or creating a "receptionist of the future", the Committee was successful in creating key staffing solutions to support these innovative care delivery initiatives.

While not all jobs in healthcare will transform significantly, many will be impacted by the increased use of technology, transition of care along the continuum, and increased use of virtual, home and community-based settings.

The findings of this report represent concrete Committee deliverables which redefine the way KP prepares for its future workforce needs. Report recommendations will result in the development of new jobs and skills, training, and recruitment strategies beginning immediately.

Through this process, the Committee effectively partnered labor and management, operations, and front line staff to develop joint staffing solutions in advance of care delivery changes. This new approach required increased transparency from management and increased flexibility from labor.

As we plan for 2015, we will build on our successful track record and continue to utilize this collaborative process to transform the workforce to support 21st century care.

KEY TAKEAWAYS

Key trends for the workforce of the future are:

1. Need for a technologically capable workforce, able to adapt to ever changing technology and systems
2. Development of staffing teams which can operate effectively along the care continuum (virtually or physically) so that patients can access care where, when and "how" they want it.
3. Need for a multi-skilled workforce in the future to effectively support smaller, more flexible care delivery in new patient settings.
4. Increase practice at top of position scope as tasks/duties shift down through the care team, enabled by technology.

RECOMMENDED JOBS AND SKILLS OF THE FUTURE

NEW JOBS

- Multi-Functional Worker or "Healthcare Concierge" combining MA (or other), blood draw, x-ray, etc.
- Patient Navigator (Paraprofessional community health workers and clinical members of the care team helping to navigate patients through care process)

EVOLVING JOBS

- Receptionist of the Future
- Virtual RN & Care Team (MA, LVN, etc.)

INCREASED DEMAND for Current Jobs based on care delivery trends

- All RNs, including Specialty RNs (WOCN, cancer, etc.)
- LVNs, MAs and other members of core ambulatory care team
- Care Coordinators and Case Managers
- Home health/Hospice/Palliative Care RNs and home health aides, managers (quality review, etc.), nurse educators, etc.
- Workflow consultants, data analysts in ambulatory environments
- Staff Educators

NEW SKILLS – FOUNDATIONAL SKILLS for all positions

- Digital fluency
- Collaboration
- Customer service oriented
- Process improvement
- Critical thinking and analytical skills

RN and Continuum of Care Teams (MA, LVNs, etc.)

- Working with higher acuity patient load
- Working fluidly across the continuum from inpatient to ambulatory to home
- Working with and educating patients on sensors and monitoring devices for remote care.
- Critical thinking and analytical abilities to monitor effectively in remote/virtual environment
- General technology skills for MA, LVN and/or RN need to increase tech-related knowledge in the new apps, tools, devices to better serve members
- Cross training and team based skills for MA, LVN or RN to function effectively in multi-functional roles in smaller, lower-volume facilities
- Familiarize work in virtual environment via email, phone, and video conferencing
- Increased assessment and triage skills for ambulatory and home RNs

Diagnostic Imaging

- Technology and equipment management skills to function effectively in increasingly digitized and automated facilities
- Cross training for combined imaging equipment
- Multi-skilled cross-trained workers providing imaging services in smaller care settings

Laboratory

- Technology and equipment management skills to function effectively in increasingly digitized and automated facilities
- Most technologies being explored will not require CLS, Lab Assistants/Phlebotomist or MLTs to acquire new core skills. Instead, increased automation and productivity will allow them to practice at top of scope as processes are increasingly automated
- Multi-skilled cross-functional worker providing lab services (blood draw) in smaller care setting
- Critical thinking & Analytical Skills

ACKNOWLEDGEMENTS

The work of the Jobs of the Future Committee would not have been possible without the leadership and guidance of executive sponsors and the work of the Committee and subgroup members in Diagnostic and Medical Imaging, Laboratory, Ambulatory and Inpatient Nursing, and Reception. We would like to thank the following people for their commitment and dedication to more closely align staffing with transformations in care delivery and technology.

EXECUTIVE SPONSORS

Arlene Peasnall, senior vice president, Human Resources
Judy White, chief operating officer, SCPMG
Kathleen Theobald, executive director, KPNAA
William Caswell, senior vice president, Operations, KFH

COMMITTEE & SUBGROUP MEMBERS

Alex Espinoza, national coordinator, CKPU, Southern California
Alicia Solis, manager, Nurse Recruitment, Regional Recruitment Services
Allyne Beach, senior consultant, Workforce Planning and Development, National
Andy Molina, service representative, OPEIU, Local 30
Anna Omery, senior director, Clinical Practice, Regional Hospital Administration — Nursing Research
Barbara Knott, executive director, Home Care Services, Regional
Betsy Gavin, director, Recruitment Services, Regional Recruitment Services
Bill Waterman, radiology technologist II and grievance chair, IBT, Local 166
Brent Fratzke, managing director, Regional Laboratory
Bruce Horn, regional director, Diagnostic Imaging Services and Medical Imaging Technology and Informatics, Regional
Cindie McGinnis, union representative, UFCW, Local 770
Cloddie Shanks, department administrator, Ophthalmology and Head and Neck Surgery, Riverside
Corinna Riddle, recruitment consultant, Regional Recruitment Service
Cynthia Damo, director, Diagnostic Imaging, South Bay
Dan Weberg, director, Nursing Innovation for Innovation and Advanced Technology and National Patient Care Services
Datosha Williams, receptionist/cashier, Gardena
Debbie Candelario, unit capacity representative, USW, Local 7600
Debbie Watts, union representative, UFCW, Local 324
Deborah Dannemeyer, ambulatory practice leader & assistant medical group administrator, Orange County
Denise Duncan, vice president, UNAC/UHCP
Denise Topliff, department administrator, Laboratory, Riverside
Don Bruzzi, director, SCPMG Labor Relations & Risk Management, Regional
Gail Franklin-Kiek, recruitment manager, Pharmacy & Allied Health, Regional Recruitment Services
Holly Davenport, business union representative, UFCW, Local 770
Ilda Luna, receptionist & SEIU-UHW employee representative, Glendale
Janis Thorn, vice president, USW, Local 7600
Jeff Moses, assistant medical group administrator, South Bay
Jennifer Marquez, area recruitment manager, Recruitment Services, Riverside
Jennifer Thien, recruitment consultant, Orange County
Jerry Spicer, vice president, Regional Patient Care Services, Regional
Jessica Butz, national program coordinator, CKPU, National
John Bryan, union representative, USW, Local 7600
Josh Rutkoff, national coordinator, Innovation, CKPU, Southern California
Juan Mendez, contract specialist, Interventional Radiology, SEIU-UHW, Los Angeles
Julie Long, assistant medical group administrator, Los Angeles
Kaine Kerkhoff, assistant medical group administrator, Regional
Kathy Hogan, department administrator, Cardiology & Cardiac Cath Lab, Fontana
Ken Deitz, president, UNAC/UHCP
Laura Long, director, Workforce Planning & Development, National
Linda Jones, manager, Admin. Services, Central Reception, Employee Health Services & Systems Training, Panorama City
Linda Medina, vice president, Revenue Cycle Finance, Regional
Liz Spinella-Jones, assistant medical group administrator, Antelope Valley
Lolita Babaran, union representative, OPEIU, Local 30
Louie Farnacio, regional operations director, Regional Laboratory
Manuel Alanis, recording secretary, IBT, Local 166
Manuella Abrahamian, organizational development consultant, Regional
Maria Solano, union representative, USW, Local 7600
Marianne Giordano, president, OPEIU, Local 30
Mary Machado, director, Home Health Clinical, Regional
Mary-Ellen Blair, area recruitment manager, Recruitment Services, Orange County
Matt Lege, research analyst, Workforce Development, SEIU-UHW
Matthew Graeser, assistant medical group administrator, Panorama City
Paul Martin, director, Human Resources, Los Angeles
Rebecca Miller, director of Workforce Development, SEIU-UHW
Rhianne Steins, assistant director, Diagnostic Imaging Services, Regional
Ronnie Willett, executive consultant, Woodland Hills
Roy Wiles, president, USW, Local 7600
Ruby Gill, chief nurse executive, Irvine
Sandy Wohler, union representative, IBT, Local 166
Steve Cedrone, director, SCPMG Consulting & Implementation, Regional
Susan Al-Sabih, director, SCPMG Clinical Services, Regional
Sylvia Everroad, chief administrative officer, Regional, SCPMG

Southern California WFP&D Team:
Zeth Ajemian, director
Enpei Lam, manager of workforce analytics
Jeong Hong, sr consulting Data Analyst
Julissa Barajas, project manager II
Kelley Mizukami, consulting data analyst
Natalie Miyake, project manager II

Tiffany Gardner, sr communications specialist, LMP, Regional

KAISER PERMANENTE®