Toolkit for Interdisciplinary Training to Improve Geriatric Care in Rural Areas

CLINICAL SCHOLARS

A Robert Wood Johnson Foundation program

Toolkit for Interdisciplinary Training to Improve Geriatric Care to Rural Areas

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ABOUT

This toolkit provides insights to develop interprofessional training modules to teach primary care providers in rural areas how to safely and effectively care for the elderly.

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Executive Summary

Kōkua is the Native Hawaiian word for "help". Its deeper meaning is to extend help in a sacrificial way, with no interest in personal gain. It is this value that we hope to embody in our project and impart to others.

The ultimate vision of the KOKUA Project is to change mindsets, attitudes, and knowledge in rural primary health care to prepare the existing primary care system and to create new leaders to tackle the needs of our vulnerable kūpuna (elderly). We cannot create enough new geriatric health care professionals in time to meet the needs of the impending boom of the elderly population. We are tackling the "Wicked Problem" of Hawai'i's geriatric workforce shortage and the inverse growth in the elderly population. The state of Hawai'i is not well equipped to care for our kūpuna. Access and availability of such specialist and interprofessional care is often limited. The number of persons 65 years and older will continue to rise as more baby boomers enter their retirement years. By 2040, it is projected that about a quarter (23.6%) of Hawai'i's population will be 65 years or older. We have a severe shortage of medical and mental health providers. Due to our unique geography, this deficit is especially felt in low-income populations and on the Neighbor Islands. Most specialists are clustered around the state capital of Honolulu, on the island of O'ahu. Hawai'i Island compares more poorly to the rest of the state. They struggle with a greater shortage of primary care providers, pharmacists, and mental health professionals. This shortage has become so drastic that it is a public health emergency. Service providers frequently work in silos, causing a lack of coordination for healthcare services for older adults. Currently, the only formal geriatric medical training entity is at the University of Hawai'i, with the educators again mostly located on O'ahu. Initiatives on O'ahu to train existing primary care professionals through distance education have only been effective to a degree. Barriers to success include the lack of access for target learners to attend these trainings, limited time availability, limited topics of interest to learners, and lack of formal training certifications.

Our project has a 3-pronged approach:

1. Improve geriatric knowledge within the community workforce via interprofessional tele-education to reach the existing and incoming primary care workforce.
2. Disseminate training resources, templates, action plans, and other materials via website and smartphone app, to rural primary care clinics who are ready to undergo an age-friendly transformation, creating a network of age-friendly primary care clinics better prepared to serve kūpuna.
3. Create smartphone app that allows patients and caregivers to track dementia behaviors over time and send videos to provider for feedback and medication management. The app will also include prescribing algorithms to assist providers in maximizing efficacy and minimizing polypharmacy.

WPIP ISSUES	PROJECT AIMS AND GOALS
Not enough geriatric specialists	Create an IP "mini-specialist" network who collaborate
Traditional rural clinic workflows are not set up for geriatric primary health care	Create a replicable age-friendly system with doable, non-disruptive changes that positively and highly impact care
Geography	Remote communication
Access to practical, high-quality interprofessional education resources	Training resources, toolkits geared toward "boot-on-the-ground" community professionals available on website

Planning

In Hawai‘i and nationally the fastest growing segment of our population are those aged 65 and older. As this segment ages there will not be enough geriatricians to care for them because of geriatrician shortages. Primary care will need to fill this void. Unfortunately, primary health care has always been challenged in the field of geriatric medicine. The care of frail elderly is complex and multi-layered. It is critical to strengthen the front-line of our primary care workforce while we develop geriatric training for the incoming workforce. Geriatric care requires the collective efforts of an inter-professional team attuned to the needs of the elderly to create collaborative and effective care plans.

We aimed to improve care of vulnerable older adults through changing mindsets and attitudes while improving provider knowledge to become an Age-Friendly Health System. We planned to educate Family Medicine residents, attending physicians and staff by conducting interprofessional tele-education on geriatric and mental health topics. We chose a tele-education platform because of its ability to overcome geographic barriers and its low cost sustainability. These topics are designed to provide crucial training to frail, vulnerable elderly in rural communities. We also planned to create the first age-friendly clinic system on Hawai‘i Island through the development of a Kūpuna Collaborative Care Plan (KCCP) that focused on the 4M’s of an age-friendly health care system.

One of the key aspects of our project is creating Age-friendly Health Systems that is focused on the 4M’s framework (what matters, Medication, mentation, and mobility). We aligned each of these “M’s” with specialists and experts in geriatrics within the University of Hawai‘i to build our team.

Project Team

- **Pia Lorenzo, MD (Project Lead & Geriatrician):** Assistant Professor, University of Hawai‘i at Mānoa, John A. Burns School of Medicine, Department of Geriatrics; Regional Medical Director, United Health Care
- **Robin Miyamoto, PsyD (Clinical Psychologist):** Assistant Professor, University of Hawai‘i at Mānoa, John A. Burns School of Medicine, Departments of Native Hawaiian Health and Family Medicine
- **Chad Kawakami, PharmD, BCPS, CDCES (Pharmacist):** Assistant Professor of Pharmacy Practice, University of Hawai‘i at Hilo, The Daniel K. Inouye College of Pharmacy

Key Skill Sets

The project team was led by Dr. Pia Lorenzo. For the past 10 years she has dedicated her career toward promoting equity and reducing disparities among economically disadvantaged frail elderly in Hawai‘i. She has over 15 years of experience in providing direct patient care as both a primary care physician and a geriatrician. She has witnessed first-hand how hard it is to manage the elderly in primary care. Dr. Robin Miyamoto is an Assistant Professor and Clinical Psychologist with over 20 years of active practice in health psychology. She uses her expertise to develop strategies to identify and manage disorders that affect patients’ mentation. Dr. Chad Kawakami Assistant Professor of

Pharmacy Practice and has 20 years of experience in managing medications in the elderly. He applies evidence-based medicine in teaching providers how to prescribe medications to treat diseases in the elderly that minimize harm.

Other necessary skills to complete this project include community engagement, project design, curriculum design, website development, data collection and analysis.

Funding

RWJF provided $315,000 in three-year base funding. The funds are used primarily for faculty time buy-out. Additional funding supported the costs of project activities and materials. RWJF provided an additional $3000 in funding for logo development and branding. We also used the funding to hire a web designer, website host, and copywriter to develop content.

COVID Rapid Response Project

Additionally, to address the increased need for long-term care in response to the pandemic, the team was awarded a $10,000 RWJF COVID-19 Rapid Response Grant. We partnered with a local nonprofit to train students in nursing and social work in health equity and concepts in geriatric medicine. They helped gather information to create a website to help place frail seniors in foster homes. Funds were used for recruitment, training, website development and promoting the website.

Community Partnerships

Our current partners include the University of Hawai‘i at Hilo, The Daniel K. Inouye College of Pharmacy (DKICP) and the Hilo Medical Center (HMC). The College of Pharmacy has a robust physical and professional presence in Hilo, the largest town on Hawai‘i Island. They are well-attuned to the healthcare needs of this community and value lateral interprofessional training. HMC is the largest hospital in the Hawai‘i state hospital system and home to the Hawai‘i Island Family Medicine Residency Program (HIFMRP). The HIFMRP utilizes an interprofessional team training model to train learners from medical, pharmacy, advanced practice nursing, and health psychology backgrounds. There are no specialists in geriatric care on their faculty.

In building our website, we partnered with a local digital design firm called Marketing Seed. They are also very passionate about helping the kūpuna, having strong personal ties to the local Meals on Wheels. They have connected with us at other projects we have at the university, and with other professionals in the community who are not necessarily medical, but have a passion for helping others as well.

HIHI Hawaii Health Ideas

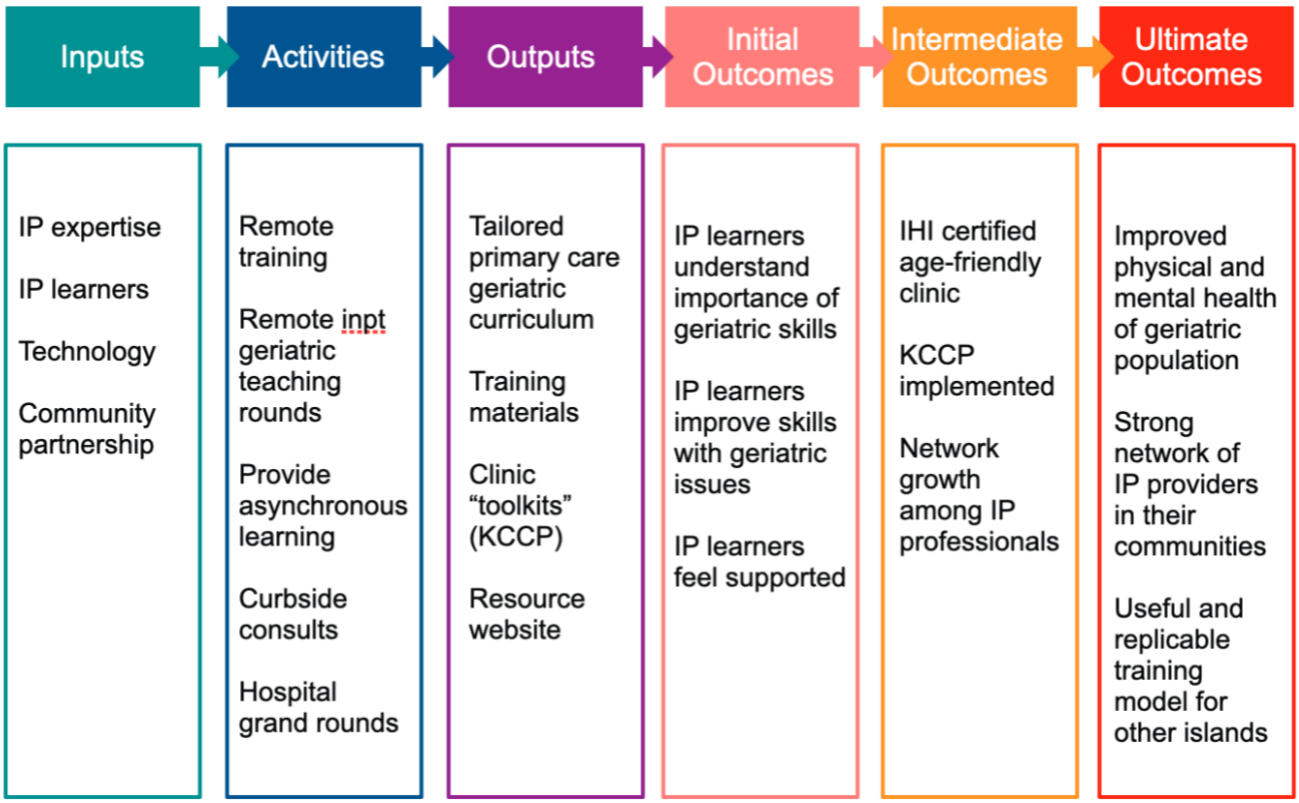
Project work

According to the American Geriatrics Society, in 2018, there were about 7000 certified geriatricians in the US, and only half of those were practicing full-time. As we look at future trends, Geriatrics is one of the few medical specialties that is decreasing as the demand increases. We are not producing enough specialists and the deficit will continue to grow as our population ages. Studies show that the optimal patient panel is 1 geriatrician for every 700 seniors. By 2025, it is projected we will need 33,000 geriatricians to care for 17 million older adults. However, at the current rate we are only projected to have 6,000. With this short supply, only 3 million elderly Americans will be able to get geriatric care. We are feeling this shortage even more acutely in Hawai‘i. We already have a primary care physician shortage, which was further exacerbated by the COVID-19 pandemic. The neighbor islands are hit even harder. In Hawai‘i we have 1 geriatrician for every 24,000 seniors. These statistics drove our solution to improve geriatric education for primary care providers on front lines.

The original 3-phase project plan involved a much stronger presence with the clinic. In year 1, the plan was to conducted interdisciplinary training including the paraprofessional staff. In year 2, we were going to assist in pursuing Institute for Healthcare Improvement (IHI) Age-Friendly Health Systems certification. Finally in year 3, we would implement the KCCP, an individualized care plan for each elderly clinic patient based on their responses to “What Matters”. The results of each piece of the project would be shared on the website for potential implementation at other clinics.

In developing our project plan, we gathered stories from stakeholders about their frustrations in the current system. We found a common themes among residents and faculty physicians. One of these recurring themes was provider burnout resulting from the feeling of failing their patients due to the system’s limitations. Based on our original plan and our initial conversations with stakeholders, we developed our logic model below.

Logic Model:



Ellen's Story

My name is Ellen. I grew up in a poor community and always wanted to do well. I was a nurse's aide while I put myself through medical school. I chose to specialize in family medicine to serve as many patients as I could. It was one of my proudest accomplishments. I wanted to give back to a community like mine, and I ended up taking a job working in an underserved clinic on the edge of Oahu. It was hard work seeing 25+ patients a day and I didn't expect my patients to be so medically and socially complex. I thought primary care meant giving shots, talking to people about their diabetes and convincing them to take their blood pressure medication. It was way more complicated.

One day, a woman made an appointment with me to see her father. I scanned the chart, and saw she had seen every other provider in the clinic several times, and he just seemed to get worse and worse. His memory continued to fail, he became incontinent and now he was stuck in his wheelchair. I was not sure about what I would plan to try next.

The clinic receptionist came to me saying that the daughter was having a breakdown in front. I came out to the waiting room to see what was going on. I see an old, emaciated man howling on a wheelchair and a very distraught woman pacing, cussing and muttering under her breath. She took one look at me enraged and said "I don't know why I am even here. You wouldn't understand. You wouldn't know what to do either. I can't deal with this anymore." She stormed out of the building yelling she was abandoning her father to our care in the waiting room!

Inside myself, I had my own meltdown too. She was right. I did not know what to do either. Here I was, at the edge of the island, and now I have to figure out what to do with this frightened, non-communicative patient in the wheelchair. I think I was just as afraid as him. I had no clue where to start. She obviously was trying her best but no one knew how to help her either. I want to make a difference. I just did not know how. What do I do? Am I even cut out for this type of work? Is there anyone who can even help me?

COVID-19 Pivot

The COVID-19 pandemic posed challenges to our original proposal. The team had a reduced ability to travel easily to the community partners. Communication and teaching had to be been done solely via tele-education. Despite the lack of face-to-face interactions, our team was able to pivot, focusing more on technology than had been factored into our original plan.

Lessons learned from improving tele-education experiences may be leveraged for future projects when reaching out to other remote communities. We are hopeful that we will be able to develop a smartphone app that will increase communication between patients, caregivers, and providers, especially in a post-COVID health care system. After the pivot, we adapted the logic model to reflect the true activities of the project.

What Actually Happened:

Inputs	Activities	Outputs	Initial Outcomes	Intermediate Outcomes	Ultimate Outcomes
IP expertise ✔	Remote training ✔	Tailored primary care geriatric curriculum ✔	IP learners understand importance of geriatric skills ✔	IHI certified age-friendly clinic X	Improved physical and mental health of geriatric population ?
IP learners ✔	Remote inpt geriatric teaching rounds X	Training materials ✔	IP learners improve skills with geriatric issues ✔	KCCP implemented X	Strong network of IP providers in their communities ✔
Technology ✔	Provide asynchronous learning ✔	Clinic "toolkits" (KCCP) X	IP learners feel supported ✔	Network growth among IP professionals ✔	Useful and replicable training model for other islands ✔
Community partnership ?	Curbside consults X	Resource website ✔			
	Hospital grand rounds X				

Evaluation and dissemination

We implemented a Kirkpatrick style evaluation that our learners complete after each session to evaluate the effectiveness of training modules and learner satisfaction. This feedback assisted us in simultaneously adapting and improving our training to their specific priorities and needs. To date, these evaluations have indicated that they are interested in ongoing, interdisciplinary training with a case-based approach. After each didactic module, learners completed the evaluation form through Poll Everywhere software embedded in the presentations. Questions can be found in the Appendix.

Level 1: Reaction

The Kirkpatrick Evaluation approach measures outcomes on 4 different levels, reaction, learning, behavior change, and results. For the first level, reaction, we had extremely high ratings from learners, with all but one area being above 90%.

QUESTIONS REGARDING LEARNERS' REACTION	AGREE OR STRONGLY AGREE
The class environment was sufficient to help me learn	91%
I was engaged with what was going on during the program	92%
The activities and exercises aided in my learning	94%
I was able to immediately use what I learned	78%
The program material will contribute to my future success	98%

Level 2: Learning

We found a significant increase in learners' confidence in their ability to apply what they had learned (98%). Additionally, 100% of learners were committed to applying what they learned to their work.

> ***"This was very helpful and clear.***
>
> *Aggression in Dementia patients is very frustrating for families and patients both. Glad to have more tools in my tool chest for this."*

Level 3: Behavior

The behavioral level involves measuring changes and seeing if learners are applying new behaviors in their job. In reflecting back on our family medicine resident, Ellen's story, we were very pleased to get this comment following one of our didactic sessions:

> ***"It was so interesting just days after this lecture…***
>
> *I had a 76-year old with chief complaint of dizziness that I was caring for in the Emergency Room on my ER rotation. She had a UTI, but her dizziness was chronic, and she described it as lightheadedness, presyncope with further investigation. Her medication list had several medications on it that are not recommended in this age group, and her diabetes was under very strict control (A1C < 7). I was able to use the skills discussed in this talk to feel confident in talking with the patient and her son about polypharmacy and recommended A1C targets in this age group, which were likely directly related to symptom management."*

Level 4: Results

Unfortunately, with COVID-19 and the resulting pivots, we were not able to measure the true results of our project. However, based on the limited results we were able to collect, we know we have increased the number physicians serving the rural communities of Hawai‘i.

- **14 residents trained**
- **2 new geriatricians serving rural communities in Hawai’i**
- **8 residents now serving as PCPs with specialized geriatric training**

Dissemination: The Kokua Project Website

The KOKUA Project Website was created in collaboration with Marketing Seed. The homepage holds up-to-date statistics detailing our wicked problem. It provides a public domain for patients and caregivers. There is a searchable resource page by island to facilitate connections to care. There is also a protected log in for health care providers to access additional resources and the training platform. We are hoping to add a curbside consultation feature to the website in the future. The website also holds the recordings of our didactic training sessions, allowing providers to engage in asynchronous learning.

Lessons learned

Challenges

The COVID-19 pandemic created many unprecedented and unforeseen challenges. A few of the largest challenges we faced included multiple military deployments of a team member, shift in clinic priorities, and the inability to travel interisland.

Dr. Kawakami is in the Army Reserve and was deployed multiple times during the three year project duration for pandemic response. This caused major disruptions because we went from a three person team to a two person team. Dr. Kawakami’s primary responsibility, through additional funding from the GACA, was to assist in certifying the clinic as an IHI Age-Friendly Clinic. The remainder of the team was not able to complete this without him. Additionally we lost our pharmacist expert who would handle discussions on appropriate medication prescribing and management. The clinical work loads of both Drs. Miyamoto and Lorenzo had increased significantly in the COVID response, causing strain on the project as well.

Hilo is a rural community with limited medical resources. COVID surges stressed the healthcare system in Hilo forcing providers to shift their priorities to care for the sickest patients. The priority of learning about appropriate geriatric management shifted to learning to prevent, mitigate, and treat COVID both in the clinic and in the hospital. Even at present, Hilo Medical Center is frequently on the local news due to critical issues with staff shortages.

During the height of the pandemic, air travel was either shut down or risky due to infection. This forced us to transition our planned quarterly in-person training sessions to virtual. With the loss of in person learning and the ability to build connections with our learners, enthusiasm for geriatric education and momentum was lost. COVID also caused the medical center to shut its doors to student learners. We subsequently lost access to pharmacy and psychology students.

Successes

We were able to train 3 classes of residents with a total of 14 residents trained. Out of these graduates, 2 went on to pursue subspecialty geriatric medicine training at the University of Hawai‘i. One of these geriatric medicine fellowship graduates is now serving as a primary care physician in an

underserved area of Oʻahu which has the highest concentration of Native Hawaiians. The other geriatric medicine fellowship graduate has just finished training and has plans to return to serve the Hilo area. 8 other residency graduates stayed in Hawaiʻi island and are currently serving as geriatric medicine trained primary care physicians in the community. In summary: out of the 14 residents trained, 2 became fellowship-trained geriatricians, and a total of 10 of them have stayed to serve the Hilo community. Two more residency graduates are practicing primary care in Kansas and California.

We were able to negotiate continued inclusion of the HIFMRP students to the University of Hawaiʻi's Aquifer training program for future residency classes even after our time with Clinical Scholars has ended. They will also have access to our website with past training sessions and training materials. These measures will augment their geriatric medicine rotation for years to come.

This project has also led to new partnerships with Hawaiʻi Health Ideas (HIHI), a local nonprofit comprised mostly of retired medical and para-medical professionals who are kūpuna helping other kūpuna. The partnership resulted in our COVID project that helped frail elders in the community find placement in adult foster homes. Our project has also attracted new partners. We will be collaborating with the University of Hawaiʻi College of Nursing in their nurse practitioner program. They would like to initiate interprofessional training similar to what we had provided for HIFMRP for a new geriatric APRN track that is being planned.

Shifts in Thinking

In tackling this wicked problem, we have learned we need 4 main things:

1. **More geriatrics experts**
2. **More geriatrics training for our entire workforce**
3. **More public education to empower our older adults and caregivers, and**
4. **Health policies to support us as we all age.**

Success can take many shapes and forms. Success is not necessarily accomplishing each and every goal we set out to achieve at the beginning of this project. Our wicked problem is so enormous and every pivot brought us to new partners who joined us on this journey. Success is being able to adapt, keep going, and keep planting seeds of awareness and inspiration in new or unexpected places. None of your good work is a waste.

Traversing the 3 years to address our wicked problem and with the pivot during the COVID-19 pandemic, we learned a lot about leadership, working in community and teamwork.

- Leadership is shared. This work can sometimes be an uphill climb. It is important to know when to rest, and to always lift each other up.
- Alignment of goals with partners is key. Find partners who are fighting the same wicked problem as you. If you can't find partners like these, find partners who are willing to listen and walk with you in this journey.
- Keep the end in mind: the roads may change but the destination remains the same.
- Empower everyone along the way. Be a multiplier and an influencer.
- Don't reinvent the wheel, don't duplicate work. If you find key people or resources, connect them.
- There is strength in networking. It creates a synergistic ripple effect.

Recommendations

This project was shown to be useful in empowering the primary care workforce when working with the geriatric population. Additionally, the introduction of the simple question, “what Matters” can dramatically shift the focus of the provider-patient discussion and the resulting treatment plan. The use of specialists in a consultant role is one that has been shown to be effective in behavioral health with the lack of psychiatrist, particularly in rural areas. This project demonstrates that this approach can also work with a geriatric population as well. Moving forward, we would like to examine payment models that would support this work on a broader scale. This model is scalable in a larger population and applicable to a number of other specialty areas with significant workforce issues.

In thinking about how to utilize this toolkit in your targeted population, here are some recommendations, best practices, and advice.

Getting Started

- Start with a roadmap, but don’t be committed to the path. There are many roads to success.
- Have a high-trust / high-performance team. Have regular meetings with each other not only to update each other on your progress with the project, but with life. You will know how to support each other better, and maybe even have fun along the way. Give and receive appreciation frequently. Be authentic and willing to share your emotions with your team.
- Have very frequent contact with the community partners in the beginning of the project if you are geographically separated. This will help you find key people in unexpected positions who may help keep the project going if contact is somehow interrupted. Make sure to get accurate and best methods for preferred communication. Make sure you have more than one specific point person.

Best Practices

- Have a contingency plan. Have a method of dividing and conquering the work. Do not be afraid to adapt the plan into something more manageable if you hit roadblocks. Just keep going.
- A small team is still a mighty team if you have a high-performance team. Lean on each other. Rest when you need to, take turns being the leader, and lift each other up.
- Pivots are victories. The ability to adapt and change course while still pursuing the end goal is a gift.
- Keep going. When tackling a wicked problem, there is much work to be done and none of what you do is a waste of time.
- Don’t reinvent the wheel. If you find people and resources that align, bring them together. Keep your momentum by not duplicating work.
- Keep your eyes and ears open. Share your story as much as you can. You will find unexpected advocates and future partners.
- Work with your executive and team coach to guide you through challenges.

Appendix

Post-Didactic Evaluation Questionnaire

1. The class environment was sufficient to help me learn.
2. I was engaged with what was going on during the program.
3. The activities and exercises aided in my learning.
4. I was given adequate opportunity to practice what I was learning.
5. I will be able to immediately use what I learned.
6. The program material will contribute to my future success.
7. From what you learned, what you will be able to apply in your work?
8. What assistance or resources will you need to successfully apply what you have learned?
9. How confident are you to applying what you learned to work?
10. How committed are you to applying what you learned to your work?
11. What outcomes are you hoping to achieve as a result of your efforts?
12. What other feedback would you like to share?

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