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Report on Outcome Metrics  
LTC Apprenticeship Programs

**WorkForce**21

*Innovative Workforce Strategies for the 21<sup>st</sup> Century*

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## INTRODUCTION

This is a report on data and observational outcomes for apprenticeship-based LTC direct care worker training. Most data is based on the Extended Care Career Ladder Initiative or "ECCLI" in Massachusetts. We primarily used the ECCLI source data for review as this program has been operational since 2000 and is now in its ninth cycle of training -- so it has a deeply established track record. In its complete program structure, it is formulated almost identical to "Golden Horizons CareerWorks", our GV apprenticeship variant, using the Kansas developed Health Support Specialist program as its core apprenticeship curriculum. GV CareerWorks differs in some key structural areas, but none that should affect outcomes. If anything, such differences should enhance outcomes.

In Massachusetts, the ECCLI program is administered by Commonwealth Corporation, a nonprofit entity created by an act of the state legislature to fund and administer industry-specific employment and training interventions. ECCLI works in conjunction with the commonwealth's Nursing Home Quality Initiative to enhance the quality of long-term care in Massachusetts. They assist long-term care employers "in the design of unique education opportunities, career ladders, and positive workplace practices which lead to improved patient care and employee retention rates in their facilities." Under ECCLI, just as under Golden Horizons CW, Direct-care workers, managers, and supervisors all receive occupational training.

Just as in our target states, in MA the quality of service for seniors and disabled individuals suffers due to high employee turnover and chronic worker shortages. We know Certified Nursing Assistants (CNAs) have demanding careers that are vital to the industry, but they frequently move on to other jobs because they have few opportunities for professional, economic, or educational advancement. Like our program, ECCLI addresses the recruitment and retention of nursing staff by providing them with flexible educational opportunities and incentives. Also like in our program, a framework for Nursing Home Quality was also implemented in order to encourage better workplace conditions for CNAs while simultaneously promoting workplace culture change.

Since 2000, ECCLI has helped 158 nursing homes and home health agencies train over 7,500 individuals. ECCLI sites report improved worker retention rates and reductions in the cost of doing business, while improving the quality of patient care. Direct-care workers who completed at least one training module have received a wage increase at an average of \$.96 per hour.

## **SOURCES**

Data was compiled from the following sources:

### ***Institute for the Future of Aging Services--AAHSA***

*Robyn Stone, DrPH -- Executive Director*

*Michelle Washko, PhD -- Senior Research Associate*

*Lauren Harris-Kojetin, PhD -- (formerly Director of Research, no longer at IFAS)*

### ***University of Massachusetts Boston—Gerontology Institute***

*Frank Caro, PhD -- Senior Fellow*

*Alison Gottlieb, PhD -- Senior Fellow*

*Kathy Wilson, MS, MBA -- Doctoral Student*

### ***Commonwealth Corporation***

*Carol Kapolka -- ECCLI Project Director*

*Navjeet Singh -- Vice President, Research and Evaluation*

### ***Hebrew SeniorLife Institute for Aging Research***

*Richard N. Jones, ScD -- Senior Research Associate*

*John Morris, PhD -- Co-Director*

### ***Rhode Island Department of Elementary and Secondary Education***

*Johan Uvin, PhD -- Director of Adult Education*

### ***WorkForce21 (NPO GV CareerWorks)***

*Michael D. Van Stine -- President and CEO*

## Program Structure - ECCLI

Under the broad goal to create a culture of retention, ECCLI has two specific goals:

- Improving the quality of patient care
- Improve the quality of work life for front line staff

After initial funding in 2000, the program administrator consulted with a number of key partners to discuss program design. They were:

- State Partners: providers associations, labor, education, workforce development, policy;
- Local Advisory Boards: LWIB's, regional "One Stop" centers, community colleges and relevant community-based organizations or CBOs;
- Holders of primary and secondary research to assess what was working where and what needed to be changed.

Following this, the first round of funding was announced in 2001 and the first application for funding was released. Technical assistance was provided to develop effective E&T partnerships, needs assessment, defining career ladders, effectively choosing training providers, use of ABE/ESOL for workers and budget development. LTC organizations applied under a competitive process. Funding was awarded and projects started-up.

Like our program, these are the design parameters of ECCLI:

- Employer driven in partnership with technical/community colleges
- Organizational needs assessment
- CNA career ladder (apprenticeship structure)
- Entry level skills development (life skills, ABE/GED/ESOL)
- Participant support (mentoring component)
- Culture change to person-centered care
- Offer flexibility to individual facilities based on the needs of their workforce and their resident populations

The program design assured full administrative and technical support. This was seen as a structural priority for success. Just as we are doing with our initial rollout in KS, they focused on "in person/just-in-time" intervention (just like they, we are doing this just a little differently in each facility/workforce region), troubleshooting and problem solving collaboratively, building and nurturing effective partnerships, expediting implementation through inquiry and assuring full access to all appropriate resources. This evolved as a supplement, as we are also planning, a promising practices virtual library and nursing home ED forums/focus groups.

Through ECCLI to date:

- Funding appropriated to date through state legislature - **\$20M**
- Number of LTC organizations participating – **158**
- Workers trained statewide – **over 7,500**
  - **Over 2,600** have participated in at least one career-ladder program
  - **Over 3,400** have participated in one basic or soft skills class
  - **Over 500** have participated in more than one career ladder training
  - **Over 1,000** have participated in more than one basic or soft skills class
  - **Almost 1,800** have completed at least one career ladder training and received a wage increase
  - **Almost 1,500** managers have participated in management training
  - **Average wage increase = \$0.96**

## **PROJECT EVALUATION - Method**

Two methodologies were here used. Method one -- assessment of the program

- Larger hypothesis: higher quality jobs, job skills, and work environments for frontline caregivers will result in better patient care and quality of life.
- Five major evaluation topic areas:
  - General context
  - Implementation of the interventions
  - Changes in organizational structure/practice
  - Outcomes
  - Sustainability

Method two -- assessment of the employee/trainees

- Employee Data Collection
  - participant observation & informal discussion
  - formal one-on-one interviews (both in-person and on the telephone)
  - focus groups
- Site Data Collection:
  - A→ No longer receiving ECCLI funding
  - B→ Newly funded
  - C→ Receiving funding over multiple rounds
  - Used data from 69 nursing facilities that participated in ECCLI and 161 nursing facilities as a comparison group out of 450 in MA (Those selected were carefully picked to preserve balance of

number of beds, location, legal form (for-profit or not-for-profit), number of registered nurses and the existence of a nurse aide training program. ECCLI participation was then associated with the overall level of functional impairment of facility residents, the level of behavioral problems exhibited by the residents in the facility and the mean level of clinical complexity.

Then two data sets, one from the program implemented:

- CNA/HHA Career Ladders
- Basic/Soft Skills Training
- ESOL & ABE
- Career Counseling & Case Management
- Management & Supervisory Training
- Mentoring (part of the apprenticeship)

Two, from the partners:

- Community Colleges
- Employment Organizations
- Health Care Partners
- Training Partners

## **PROJECT EVALUATION - Outcomes**

- **Improved Communication**
- **Increased Clinical Skills**
- **Improved Teamwork**
- **Increased Respect & Self-Confidence**
- **Increased Wages & Benefits (tied to increased productivity/skills)**
- **Improved Staff Retention & Recruitment**
- **Organizational Practice/Culture Change**
- **Quality Outcomes for Residents/Clients**

These now taken one-by-one:

- **Improved Communication**
  - Most far-reaching outcome
  - Affected all personnel, clients, family members, operations, QOC
  - 3 types of ECCLI-funded communication training:
    - ESOL

- *The extent of English deficiency had not been understood before ECCLI training*
  - *Improved English proficiency affected worker self confidence and self esteem*
  - *Improved staff communication throughout organizations*
  - *Cultural diversity training helped with inter-personal understanding*
- **Soft skills training AND leadership/management training**
    - *Improved frontline staff communications with co-workers*
    - *Improved communication with upper management (open door policy)*
    - *Uneven impact on supervisor/aide communication*
    - *Supervisors reported improved communication with subordinates*
    - *HHAs reported improved communication with supervisors*
    - *CNAs reported uneven communication with supervisors*
- Sources of best communication outcomes
    - *Supervisor communication training (capacity building)*
    - *Problem solving meetings including direct care staff*
    - *Interdepartmental in-services/learning circles*
    - *Between-shift communication*
    - *Overlapping shifts*
    - *Care cards*
    - *Cultural diversity training for all staff*
    - *Continued ESOL training opportunities*
- **Increased Clinical Skills**
    - Clinical knowledge/skills of direct care staff
    - Impact on quality of care
    - Need for capacity-building to use effectively increased CNA/HHA skills

- Relieves nurses (e.g., CNAs taking resident vital signs, managing weights, etc.)
- Bridge to nursing
  - “Building our own nurses”
  - Home-grown nurses know the organization
  - Promise to work at least 2 years at company
- Building LTC workforce
  - Even if newly trained nurses leave, pool of nurses (and advanced CNAs) in local area is higher quality (benefits industry and customers)
- **Improved Teamwork**
  - Quality of teamwork improved
    - Shift in focus from individual tasks to group goal of resident-centered care
    - Sharing workload between staff
  - Interdepartmental cross-training
    - Breaks down barriers associated with job title
    - Job shadowing
  - Collaborative interdepartmental classes
- **Increased Respect & Self-confidence**
  - Increased self-esteem, self-respect, self-confidence, empowerment of direct care staff, which in turn, positively affected quality of staff interactions and resident care.
  - Statement: *“HHAs are much more confident bringing things up. They are more comfortable, knowing that what they say makes a difference.”*
  - Statement: *“ECCLI training resulted in CNAs having more self-respect as they gained an appreciation of how important their roles were to the nursing home residents, family members and supervisory staff.”*
  - Management and supervisors have more respect for and trust in CNAs/HHAs



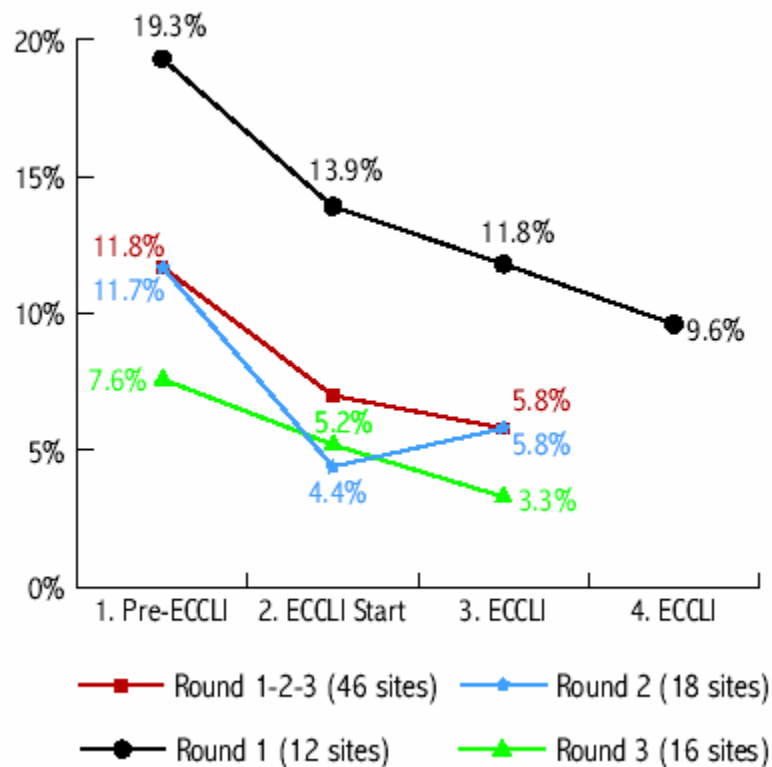
- CNAs/HHAs are increasingly able to resolve client care issues independently without going to upper management.
- Statement: *“Education through ECCLI has led to more CNA empowerment, leading them to have more self-respect and to be more respected by others. They are involved in more decisions; they have more input into resident care and feel more valued by everyone, other staff, residents and family members. This boost in confidence has allowed them to focus their attention on the residents and to structure work processes for the benefit of the residents.”*
- At one LTC facility, where there were issues:
  - CNAs thought ECCLI training led to more work for little extra money;
  - Supervisors did not trust advanced CNAs with higher functions;
  - This facility had not focused on capacity-building for supervisors.

- **Increased Wages & Benefits**

- All CNAs/HHAs provided modest wage increases for career ladder steps (**Average wage increase \$0.96/hr. ranging from 3-6 steps**)
- Most assigned elevated titles with completion of trainings (CNA I, II, III)
- Mixed opinions about value of wage increases
- Direct care staff appreciated opportunity for education at no cost and on work time
- Immigrants and older workers lacked confidence in their academic ability
- ECCLI-funded classes got them over a hurdle → more trainings or college preparatory classes
- Offering education and wage increases sends message: workers are valued
- Important for middle management to support staff education by accommodating schedules

- Important to acknowledge direct care staff accomplishments and give them responsibilities that use new skills
- **Improved Staff Retention & Recruitment (Operational Cost Savings)**
  - Using data from Rounds 1-3, **vacancy rates decreased from 19.3% to 9.6% for a decrease of slightly over 50%** (See figure 1 below)

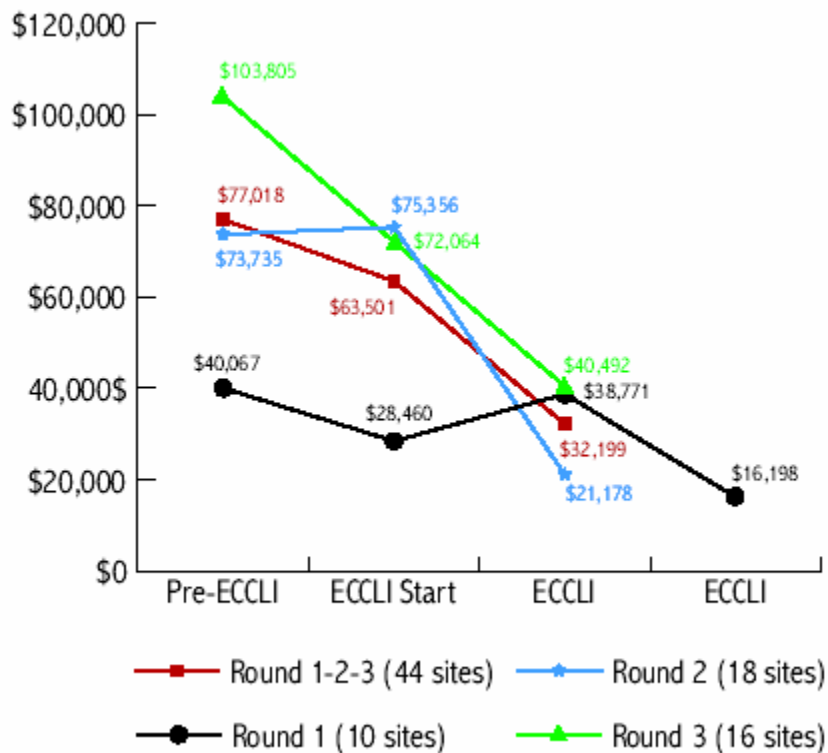
Figure 1: Six-Month Average Vacancy Rates for ECCLI for the Entire Initiative (Rounds 1-3) and by Funding Round



- Among organizations with high baseline turnover, **staff turnover was reduced modestly to substantially (ranging 10% to 70%) especially among staff who received training**
- Contributing to reduced turnover:
  - Involving direct care staff with hiring
  - Training mentors to orient new staff
  - Opportunity to advance careers
  - Opportunity for wage increases

- As staff turnover declines, there was less need for recruitment (Accepted estimate \$4,000 saved/EE) **Global savings per facility for turnover replacement estimated at \$160,000 annually** (an estimated average decrease of 40 new hires/facility annually)
- Reputation that the organization is a good place to work → employees act as ambassadors, recruiting friends and acquaintances → less need for advertising/job fairs/processing/screening//retraining/orientation
- Dietary staff also difficult to recruit and retain with competition with fast food restaurants (Link of apprenticeship to dietary and /housekeeping helps mitigate impact to non-nursing departments)
- Lower secondary employee costs (call-outs, overtime, temps, agency fees) Again using Round 1-3 data, **the average agency expense per facility declined from \$77,018 to \$32,199 for a decrease of \$44,819/facility or a decrease of 58%. (For this total group of 44 facilities, total agency cost savings were \$1,972,036. See Figure 2 below)**

Figure 2: Six-Month Average Agency Expense per Facility for ECCLI for the Entire Initiative (Rounds 1-3) and by Funding Round



- Also huge potential for savings to fund further staff training, etc.

- **Organizational Practice/Culture Change**
  - Two nursing homes embraced culture change (resident-centered care)
    - ECCLI funded capacity building training for culture change
    - Other organizations proposed culture change, but achieved only modest gestures toward culture change
  - Permanent versus rotating staff assignments
    - Benefits:
      - staff get to know residents/clients/FM at personal levels
      - staff more likely to detect changes in residents/clients
      - Encourages resident decision-making
    - Disadvantages:
      - Staff can get “stuck” with difficult residents
      - Residents get “stuck” with less favorite staff
      - Resistance to change
  - Increased direct care staff participation in resident care planning
    - Formalized: NC (neighborhood coordinator), GNAS (geriatric nurse assistant specialist)
    - Informally/gradually: with improved communication and observational capacities of CNA/HHAs
    - Some organizations still do not include aides in resident care planning
- **Increased Autonomy/Responsibility for Direct Care Staff**
  - Advanced Aides (NC, GNAS, CNA III) have responsibilities traditionally given nurses
    - Take resident vital signs
    - Manage weights
    - Back up for floor nurses
  - Greater flexibility in assignments
  - Increased focus on personal and aide-to-aide problem-solving

- **Quality Outcomes for Residents/Clients**

- Clinical impacts

- ECCLI participation reduced worsening behavioral symptoms during the period for the analysis (Rounds 1- see Figures 3 and 4 and MA report card charts below)
    - Reductions in behavioral problems among facility residents, as assessed by the presence and frequency of four behavioral symptoms:
      - Wandering
      - Verbally abusive behavior
      - Physically abusive behavior
      - Socially inappropriate or disruptive behavior
    - A resident in an ECCLI facility was likely to have **12% fewer cases per year of exhibiting worsening behavioral symptoms following ECCLI participation than a resident in a comparison facility**
    - Findings supported by the presence of dementia care training as an element in the ECCLI training (as we also have in GV CareerWorks)

Figure 3: Behavioral Worsening Quality Indicator

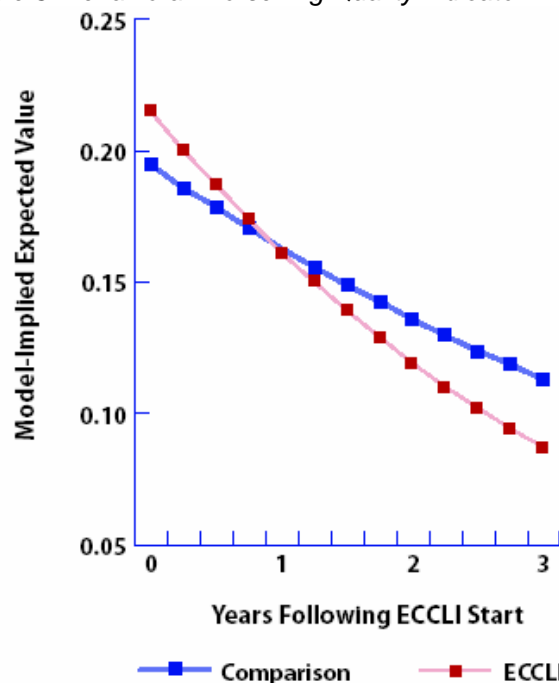
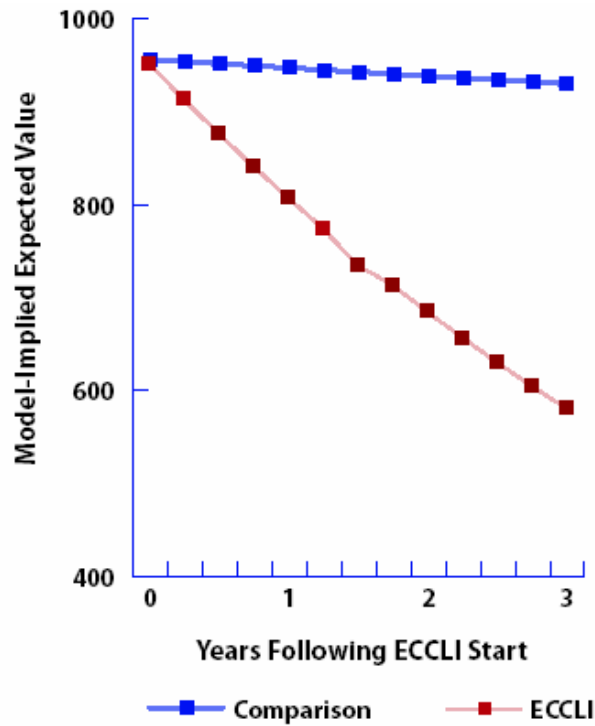


Figure 4: Conflict with Staff (per 100,000 residents)



- State Survey Results (comparing ECCLI facilities in the test group to MA average results 2004-2006. All areas shaded in green are where ECCLI facilities performed better than the MA average.)

**MA Report Card/Deficiencies**

	MA Average	A1	A2	A3	B1	B2	B3	C1	C2
MA Report Card	123	131	128	131	129	130	116	128	115
Deficiencies 2006	6	1	2	2	5	1	9	6	0
Deficiencies 2005	6	2	5	1	2	2	11	0	10
Deficiencies 2004	6	3	1	0	2	0	7	0	5

### Quality Measures/Selected MDS Indicators

Quality Measure	MA Average	A1	A2	A3	B1	B1	B3	C1	C2
ADL worse	16	13	4	19	12	7	28	5	1
Moderate/Severe Pain	3	2	0	0	3	5	4	1	3
Pressure Sore	12	5	12	7	5	9	16	23	4
UTI	10	9	7	10	5	10	3	17	7
Excessive Weight loss	7	5	8	6	5	6	5	3	4

### Quality Measures/OASIS-HHA

Quality Measure	MA Average	B4	C3	C4
Walk or get around better	41	32	17	48
Get in/out of bed better	51	56	24	62
Less pain when moving	64	57	35	66
Better bladder control	51	53	31	57
Better at bathing	62	56	44	66
Quality Measure	MA Average	B4	C3	C4
Oral meds	43	37	21	48
Short of breath less often	60	64	41	58
Stays home	65	58	61	68
Admitted to hospital	32	38	39	29
Needs emergency care	23	26	32	25

- Staff perspectives

- ESOL Classes

- improved frequency of conversations between frontline workers and residents/clients
    - Improved worker input into care planning

- Advanced skills training

- Improved depth of knowledge on health related issues
    - Promoted early recognition of symptoms and early problem intervention



- Improved ability to deal with behavioral issues
  - Cultural diversity training led staff to better understand residents
  - Person-centered care taught why residents come first
  - Permanent assignments improved relationships
  - Permanent assignments promoted resident involvement in decision making
- Resident/family perspectives)
- Residents notice more conversation
  - Families notice better clinical skills
  - Both notice more autonomy-very important to them
  - Language skills can still improve
  - Family member: *“Communication has always been good, but the change I see is that they seem to know what to say to Mom to help her be cooperative. Also, before, I was the one who noticed changes in Mom; now the CNAs are starting to pick up changes (like when she is about to get a UTI).”*
  - HHA: *“I learned about Alzheimer’s behavior and now understand why they act the way they do and how to treat them.” I understand them [clients] better. I got to know them as people now, not just clients.”*
  - Resident: *“...they encourage me to do things for myself; I have choices. They want me to be happy; they are like my sisters.”*
  - Administrator: *“We have taught [dietary staff] about death and dying, helping them realize that their job is more than just bringing the food to the residents, they can also help by consoling residents. [Now] they are very vocal about changes they see in residents. This has been part of what the training ECCLI brought.”*

## GENERAL CONCLUSIONS

- Crucial Elements for Successful LTC Workforce Development
  - Incorporate an initial needs assessment; thorough plan from the outset
  - Home Health Agencies should develop different model from nursing homes
  - Need to work with experienced training providers
  - ESOL and ABE training critical
  - Supervisory training critical
  - Commitment to improved communication critical
  - Support of upper- and middle-management critical
- Organizational Benefits
  - The opportunity for education and career advancement via career ladders & training, with workforce subsidy for training and most program management expenses
  - Help establish a “culture of learning” and generate enthusiasm for education
  - Can make an organization more attractive to potential new employees
  - Improves frontline workers’ feelings of self-confidence and respect and leads to improvements in the quality of resident/client care