



AutumnCare

The Aged Care E-Health Landscape

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Aged Care Landscape

- Many small orgs
- Many in rural and remote
- Govt regulation
- Staffing
- Whole of life functionality needed

Table 2.6 Number and size of residential aged care facilities, 1998 and 2007
 As at 30 June

Size of facilities (Number of places)	1998		2007		Percentage change
	Facilities	Per cent	Facilities	Per cent	
1-20	396	13.1	213	7.4	-46.2
21-40	1194	39.6	762	26.5	-36.2
41-80	831	27.6	887	30.9	6.7
81-100	322	10.7	469	16.3	45.7
101-120	141	4.7	252	8.8	78.7
121+	64	2.1	140	4.9	118.8
121+	67	2.2	149	5.2	122.4
Total	3015	100.0	2872	100.0	-4.7

Sources: AIHW (2000b, 2008d).

Figure 6.2 Comparison of registered nurse remunerations

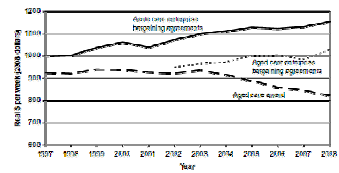



Table 6.1 Workforce characteristics: profiles for selected sectors

	Residential aged care	Health and community services	All industries
Female	95	75	45
Part time	65	43	29
45 years or older	57	46	37

Sources: Richardson and Martin (2004); DEWR (2007).



E-Health requirements

✦ Functions required

- ✦ Finance and Accounting
- ✦ HR & Rostering
- ✦ Communication
- ✦ Clinical operations

✦ Jigsaw puzzle

✦ Key is what implements fundamental operations

- ✦ Aged care – key is clinical operations from enquiry to discharge
- ✦ Can outsource other functions and remain the same business
- ✦ Key also are interactions with external systems – medication management etc



Technical Requirements

✦ 24/7 access

- ✦ Information consolidated in single database
- ✦ Ability to work without a network connection
- ✦ Quick response times
- ✦ Ability to work over low bandwidth connections
- ✦ Robust – no single points of failure; disaster recovery functions etc
- ✦ Scalable



Aged Care IT Requirements

- ✦ Ease of take-up,
- ✦ Future proof,
- ✦ Flexible,
- ✦ Available at the point of care,
- ✦ Connectivity between disparate systems,
- ✦ Operating across multiple facilities,
- ✦ Management capable of making informed decisions.



Issues and solutions

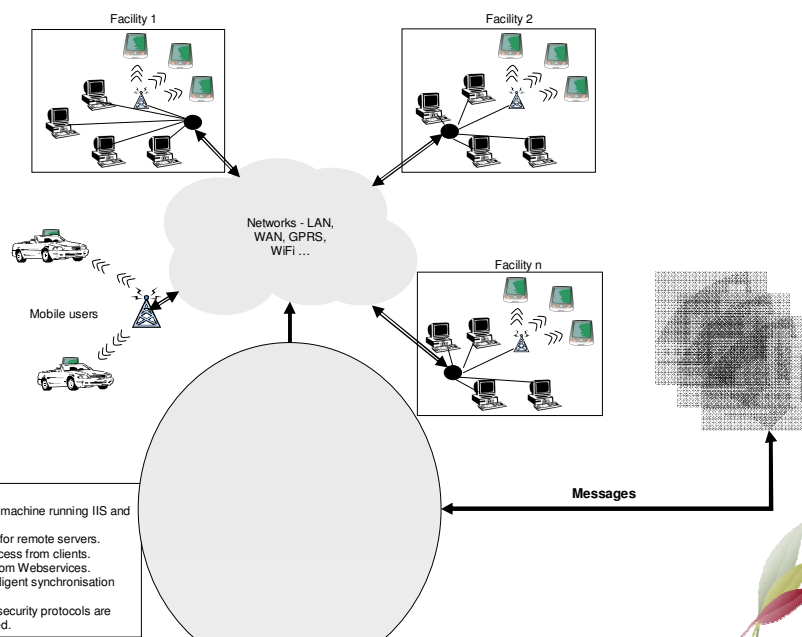
- ✦ Shortfall in clinical staff
 - ✦ Embed knowledge into systems
 - ✦ Make knowledge actionable
- ✦ Improve productivity
 - ✦ Available at point of care
 - ✦ Address where current time is used – eg communication
- ✦ Improve efficiencies
 - ✦ Automate as much as possible – especially on system boundaries – eg hospital transfers



Technical solutions

- ✦ Enterprise designed systems
 - ✦ Robust, scalable etc
- ✦ Expert Systems
 - ✦ Actionable user definable rule based engine
- ✦ Services Oriented Architecture – SOA
 - ✦ *Service-oriented architecture* is often defined as services exposed using the Web Services Protocol Stack (but not necessarily)
- ✦ Occasionally Connected Computing – OCC
 - ✦ An end user is able to continue working a application even when temporarily disconnected or when a wireless connection fails or is otherwise unavailable
- ✦ Software as a Service – SaaS
 - ✦ An application is hosted as a service provided to customers across the Internet.

AutumnCare System Architecture



- Notes**
1. Can be a single machine running IIS and SQL servers.
 2. No requirement for remote servers.
 3. No direct DB access from clients.
 4. All DB access from Webservices.
 5. Lightweight intelligent synchronisation protocol over IP.
 6. Encryption and security protocols are also implemented.

An example

- ✦ On Incident Form Resident
- ✦ If a Fall is recorded
- ✦ Then
 - ✦ Create Task with text 'Perform Falls Risk Assessment', 'Assessment Required'
 - ✦ Create Falls Risk Assessment Form
 - ✦ Create a Case note
 - ✦ With text of 'Possible falls risk. Please monitor.' and mark it as
 - ✦ Important and
 - ✦ A Care Alert and
 - ✦ Categorise as 'Mobility'

AutumnCare Example

The screenshot displays the AutumnCare Connect software interface for a patient named Anne Beadal. The main window shows a 'Falls Risk Assessment - F018 < 100% >' form. The form is divided into several sections:

- Risk Factors**: A table with columns for 'Risk Factors' and 'Risk Level'.
- Fall History**: A section for recording past falls.
- Medications**: A list of medications including Psychotropic, Cardiovascular, Anti-hypertensive, Anti-depressant, Tranquillizers/sedatives, Diuretics, Anti-Parkinson, Anti-convulsive, and Opioids.
- Psychological/Psychiatric**: A list of conditions including Anxiety, depression, reduced cooperation, restless, agitated, reduced insight, reduced judgment (esp. regarding mobility), impulsive, depression, delirium, and bipolar.
- Cognitive State**: A section for recording cognitive status.
- Mobility/Transfer**: A section for recording mobility and transfer issues, such as 'e.g. Poor transfers, Mobility, Balance, Walking without aid'.
- Sleep Patterns**: A section for recording sleep patterns.
- General Health Status**: A list of general health conditions including CVA, Parkinsons, postural hypotension, vertigo, recurrent UTIs, MS, diabetes, and cardiac problems.
- Vision**: A section for recording vision status.
- Nutrition**: A section for recording nutrition status.

The interface also shows a navigation pane on the left with a tree view of the patient's record, including sections for Staff, Community, Enquiry, Forms, High Care, Low Care, Profile, Care Plan, and various forms and assessments. The status bar at the bottom indicates 'Profile | Incident Form Resident - F095 < 100% > | Falls Risk Assessment - F018 < 100% >' and shows system information like 'Sync'd at 12:17 PM, Next at 12:32 PM'.



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